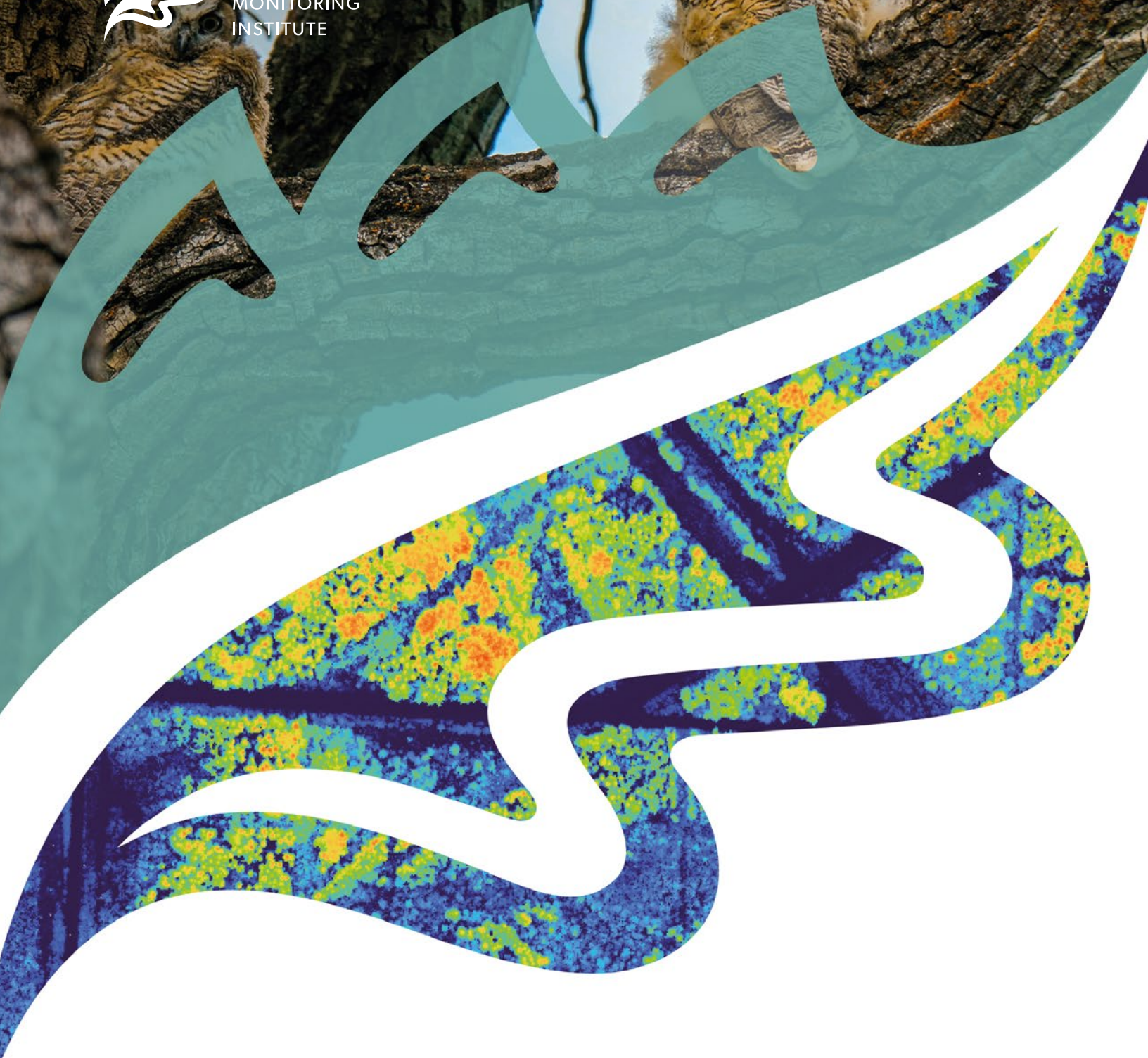




ALBERTA
BIODIVERSITY
MONITORING
INSTITUTE



Alberta Biodiversity Monitoring Institute

ANNUAL REPORT | 25–26



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This report showcases the many ways we've monitored land cover and biodiversity across Alberta this past year. Learn about these efforts, and more at abmi.ca.

SUGGESTED CITATION

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Introduction and Acknowledgements

The ABMI is advancing biodiversity science and sharing what we learn.

The Alberta Biodiversity Monitoring Institute (ABMI) is an independent, not-for-profit, non-regulatory institute housed at the University of Alberta (U of A), InnoTech Alberta, and the University of Calgary (U of C). Since 2007, we have monitored and reported on Alberta's biodiversity and land cover. This report highlights our activities and achievements for the 2025-26 fiscal year, illustrating the value of our collaborations. Through these partnerships, we strive to deliver results that meet diverse and evolving needs.

OUR VISION

The ABMI advances biodiversity monitoring to inform responsible resource management and land stewardship, now and for future generations.

OUR MISSION

We track changes in wildlife and their habitats across Alberta, working collaboratively to provide ongoing, relevant, and scientifically credible information about our living resources.

OUR VALUES

We pride ourselves on being independent, scientifically credible, relevant and accessible, transparent, and collaborative.

LAND ACKNOWLEDGEMENT

The ABMI respectfully acknowledges that our work takes place on the territories of Treaties 4, 6, 7, 8, 10, the Blackfoot Confederacy, and the Métis homeland, traditional and ancestral lands of First Nations and Métis Peoples, whose histories, languages, and cultures are directly linked to the biodiversity that we monitor. We acknowledge and honour the traditional teachings of the lands that we work on and benefit from, and that reciprocal, meaningful, and respectful relationships with Indigenous peoples make our work possible. We are deeply grateful for their stewardship of these lands, and we are committed to supporting Indigenous-led monitoring programs, while increasing our learning and understanding of Indigenous ways of knowing, being, and doing.



Thanks to

Our Funders and Collaborators

Alberta Ecotrust Foundation
Alberta Grazing Leaseholders Association +
Alberta Innovates
Alberta-Pacific Forest Industries Inc. +
Alberta Wilderness Association +
Athabasca Oil Corporation
Beaver Lake Cree Nation
Biodiversity Pathways Ltd. °
Birds Canada
Blood Tribe/Kainai Nation
Braiding Knowledges Canada
Buffalo Lake Métis Settlement
Canadian Forest Products Ltd.
Canadian Nuclear Safety Commission
Canadian Natural Resources Limited
Canadian Parks and Wilderness Society +
Cenovus Energy
Chipewyan Prairie First Nation
CNOOC International Ltd.
Cold Lake First Nation
Commission for Environmental Cooperation
Conklin Resource Development Advisory Council
ConocoPhillips Canada +
Ducks Unlimited
Forest Resource Improvement Association of Alberta (FRIAA)
Fuse Consulting Ltd.
Gift Lake Metis Settlement

Government of Alberta +
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Government of Saskatchewan
Imperial Oil
InnoTech Alberta Inc. **
Lakeland Métis Nation Association
LGL Environmental Services Inc.
Mercer International +
Mercer Peace River Pulp Ltd.
Nature Conservancy of Canada +
Oil Sands Monitoring Program
Oil Sands Alliance
Otipemisiwak Métis Government - Lac La Biche District 19
Ovintiv Canada ULC +
Pembina Institute +
Stoney Tribal Administration
Suncor Energy Inc. +
Alberta Northwest Species at Risk Committee (NWSAR)
University of Alberta *+
University of Calgary *
University of Waterloo
West Fraser +
Western Stock Growers' Association +
Whitefish Lake First Nation #128
Willow Lake Métis Nation
World Wildlife Fund Canada
Ya'Thi Néné Lands and Resources

+ *The ABMI extends our gratitude to our Members for their ongoing support.*

These organizations are integral to our success and the realization of our work.

* *We also value the strong support provided by our Delivery Partners*

at Innotech Alberta, the University of Alberta, and the University of Calgary. Without their invaluable contributions, many of the achievements we showcase in this report would not have been possible.

* Delivery Partner
+ Member
° National Affiliate

Thanks to our

2025–2026 Board of Directors



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Alberta-Pacific Forest
Industries Inc.



Shira Mulloy
Director-at-large
Nature Conservancy
of Canada

Message from the Executive Director

Alberta's landscapes continue to change, and the need for reliable information about our ecosystems is as important as ever.

Over the past year, the ABMI continued its long-term monitoring of biodiversity and human footprint across the province. At the same time, we expanded how we use that information to understand ecosystem condition, habitat recovery, and the effects of changes on Alberta's plants and wildlife.

New technologies are helping us improve how we do this work. Lidar, remote sensing, environmental DNA, acoustic monitoring, and artificial intelligence are allowing us to collect and analyze information in ways that were not possible when the ABMI began almost 20 years ago. These tools complement the long-term monitoring and scientific standards that remain at the core of our work.

We also continued to support Indigenous-led monitoring and to work with partners across Alberta. These relationships are essential to building a shared understanding of Alberta's ecosystems.

Looking ahead, we are strengthening the ABMI's Ecosystem Health Program to better connect information about the state and condition of Alberta's ecosystems with how biodiversity is responding. The goal is simple: provide credible information that helps Albertans understand how our ecosystems are changing, and supports informed decisions about their future.

Thank you to our staff, partners, and supporters for another year of important work.



Jim Herbers

Executive Director

Alberta Biodiversity
Monitoring Institute



Monitoring Alberta's Landscapes and Biodiversity

The ABMI collects high-quality and wide-ranging data on Alberta's biodiversity and landscapes through a variety of monitoring programs and initiatives. These data span from detailed records of individual species across eight taxonomic groups to large-scale airborne lidar- and satellite-derived geospatial products such as the Human Footprint Inventory (HFI). Collected from the ground, air, and even space, these datasets are publicly available to support research, planning, and decision-making.

In 2025, we began redesigning the Ecosystem Health Program (EHP) into a more targeted monitoring system enabling enhanced collaboration. We deployed hundreds of cameras and autonomous recording units (ARUs) at dozens of sites to monitor local wildlife responses to various oil sands operations within the Oil Sands Monitoring (OSM) Program while our geospatial, lidar and remotely sensed imagery provided crucial support for habitat assessments. We also expanded support to the OSM Indigenous Community-Based Monitoring Program through advanced data visualization and analysis. We updated the Human Footprint Inventory and Temporal Human Footprint with imagery circa 2023, improving the accuracy of seismic line mapping and vegetation regeneration tracking. A very rewarding year for new species, ABMI experts and collaborators also published identification for 13 new to science tiny lichen (calicioid) species and reported 29 new additions to Alberta.

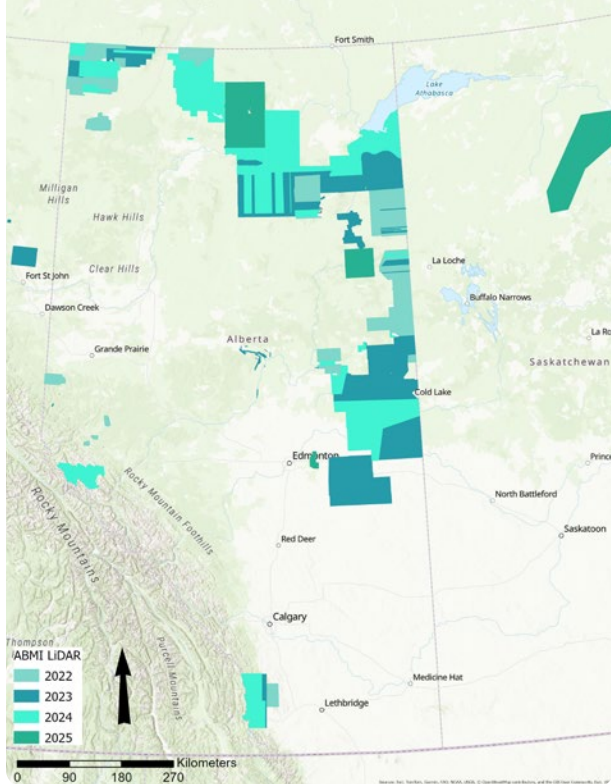
The following section provides detailed summaries of these and other monitoring programs and initiatives, along with a snapshot of the cumulative data the ABMI has made available over the past nearly two decades.

LIDAR MAPPING

The ABMI continues to expand one of Alberta's most comprehensive airborne lidar programs, providing the high-resolution, three-dimensional data needed to better understand and monitor the province's changing landscapes. Over the past five years, our team has acquired more than 140,000 km² of lidar data across Alberta—or close to one fifth of the province—creating an invaluable resource for biodiversity monitoring, ecological research, and natural resource management.

Unlike traditional aerial imagery, lidar captures the three-dimensional structure of vegetation and terrain, enabling detailed mapping of forests, wetlands, riparian areas, and wildlife habitats. These data support a wide range of applications, including assessing forest regeneration, evaluating habitat connectivity, monitoring wildfire impacts, mapping species-at-risk habitat, and improving land cover inventories.





By integrating lidar with aerial imagery, satellite observations, field data, and advanced machine learning techniques, the ABMI has completed vegetation regeneration mapping for key anthropogenic disturbance features across all Woodland Caribou ranges and throughout most of Alberta's Oil Sands Region (OSR). These products provide critical information to support conservation planning, ecosystem restoration, cumulative effects assessment, and evidence-based land management decisions.

Through strong partnerships with provincial and federal governments, industry, Indigenous communities, and the research community, ABMI's lidar program continues to deliver the foundational geospatial data and analytical products needed to monitor Alberta's landscapes, inform sustainable resource management, and support biodiversity conservation now and into the future.

ECOSYSTEM HEALTH MONITORING

The EHP is a long-term, province-wide monitoring system for tracking the status and trend of Alberta's biodiversity. For more than a decade, the program comprised a systematic 20-km grid of monitoring sites spaced every 20 km across the province. This historic program captured representative data on species, habitats, and human footprint, creating a strong foundation for hundreds of provincial species models and served as the foundation for the development of provincial indicators such as the Biodiversity Intactness Index.

The EHP is currently being redesigned into a more targeted monitoring system that enables collaborators and funding partners to contribute to and build upon the core system. The legacy grid remains as the backbone for long-term trend assessment, but ABMI is adding a larger diversity of sites via off-grid sampling and new species and habitat monitoring protocols. This updated program is designed to provide ongoing, accurate information on how, where, and why ecosystems and species are changing over time.

The revised design is further strengthened via increased integration with rapidly advancing technologies in the fields of remote sensing and a focus on sensor-based permanent-record data collection, including ARUs, remote cameras, and vegetation photo-surveys, as well as flexibility to incorporate emerging tools like environmental DNA. Together, these elements shift the EHP from a purely systematic grid toward a more adaptive, responsive monitoring framework that blends statistical rigor with the ability to focus effort where change is happening.

The Ecosystem Health Program

has shifted toward a more adaptive,

responsive monitoring framework

that blends statistical rigor with

the ability to focus effort where

change is happening.



OIL SANDS MONITORING PROGRAM

The OSM Program is a regional monitoring effort, administered in partnership by the governments of both Alberta and Canada, designed to detect environmental change across a number of environmental media as a result of oil sands industrial operations. The ABMI supports the delivery of OSM via contributions to several program areas.

The ABMI is a core delivery partner within the Terrestrial Biological Monitoring component of OSM, specifically monitoring local wildlife responses to various oil sands operations, including plants, mines, roads, in-situ operations, linear features, and wellsites. In 2025-26, the ABMI deployed hundreds of cameras and ARUs at dozens of monitoring sites within the Alberta OSR.

The ABMI also provides critical geospatial data products to support monitoring and data analysis within OSM. Notably, the ABMI's Habitat Monitoring of Forest Regeneration Program collects new and leverages existing aerial lidar and remotely sensed imagery to assess habitat recovery on oil sands-related human footprints. In combination with other foundational geospatial products, including the ABMI's [enhanced Human Footprint Inventory](#), an annually updated dataset that reflects changing human footprint condition across the oil sand watershed boundary, this monitoring is essential for stressor-response analyses and cumulative effects assessment.

Furthermore, the ABMI supported the OSM Indigenous Community-Based Monitoring Program by providing essential equipment, scoping, and training to nine Indigenous communities leading wildlife abundance monitoring programs. Crucially, 2025-26 marked a shift toward advanced data visualization and analysis. Key achievements included leading 14 capacity-development workshops, supporting one Nation in developing a journal manuscript, and co-developing password-protected data reporting portals for four communities to visualize wildlife trends alongside rich cultural context.

MAPPING HUMAN FOOTPRINT

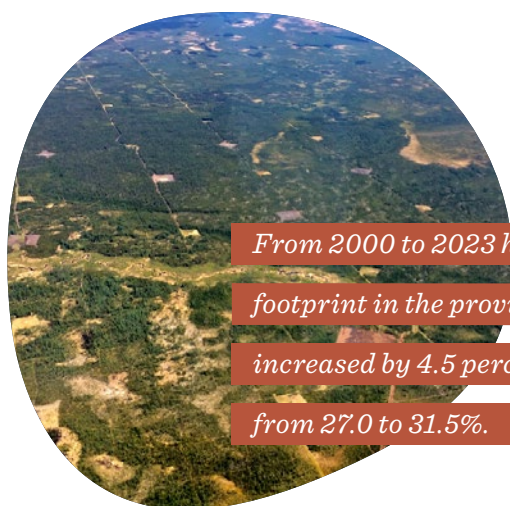
We updated the HFI to capture human disturbances visible in satellite imagery circa 2023. The HFI extends back pre 1950 and is updated annually to reflect changing human footprint conditions across Alberta. The current HFI contains 117 feature types and 20 individual sublayers including seismic lines, harvest areas, roads, and cultivation. The total human footprint in Alberta was 31.5% of total land area as of 2023. In addition to [an online report](#), the HFI is available to view on the [Mapping Portal](#), in the [ORB \(Online Reporting for Biodiversity\) tool](#), and to download through our [Open Data Portal](#).

HFI 2023 classifications within the Seismic Lines, Trails and Other Linear Features sublayer have been changed to match the standards of the Government of Alberta's Cutline and Trail Attribution Project and to be more aligned with government and industry terminology. These classifications are based on the construction method of the seismic line and determined in consultation with various subject matter experts and newly available regulatory and industry data. Through collaboration with the Government of Alberta and the Alberta Human Footprint Monitoring Program the 2023 HFI provides the most accurate classification and dating of seismic lines ever available to the public. Ninety-nine percent of seismic lines have a year of origin and 100% of seismic lines have constructed widths obtained from a regulatory source or estimated by subject matter experts. For more information please see the [Seismic Snapshot](#) and the [HFI 2023 Metadata](#).

We also updated the Temporal Human Footprint dataset to include conditions in 2023. This dataset covers approximately 5% of the province and provides information from the years 1950, 1985, 2000, 2001, and annually from 2004 to 2023. It is spatially consistent with the larger HFI dataset and is designed also to be consistent over time, meaning that features from earlier years are also included in later years. This makes it useful for accurate trend analysis. From 2000 to 2023 human footprint in the province of Alberta increased by 4.5 percentage points, from 27.0 to 31.5%.

VEGETATION REGENERATION MAPPING

We are advancing the mapping of vegetation on human footprint features through our Vegetation Regeneration Mapping program. This multi-year program is designed to track and quantify forest regeneration across disturbed landscapes such as seismic lines, wellsites, pipelines, and roads, with a particular focus on caribou ranges and the OSR. In 2025-26 we finished mapping all caribou ranges in the province and 60% of the OSR.



*From 2000 to 2023 human
footprint in the province of Alberta
increased by 4.5 percentage points,
from 27.0 to 31.5%.*



NEW LICHEN SPECIES TO ALBERTA AND TO SCIENCE

In 2025, ABMI experts and collaborators named 13 new calicioid species to science and reported 29 new additions to the province. Often overlooked, these calicioids are a group of tiny lichens that resemble small pins, frequently measuring less than 1 millimetre in height.

Calicioid lichens are recognized as indicators of ecosystems with high conservation value as they occupy specialized microhabitats. For example, Rose Needles (*Brevicalicium roseum*) is found growing exclusively on dead or dying branches of Woods' Rose. Another species, the Glass-whisker Lichen (*Sclerophora pallida*), was found growing on a mature Balsam Poplar within an old growth forest along the Athabasca River.

The study used historical and contemporary collection data, while incorporating technologies such as DNA barcoding, to examine the calicioid diversity in Alberta. Overall, the study increased the known diversity of this ecologically important group to 73 species within the province.

KEEPING MONITORING ON TRACK: TABLET DEVELOPMENT

The ABMI uses an Android-based application to collect the majority of its field data across multiple program areas. In 2025-26, these program areas included the OSM Program, Biodiversity Trajectories (BDT), Wildland Foundations, and the EHP. The application enables efficient collection of diverse field data, including automatically labelled and stored photographs, plant and ground cover observations, wildlife camera and bird recorder deployment information, and habitat assessment data, among many other data types.

At the end of each field day, technicians upload their data in real time. This allows for quality control checks to be completed while fieldwork is underway. This process helps identify and address potential issues early, improving overall data quality. We continue to improve the application's functionality, support the field data collection experience, and meet evolving program needs. Development is also underway to add new data collection protocols such as those for the Caribou Habitat Restoration Monitoring program, with a planned release in 2027.

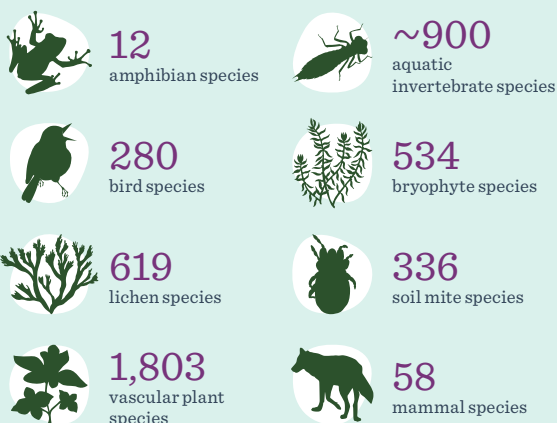
SPOTLIGHT

Species and Habitat Data Collection Overview

Since 2007, the ABMI has been collecting species and habitat data across the entire province of Alberta. Over the past 19 years, this effort has resulted in a massive and diverse dataset that is publicly available at abmi.ca.

SPECIES AND HABITAT DATA

Over two million rows of data have been collected from more than 2,000 locations dispersed across the entire province of Alberta (see ABMI Survey Locations in Alberta map). This dataset comprises over 4,500 distinct species including:



Our dataset also contains detailed habitat data such as hydrology chemistry measurements at wetland sites (pH, electrical conductivity, and water depth) and soil and tree cores at terrestrial sites, among others. These help us understand the environments these species call home.

WILDLIFE SENSOR DATA (SINCE 2015)

Camera trap and acoustic recording data are processed and shared on the ABMI's WildTrax platform (wildtrax.ca). Nearly 31 million images have been collected by the ABMI from remote cameras, totaling 12.8 TB of data.

WILDTRAX'S TOP SPECIES IMAGE COUNTS



Over 150,000 audio recordings from ARUs have been processed, totalling approximately 4 TB of data. An additional 142 TBs of audio recording data remains unprocessed outside of WildTrax.

The most frequently tagged birds include White-throated Sparrow, Canada Goose, Ovenbird, Western Meadowlark, Red-winged Blackbird, Yellow-rumped Warbler, and Swainson's Thrush.

LIDAR DATA (SINCE 2022)

Lidar goes further than traditional aerial imagery by revealing the three-dimensional shape and structure of habitats. Our lidar coverage now totals about 140,000 km² (270 TB), with data collected each year as follows:

- 2022: ~26,000 km² (50 TB)
- 2023: ~44,000 km² (80 TB)
- 2024: ~48,000 km² (90 TB)
- 2025: ~22,000 km² (50 TB)



SPOTLIGHT

Species and Habitat Data Collection Overview

ADDITIONAL PRODUCTS

The ABMI also produces:

- Human footprint maps
- Species intactness indices
- Lidar data and products
- Online reports and publications
- Publicly available datasets

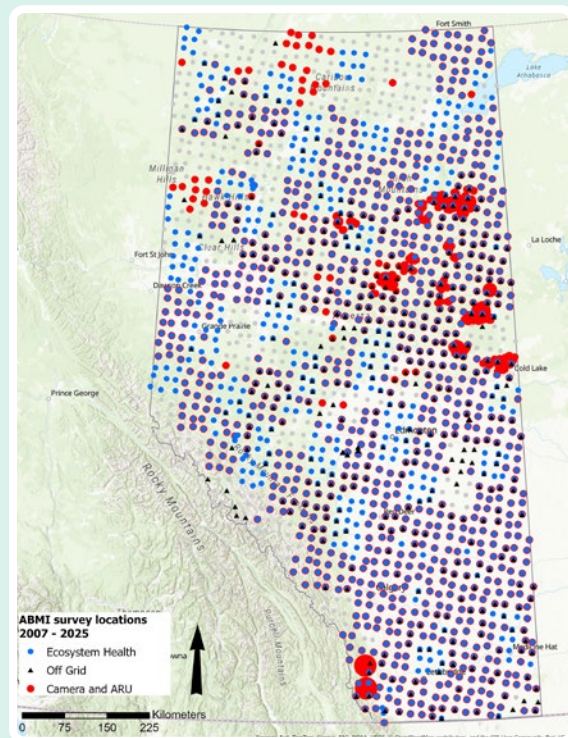
Available on the [ABMI website](#) are:

- 90 GIS datasets (1.5 TB)
- Over 511 publications (4.6 GB)

TOTAL DATA COLLECTED

The ABMI has gathered nearly **one petabyte of data** over 19 years. To put that in perspective, if you were to lay flat one petabyte of document pages (each page represents 1 MB) end-to-end, they would stretch from Edmonton to Calgary and back again nearly 465 times.

ABMI SURVEY LOCATIONS IN ALBERTA



Large red dots represent locations where up to 100 camera/ARUs were deployed.

Science Innovation

Working in collaboration with partners, in 2025-26, the ABMI advanced biodiversity monitoring through several key innovations. From Caribou Habitat Restoration Monitoring, to mapping seismic lines, wellsites and land cover of Wood Bison habitat, we've showcased how remote sensing technology, artificial intelligence (AI), and innovative methodologies can integrate to produce exceptional results.

We've improved the use of remote camera data in mammal science research as well as detection probability and automated classifiers in acoustic research. We advanced development of new landscape-level indicators such as an invasive plant index and reported on landscape connectivity for the first time.

By re-envisioning the monitoring and assessment of Alberta's wetlands we'll be able to link a scalable and targeted field- and partner-based monitoring program with new provincial-scale wetland information products and advancing technologies. Finally, we're actively developing the Integrated Land Disturbance Tracker, a near-real-time tool designed to detect disturbances and changes across Alberta's landscape.

SPOTLIGHT

Advancing Monitoring for Caribou Habitat Restoration

[Caribou Habitat Restoration Monitoring](#) is a multi-year, science-based program led by the ABMI in partnership with Alberta Environment and Protected Areas (EPA). Launched in 2024, it supports Alberta's Caribou Habitat Recovery Program by evaluating restoration treatments on legacy seismic lines across caribou ranges. This work addresses the ongoing decline of Alberta's Woodland Caribou populations, driven primarily by predation as a result of habitat disturbance and climate change. Restoration treatments aim to accelerate forest regeneration, reduce predator efficiency, and limit human access, with an overarching goal of contributing to self-sustaining caribou populations.

The program encompasses a range of activities focused on monitoring restoration treatments. One area of this work is exploring new approaches to measuring restoration outcomes. In 2025, the ABMI completed an establishment survey pilot in the À La Pêche caribou range, to evaluate how emerging technologies can improve the way restoration outcomes are measured in areas where ground access is increasingly difficult. This project compared multiple monitoring approaches including beyond visual line of sight drones equipped with lidar and high-resolution imagery, helicopter-based sketch mapping, ultralight aircraft imagery collection, and ground-based field surveys. The project is designed to determine which technologies and methods provide the most effective, scalable, and cost-efficient methods for assessing restoration success on legacy seismic lines. The results will help improve restoration planning, adaptive management, and long-term monitoring, while showcasing how remote sensing technology and innovative methodologies can advance and support woodland caribou recovery.





SEISMIC SHIFT

Seismic lines are among the most extensive human footprint features in Alberta's boreal forest, making their accurate mapping essential for biodiversity monitoring, habitat assessment, and evaluating ecosystem recovery. While existing seismic line inventories provide comprehensive coverage, they are often represented with coarse geometry that does not capture the true extent and shape of the lines, limiting their usefulness for vegetation regeneration analyses and restoration planning. To address this challenge, the ABMI developed Seismic Shift, an innovative semi-automated workflow that integrates airborne lidar, high-resolution imagery, and machine learning to detect and delineate seismic lines with greater accuracy, consistency, and efficiency than traditional mapping methods.

At the core of Seismic Shift is a deep learning AI model that uses lidar-derived products to identify seismic lines across the landscape. The model uses information about canopy height, topographic position, and normalized intensity (ensuring consistent measurements) to generate an initial seismic line network map, which is then refined through automated processing and expert review to ensure accuracy. The resulting inventories provide a reliable foundation for vegetation regeneration assessments, habitat monitoring for species at risk such as Woodland Caribou, and restoration planning across Alberta's forested regions.

By combining AI with expert interpretation, Seismic Shift significantly reduces the time and effort required to map linear disturbances while improving the quality and consistency of the final products. The workflow demonstrates how advanced geospatial technologies can enhance environmental monitoring and deliver the accurate, repeatable data needed to support land management and evidence-based decision-making.



Seismic Shift significantly reduces the time and effort required to map linear disturbances while improving the quality and consistency of the final products.



MAMMAL SCIENCE RESEARCH

This year, we continued to improve how remote camera data are used to monitor mammals across Alberta. Building on our previous work integrating camera data from multiple organizations, we developed and tested new methods to account for differences in camera deployment protocols, such as camera model, mounting height, lure use, and placement relative to animal activity corridors. These improvements increase confidence that differences in wildlife observations reflect real ecological patterns rather than differences in monitoring methods.

These methods support a range of monitoring and research initiatives across Alberta, including helping to establish a new remote camera grid in the Wainwright area to monitor ungulate populations, researching moose ticks and their effects on wildlife, and continuing to provide scientific support for the OSM Program. Combining standardized ABMI monitoring with data collected by partners enhances our understanding of mammal distributions and responses to human disturbance across the province. These advances optimize existing data, improve species model accuracy, and provide more reliable information for conservation and resource management decisions.





ACOUSTIC RESEARCH

In 2025-26 we maximized the use of ARU data collected by the ABMI and the broader passive acoustic monitoring community through continued research and development. Our acoustic research was co-produced with staff in the Boreal Avian Modelling Centre of Biodiversity Pathways (our national affiliate) and researchers at the U of A.

As in previous years, we progressed with research on ARU detection probability (i.e., how well birds can be detected) and how to integrate data collected with acoustic sensors with other data types such as in-person point counts. We published a manuscript comparing the two survey types in a special feature on detection probability in the journal *Ornithological Application*, which our staff co-guest edited as part of an international working group they co-chair. We also served as the Mitacs industry partner for a graduate student studying how well automated recording devices can detect birds. The project used multiple recording devices that were synchronized to record at the same time and was conducted in partnership with Environment and Climate Change Canada.

An area of rapid technological development is the use of automated classifiers to efficiently process vast amounts of acoustic data. To further their uses, we supported the development of HawkEars by Jan Huus, including the release of HawkEars 2.0 with improved species coverage and a new coding package for training custom species identification tools. In addition, we participated in research led by institutions such as the University of Saskatchewan and the University of Pittsburgh on how to best use data that is

produced by automated classification of ARU recordings. We communicated the value of automated classification to the public and research community through media appearances and training sessions.

A significant advantage of acoustic data is that it can be readily shared. To that end, we made the ARU data more accessible to the general public and research community. We initiated development of two forthcoming public acoustic datasets, one covering the entire boreal region of Canada and another using time-synchronized arrays of ARUs in both Canada and the USA to determine exact locations of vocalizing birds, which can help us to refine habitat models and better understand bird detection processes. We also contributed to a global horizon scan of emerging challenges and opportunities to facilitate the effective uptake of passive acoustic monitoring by the global community.

Given the efficiency and information value of acoustic monitoring, we've expanded the use of ARUs for ABMI's biodiversity monitoring in novel ways in 2025-26. We continued using the HawkEars classifier to better understand the life cycles of amphibian species in Alberta and improve our amphibian habitat models. We developed a predictive noise map for Alberta trained with ARU data that can be used to understand the impacts of anthropogenic noise on wildlife and identify areas for noise mitigation and reduction. We also conducted a pilot study using ARUs to study the impacts of off-highway vehicles on bird and wildlife habitat use.

ADVANCING LANDSCAPE-LEVEL INDICATORS IN ALBERTA

To assess biodiversity at a broad scale, the ABMI relies on landscape-level indicators. The advantage of this approach is that it provides an integrated, repeatable, and scientifically defensible measure of ecological condition across large areas, supporting both provincial land-use planning and local decision-making. By combining landscape-level metrics with species-level information where available, this approach balances broad biodiversity assessment with the recognition of individual species' needs.

This year, we continued development of new landscape-level indicators, such as an invasive vascular plant index (currently under review, through our partnership with EPA). In addition, through our client reporting in northeastern Alberta, we summarized multiple landscape-level indicators. For the first time we also reported on the state of landscape connectivity—the degree to which the landscape facilitates the movement of organisms, their genes, and ecological processes. Several of these indicators have also been adopted by provincial watershed councils and used in their state of the watershed reporting.

IMPROVED HABITAT MONITORING IN ALBERTA USING LIDAR AND MACHINE LEARNING IN WELLSITE IDENTIFICATION

Alberta is home to hundreds of thousands of wellsites, making accurate mapping of these features essential for monitoring landscape disturbance and ecosystem recovery. Traditional wellsite inventories often rely on generalized boundaries that are insufficient for assessing vegetation regeneration and habitat condition.

To address this challenge, we developed a workflow that combines airborne lidar, machine learning, and image analysis to automatically detect and precisely delineate wellsite boundaries. By leveraging the three-dimensional information captured by lidar, the workflow produces accurate representations of wellsites while significantly reducing the time required for manual interpretation.

The resulting high-resolution wellsite boundaries provide a stronger foundation for monitoring vegetation recovery, evaluating reclamation success, and improving Alberta's HFI. This work also supports more accurate habitat assessments for species at risk and enables better-informed land management and conservation decisions.

By integrating advanced remote sensing with AI, the ABMI is transforming how industrial disturbances are mapped, creating scalable, science-based solutions for monitoring Alberta's changing landscapes.

[Read more in our blog here.](#)





MAPPING WOOD BISON HABITAT

Wood Bison require a detailed understanding of the landscapes they depend on. To support recovery efforts, ABMI partnered with EPA to develop an innovative, high-resolution habitat mapping framework for the Wabasca Bison Protected Area using airborne lidar, satellite imagery, and AI.

The project produced a 10-metre resolution landcover map with 19 upland and wetland vegetation classes, detailed vegetation fractional cover, and a 40-year history of fire, human footprint, and surface water dynamics. Together, these datasets establish a comprehensive baseline for understanding habitat conditions and landscape change.

Beyond mapping, the project demonstrates how advanced remote sensing and machine learning can transform wildlife habitat monitoring. The resulting products support habitat assessment, landscape connectivity analysis, and future modelling of Wood Bison movement and space use. The methods developed through this work are designed to be scalable and transferable to other bison ranges, creating a foundation for long-term biodiversity monitoring and evidence-based conservation across northern Alberta.

RE-ENVISIONING THE MONITORING AND ASSESSMENT OF ALBERTA'S WETLANDS

Reliable information on the condition of Alberta's wetlands is essential for understanding ecosystem health, tracking environmental change, and supporting sustainable resource management. To help address this growing need, the ABMI is advancing its wetland monitoring program to provide more comprehensive, timely, and policy-relevant information on wetland extent, distribution, condition, and change across the province.

The program is being re-envisioned as a scalable monitoring framework that enables government, industry, researchers, and other partners to contribute to and build upon a base monitoring program. This program will employ a coordinated monitoring approach that links a targeted field-based monitoring program with new provincial-scale wetland information products that harness rapidly advancing technologies in the fields of remote sensing, machine learning, and AI. Together, these complementary data sources will provide a more comprehensive understanding of Alberta's wetlands and the factors driving change.

This past year, we have been working with the wetland team at EPA to develop a long-term strategic vision, a design framework, and an operational plan to facilitate implementation.

TOWARD TRACKING LAND DISTURBANCE

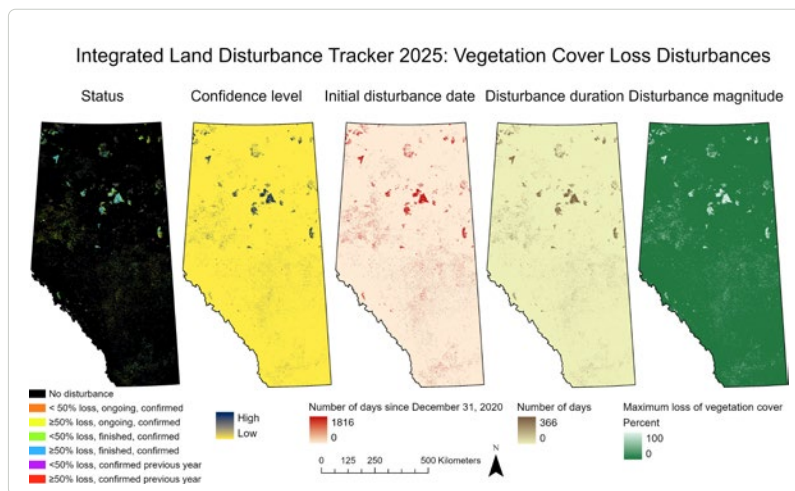
The ABMI is working in collaboration with EPA and the Alberta Energy Regulator to build an Integrated Land Disturbance Tracker. Once finalized, the tracker will be a near-real-time tool designed to detect disturbances and changes across Alberta's landscape, with the aim of providing increasing detail and functionality over time. Our vision is to develop an online platform that provides actionable, up-to-date information on the location, extent, timing, magnitude, and type of human-caused and natural land disturbances occurring throughout the province.

In 2025-26, with input from project partners, we focused on the first stage of development: emphasizing creating accurate, reliable, and easily updatable initial disturbance products by leveraging newly available external data layers based on public satellite data. We produced an initial annual tracker dataset that summarizes Alberta-wide

disturbances for 2023-25. The dataset includes information on disturbance location, confidence level, duration, initial disturbance date, and magnitude.

By leveraging year-round satellite information in our tracker dataset, we were able to produce improved delineation or outlines of disturbed areas and better characterization of recent wildfire, and human disturbances related to agriculture, energy, and forestry, among others.

Once fully developed, the Integrated Land Disturbance Tracker will provide more timely information on land disturbance between HFI updates. It will provide near-real-time inter- and intra-annual disturbance information across Alberta to support environment monitoring, evaluation, and reporting, cumulative effects management, regional planning, and environmental resource stewardship.



Working Collaboratively

Collaboration remains a cornerstone of the ABMI's operating principles. Together with our diverse range of collaborators and partners we were able to significantly advance our understanding of changes to the landscape and species in our province over the past year. We made notable headway in the areas of tracking the impacts of extreme wildfire, algal bloom monitoring, and wetland genomics. We continued the BDT collaborative project focused on understanding how ecosystem-based forest management techniques affect biodiversity in Alberta's regenerating boreal forest. WildTrax, our online platform for data collected by environmental sensors has now grown to over 600 organizations and 5,000 users.

The ABMI continues to proudly partner with numerous collaborative networks and support the development of Indigenous internship opportunities.

ALGAL BLOOM MONITORING IN ALBERTA LAKES

[This project](#) is the culmination of a three-year collaborative project involving 12 Alberta organizations¹ and was designed to support environmental reporting, public awareness, and informed decision-making. It integrates remote sensing technology, including satellite imagery, lake sampling as well as comprehensive scientific analysis and validation to report on the status of harmful algal blooms in six Alberta lakes².

¹ Project Partners: University of Alberta, Alberta Biodiversity Monitoring Institute, Alberta Lake Management Society, Alberta Primary and Preventative Health Services, Alberta Environment and Protected Areas, Alberta Health Services, Pigeon Lake Watershed Association, Lac La Biche County, Wabamun Watershed Management Council, Associated Environmental Consultants Inc., Environment and Climate Change Canada, Alberta Innovates.

² Ethel Lake, Lac La Biche, Sylvan Lake, Nakamun Lake, Pigeon Lake, and Wabamun Lake.

SPOTLIGHT

Monitoring in Forested Regions

Biodiversity Trajectories

The BDT project is a multi-year, collaborative project between the ABMI and seven forestry companies in Alberta. The project is based on testing a key assumption of ecosystem-based forest management (EBM) practiced by the forest industry: that the biological communities in burned (i.e., naturally disturbed) and harvested areas will eventually converge over time. The BDT project will help us understand how EBM techniques affect biodiversity in Alberta's regenerating boreal forest, and whether this convergence is occurring.

Field work for BDT mainly took place in the Boreal Natural Region in 2025-26. Biodiversity data collected at survey sites characterized the bird-, mammal-, and vascular plant communities, along with habitat elements present. Field crews collected vascular plant samples and transferred them to the ABMI's taxonomists who identified specimens and bolstered the project's vascular plant dataset. The Foothills phase (the third project phase) was an important milestone that expanded this work to additional portions of the province and kicked off in February 2026.



The project resulted in some major findings about algal blooms within the lakes:

- We can successfully develop reliable models to track blooms with satellite imagery and water samples
- Bloom activity can vary widely among lakes
- Blooms can appear, grow, move, and decline within just a few days
- Blooms are generally most common and most severe from mid-August to mid-October
- Researchers can use historical satellite imagery and machine learning to extend bloom monitoring insights to the 1980s

This project supports Albertans' understanding of the risks of harmful algal blooms and the value of ongoing lake monitoring. Across partners, there were more than 110 outreach and engagement activities, including community events, public consultations, media interviews, student training, webinars, social media outreach, and partnerships with local organizations over the course of the three-year project.

2026 will mark the completion of this project and will include the public launch of the Algal Bloom Tracker (algalbloomtracker.ca), a free, user-friendly application that enables users to visualize and track harmful algal blooms in near real time for these lakes, along with a subsequent It's Our Nature to Know webinar.

INDIGENOUS INTERNSHIPS

The Indigenous Internship supports individuals who identify as Indigenous (First Nation, Métis, or Inuit) and are seeking experience in western science monitoring. The program has operated for four years and is housed primarily within the ABMI's Monitoring Centre, with limited placements in other centres.

This opportunity supports personal and professional development and is intended to encourage skillbuilding and hands-on experience in biodiversity and habitat monitoring. It seeks to empower interns to pursue careers in science and related fields, while encouraging the sharing of experiences and skills within their own communities.

In 2025-26, the Monitoring Centre hosted one Indigenous intern who worked within the EHP, while also assisting with other monitoring programs. The intern joined a field crew and participated in moss and lichen surveys, habitat structure assessments, soil sample collection, wildlife camera and ARU retrieval, and water chemistry sampling, among others. The placement ran from early May to late August.

MONITORING WETLAND HEALTH USING GENOMICS

This collaborative genomics project includes the ABMI, InnoTech Alberta, and Ducks Unlimited Canada and is advancing the understanding of how agriculture and climate change affect wetland health in Alberta's Prairie Pothole Region. The project integrates conventional monitoring with environmental DNA approaches.

Over the past year, the team completed its third full field season. They sampled 50 wetlands, conducting comprehensive waterfowl surveys, and processed tens of thousands of aquatic invertebrates using physical characteristics and genetic-based methods to identify the species. The project integrates ecological, genomic, and pesticide datasets into predictive models that will inform best management practices for sustainable agriculture and wetland conservation.



Biodiversity
Pathways

Biodiversity Pathways: Working Together on Wildland Foundations

As climates continue to warm, the intensity, size, and frequency of extreme fires impacting forests and communities across Canada will increase. Extreme fires have catastrophic and lasting socioeconomic and environmental impacts to Indigenous communities and their lands, affecting livelihoods, food security, and cultural and spiritual practices.

Wildland Foundations is a multi-year project focused on tracking the impacts of extreme wildfire and habitat restoration on wildlife and plant presence and abundance, and forest structure overall. The project team spans four Indigenous communities in Alberta, British Columbia and the Northwest Territories, along with members of the ABMI, and Biodiversity Pathways. We spent the past year testing and running field programs; building relationships and holding knowledge exchange events; completing habitat restoration treatments; and identifying priority questions and outcomes for the project.

All together, the information gathered through the Wildland Foundations project lays the foundation for identifying recommendations to reduce the impacts of wildfire on people, places, and wildlife and support the return of Indigenous stewardship practices.

Meet the communities involved and [follow project updates here](#). Visit biodiversitypathways.ca to learn more.



WildTrax

WildTrax

Developed by the ABMI and the U of A, the online platform [WildTrax](#) has continued to grow over the past year. The website provides a one-stop shop for storing, managing, processing, and sharing data collected by environmental sensors such as ARUs, remote cameras, and point counts.

There are now over 600 organizations and over 5,000 users. WildTrax now has its own file storage and no longer relies on cloud solutions. We've upgraded WildTrax's website technology to support future improvements and have added the ability to create Digital Object Identifiers (DOIs)—a permanent unique code assigned to content—from WildTrax projects.



Collaborative Networks: Coordinated Approaches to Monitoring

The ABMI contributes to various initiatives within Alberta, as well as to regional and national efforts, that advance biodiversity monitoring. These collaborations extend our impact and support coordinated approaches to monitoring.

The ABMI is proud to partner with these collaborative networks:

BOREAL AVIAN MODELLING CENTRE

BAM, a centre within Biodiversity Pathways, advances bird conservation across North America through collaborative, data-driven science, and modelling. Working with academic, government, and industry partners, BAM provides information on bird populations and habitats to support conservation planning. The ABMI contributes to this work through shared monitoring data, analytical expertise, statistical products, modelling support, and participation as contributing scientists.

CANAVIAN

CanAvian is a national collaboration that connects Canada's largest bird biodiversity data platforms to make avian data more accessible, standardized, and useful for research and conservation. As a founding partner alongside Birds Canada, Biodiversity Pathways, and Environment and Climate Change Canada, the ABMI supports CanAvian by hosting the program coordinator, who leads community engagement and helps develop governance, data policies, software tools, and workflows to advance a connected national bird data ecosystem.

CAN-PEAT

Can-Peat is a national network of peatland experts advancing research, restoration, and responsible peatland management through collaboration and the ethical integration of Indigenous knowledge and western science. As a project partner, the ABMI supports this work by identifying opportunities for alignment, integration, and data sharing within and beyond the network and hosting an Indigenous liaison who coordinates and supports the activities of Can-Peat's Indigenous Advisory Council.

GEO BON

The Group on Earth Observations Biodiversity Observation Network (GEO BON) is a global network that improves biodiversity monitoring by coordinating observation networks and developing indicators and tools to support conservation decision-making. The ABMI partners with CAN BON, GEO BON's Canadian network, to advance the application of international biodiversity indicators through online tools and platforms.

NORTH AMERICAN BAT MONITORING PROGRAM & NORTH BY NORTHWEST BAT HUB

The North American Bat Monitoring Program (NABat) coordinates standardized bat monitoring across North America, while the North by Northwest Bat Hub supports regional acoustic monitoring and data management in Alberta, British Columbia, and southeast Alaska. The ABMI helped establish the NNW Bat Hub and continues to provide guidance and analytical support, with the hub led by the ABMI's national affiliate, Biodiversity Pathways.

[Learn more about our collaborative networks on our website.](#)





Knowledge Translation and Engagement

Making data openly available and easy to access is central to how we work, as is reflected in the [Data and Resources](#) section of our website. We strive to understand the needs of those who use our data and have developed tools and platforms that make accessing and interpreting those data easier. In 2025–26, this included a range of information sharing and engagement activities such as our new project on building geospatial capacity within Indigenous communities, two major reports on the status of biodiversity in northeastern Alberta, a Science Letter, and four public webinars.

We equip partner nations with the tools and technical expertise required to independently collect, manage, and protect their spatial records to support ongoing land stewardship and decision-making.

SPOTLIGHT

From Access to Action: Funding to Build Geospatial Capacity within Indigenous Communities

Over the past year, in partnership with the Institute of Prairie and Indigenous Archaeology, the ABMI made significant strides in fostering Indigenous Data Sovereignty through targeted geospatial capacity-building initiatives with the Lakeland Métis Nation and Foothills Ojibway First Nation. The initiative focused on overcoming technical barriers to accessing data by deploying enterprise-grade mapping platforms and establishing high-performance GIS infrastructure within participating communities.

The project supported partners in capturing traditional land use and oral histories through dynamic mapping sessions and leading specific GIS capacity development training sessions. This collaborative work will continue providing customized, priority-driven training in the coming year—equipping partner nations with the tools and technical expertise required to independently collect, manage, and protect their spatial records to support ongoing land stewardship and decision-making.



CLIENT REPORTING IN NORTHEASTERN ALBERTA

It was a busy year for reporting, with two regional Status of Land Cover and Biodiversity reports released for landscapes in northeastern Alberta. The first report is the fourth in a long-term monitoring series for [Alberta-Pacific Forest Industries Inc.'s Forest Management Agreement Area](#). The second report provides a comprehensive assessment of landscape condition and biodiversity across [Alberta's Oil Sands Region](#).

Both reports draw on the ABMI's province-wide monitoring data to assess regional responses of natural landscapes and species to human footprint, wildfire, and their combined effects. Each report also includes research spotlights examining the impacts of forestry and energy development on biodiversity.

NEW CHAPTERS IN THE WETLAND ATLAS OF ALBERTA

The Wetland Atlas of Alberta showcases wetland knowledge in Alberta in an easy-to-read and accessible format. It includes results from ABMI's wetland monitoring program and acts as a conduit for researchers to highlight results of their wetland research projects.

In 2025-26 two new additions were added to [the Wetland Atlas](#):

The first section, HydroPatterns: Mapping Open Water Presence and Change, highlights a new satellite- and machine learning-based approach for mapping open surface water dynamics. The project demonstrates a repeatable method for monitoring seasonal and year-to-year changes in open water across Alberta, illustrated through case studies in the boreal and parkland.

The second section, The Ecological Role of Beavers in Alberta's Wetlands, showcases the research of [Dr. Glynnis Hood](#) (Professor Emerita, University of Alberta) and her collaborators, highlighting the vital role of beavers in shaping Alberta's wetlands, including their influence on hydrology, biodiversity, and wetland connectivity.

SCIENCE LETTER: ASSESSING CONSERVATION THROUGH A HABITAT LENS

Science Letters are spotlights on applications of land cover and species data in Alberta to understand the world around us.

In March 2026, we published our [latest Science Letter](#) on an approach to understand which habitats are represented in Alberta's protected area network using different conservation targets. Our approach provides a snapshot of the current representation of habitats within Alberta's protected area network and whether the rate of development is outpacing those conservation contributions. Though there are large amounts of protected areas within Alberta (103,165 km²), how and why different habitats are included or outside of conservation areas is a legacy of land management.





IT'S OUR NATURE TO KNOW WEBINARS

Over the past year four engaging and public-facing webinars covered a range of project areas at the ABMI, from hydropatterns and mapping groundwater to habitat representation in protected areas:

Hydropatterns: advancing open surface water monitoring in Alberta with artificial intelligence and remote sensing shared the results of the HydroPatterns pilot project conducted in two pilot areas and leveraged open-access satellite imagery, machine learning, and cloud-based technologies to map open surface water on Alberta's landscape.

Mapping groundwater dependent ecosystem (GDE) in boreal Alberta with remote sensing and machine learning presented an approach to high-resolution GDE mapping, which uses multiple sources of remote sensing data and advanced machine learning modelling to predict GDE locations.

Government of Alberta: wetland inventory pilot results provided an overview of a collaborative project delivered by Ducks Unlimited Canada and the ABMI aimed at piloting and refining state-of-the-art wetland mapping methodologies specific to Alberta's boreal, parkland, and grassland zones.

Habitat representation in protected areas provided a snapshot of the current representation of habitats within Alberta's protected area network and whether the rate of development is outpacing those conservation contributions.

Watch recordings of these and other It's Our Nature to Know webinars on the ABMI's [YouTube channel](#).

SHARING INSIGHTS AT CONFERENCES

ABMI staff attended and presented at multiple conferences and events across Alberta, Canada, and internationally. These included The Wildlife Society Conference, the Canadian Symposium on Remote Sensing, Geoscience Beyond Boundaries, and the Living Data Conference, among others. Staff shared ABMI's science, monitoring methods, and research findings while exchanging ideas with other attendees. These opportunities help strengthen collaborations, keep our work informed by emerging science, and increase the reach and application of ABMI's data and expertise.

Operational Excellence

Much of the ABMI's success as an organization stems from consistent attention to the processes that support operational excellence: strategic and operational planning; recruitment and retention of talented employees; strong policies and procedures; engagement with our Voting Members, Board of Directors, partners, collaborators, and stakeholders; and overall continuous improvement (including finding and implementing efficiencies).

MEMBER ENGAGEMENT

The diverse perspectives of the ABMI's Members help to shape our organization. Engaging with our Members involves listening to their ideas and valuing their contributions; ultimately, engaging with Members strengthens us. By appointing Board Directors, providing input to our strategic planning process, and voting as per our bylaws, our Members maintain an important seat at our strategic and operational planning table.



EQUITY DIVERSITY AND INCLUSION

The ABMI's Equity, Diversity, and Inclusion (EDI) Working Group met regularly throughout the year to support initiatives that foster an inclusive workplace. The group developed workplace communication guidelines, continued employee engagement initiatives such as social events and a buddy program for new employees, and shared EDI resources through internal communication channels. The group also began developing an EDI resource library to help staff access information, as well as a support and reporting framework that outlines pathways for raising EDI-related questions or concerns.

FINANCIAL ACCOUNTABILITY TO SPONSORS

The ABMI's funding comes from a variety of public and private sector sources, and we are committed to managing those funds responsibly and transparently, in accordance with best practices of financial accountability.

Careful financial stewardship also includes supporting our funding agreements via comprehensive engagement and reporting systems that assess and manage progress against deliverables. Our Board of Directors (via its Audit Committee) maintains careful oversight of our overall financial results.



ABMI Publications

ABMI staff members publish peer-reviewed research and technical reports on a wide range of topics each year, as both primary investigators and as supporting members of collaborative teams. We make all our publications available via our [publication archive](#).

Abdel Moniem, H.E., Mallon, C., Allen, B., Littlefair, C., Leston, L., Azeria, E., Petty, A., Pendlebury, D. (2026) **Thresholding species distribution models: Simple approaches for land-use planning in multifunctional landscapes.** *Methods in Ecology and Evolution*, 17, 1462–1479. <https://doi.org/10.1111/2041-210x.70226>

Allen, B.E., Dooley, J., Roberts, D.R. (2026) **Assessing Conservation Through a Habitat Lens.** Alberta Biodiversity Monitoring Institute (ABMI), Edmonton, Alberta, Canada. <https://abmi.ca/publication/679.html>

Allen, B.E., Holden, E., Dillegard, E., Dyck, N., Cunha-Cordiero, M., Roberts, D.R. (2025) **Characterizing Biodiversity Impacts of Saskatchewan's Beef Industry.** Alberta Biodiversity Monitoring Institute, Edmonton, Alberta, Canada. <https://abmi.ca/publication/674.html>

Becker, M., Dickie, M., Kohler, M., & Roberts, D.R. (2026) **Local-Scale Mammal Response to Oil Sands Stressors: Results from 2021-24 BADR data collection.** Alberta Biodiversity Monitoring Institute (ABMI), Edmonton, Alberta, Canada. Technical report submitted to the Oil Sands Monitoring Program (OSM).

Brown, C.*, Holden, E.M.*, Cahill, J.F. Jr. (2025) **Can we call a plant plastic? Nutrients and neighbours induce idiosyncratic plastic responses in traits but the direction of response is linked to plant performance.** (* = co-first authors). *Oikos*, e11921. <https://doi.org/10.1002/oik.11921>

Haughland, D.L., Maloles, J.R., Selva, S.B., Thauvette, D., McMullin, R.T., Porter, E., Bull, R.D., Williston, P., Lane, C. (2025) **Calicioids of Alberta, Canada, with descriptions of three new genera and 13 new Sphinctrinaceae species to science.** *The Bryologist* 128(4): 607-726.

Holden, E.M., Cahill, J.F. Jr. (2026) **Community height and social context drive gains while resources drive losses in a native grassland plant community.** *Ecology*. 107(3): e70347. <https://doi.org/10.1002/ecy.70347>

Horne, L. G., DeMars, C., Avgar, T., Dickie, M., Becker, M., Serrouya, R., & Boutin, S. (2026). **Assessing potential impacts of black bear predation on neonatal mortality in boreal caribou.** *The Journal of Wildlife Management*, 90(1), e70138. <https://doi.org/10.1002/jwmg.70138>

J. Huus, K. Kelly, E.M. Bayne, E.C. Knight. (2025). **HawkEars: a regional, high-performance avian acoustic classifier.** *Ecological Informatics* <https://doi.org/10.1016/j.ecoinf.2025.103122>

Knight, E.C., B.P.M. Edwards, D.A. Yip, T. Rhinehart, S. Lapp, S.L. Van Wilgenburg, D. Iles, J. Kitze, E.M. Bayne. (2026) **Insights into detection probability of forest bird surveys from comparison of in-person and passive acoustic monitoring point counts.** *Ornithological Applications* 128(2):1-17. <https://doi.org/10.1093/ornithapp/duaf082>

Merchant, M.A., Evans, J., Edwards, R., Boychuk, L., Simms, J., Hird, J.N., Dooley, J., Doan, T., Toni, S., Cobbaert, D., Cooper, A., Mahoney, C., Mayner, K., Nasr, M., Skakun, N., Trites-Russell, M., McClain, C.N. (2026) **AI-Driven Wetland Mapping Across Diverse Natural Regions of Alberta, Canada, Using Combined Airborne and Satellite Remote Sensing Data**. Remote Sens. 2026, 18, 507. <https://doi.org/10.3390/rs18030507>

Pardo-De la Hoz, C.J., Haughland, D.L., Thauvette, D., Toni, S., Goyette, S., White, W., Medeiros, I.D., Cornet, L., Dvořák, P., Garfias-Gallegos D., Miadlikowska, J., Magain, N., Lutzoni, F. (2025) **Rapid Radiations Outweigh Reticulations During the Evolution of a 750-Million-Year-Old Lineage of Cyanobacteria**. Molecular Biology and Evolution, Volume 42, Issue 10, October 2025, <https://doi.org/10.1093/molbev/msaf244>

Patterson, L., Casey, B., Bayne, E. (2026) **Is it a mixedwood? Spatially-explicit responses to gradients in forest structure and composition in three boreal bird species**. Landscape Ecology. <https://doi.org/10.1007/s10980-026-02369-0>

Roberts, D.R., Kohler, M., Angell, M., Bayne, E., Becker, M., Fisher, T., Foster, K., Godwin, C., Herdman, E., Knight, E., Pauli, B. (2026) **An Integrated Summary Report on OSM's Before-After Dose-Response Monitoring Design: An updated overview, key findings, and future opportunities for BADR**. Alberta Biodiversity Monitoring Institute (ABMI), Edmonton, Alberta, Canada. Technical report submitted to the Oil Sands Monitoring Program (OSM).

Vinebrooke, R., Gregory, F., DeLancey, E.R., Hird, J.N., Cook, J., Hughes, M., Ironside, S., Layugan, R., Peter, B., Sinn, C., Surtees, R., Waterous, H., Graydon, J.A. (2025) **Towards a Ground-Truthing of Satellite Imagery to Track Harmful Algal Blooms in Canadian Prairie Lakes**. Canadian Journal of Fisheries and Aquatic Sciences. 82: 1-15. <https://doi.org/10.1139/cjfas-2024-0374>

Wanigasinghe, I.M., Haughland, D.L., Pyle, L.A., Villeneuve, M.A., Nielsen, S.E., (2026) **Evaluating species identification apps as a tool for small plot-based surveys of vascular plants in Alberta, Canada**. AoB Plants. <https://doi.org/10.1093/aobpla/plag020>

Yip, D.A, E.C. Knight, E.M. Bayne. (2025) **Accounting for sound characteristics and vegetation type reduces detection probability error in acoustic surveys**. Ornithological Applications 128(1):1-12. <https://doi.org/10.1093/ornithapp/duaf059>



Sharing Information

Media coverage throughout the year highlighted ABMI research and innovation.

Visit our [Media and Story Hub](#) for more on the latest news, blogs, and events.

GOVERNMENT OF ALBERTA OFFICE OF THE CHIEF SCIENTIST

Taking to the skies for Alberta's wetlands

How advancements in remote sensing are helping to achieve accurate wetland mapping data which are critical to making informed planning and management decisions. (February 2, 2026) · [Read Article](#)

UNIVERSITY OF ALBERTA / THE QUAD

Innovator spotlight: Elly Knight

An interview with the ABMI's recognized senior biodiversity scientist Elly Knight. (November 20, 2025) · [Read Article](#)

GLOBAL NEWS

Canadian scientists discover 13 new fungi species in Alberta forests

New lichen species (calicoids) were discovered in Alberta's forests thanks to years of detective work by ABMI scientists. (November 9, 2025) · [Watch Report](#)

CBC EDMONTON

Researchers, hunters study how oilsands noise might impact moose hunting

A focus on the Moose Calling Pilot Project, a collaboration between the Conklin Resource Development Advisory Committee, the U of A, and the ABMI. (November 3, 2025) · [Read Article](#)

ABMI BLOG

Improved habitat monitoring in Alberta using lidar and machine learning in wellsite identification

How scientists at the ABMI are using emerging technologies to accurately delineate boundaries of wellsites across the province enabling data-driven decision-making for land management and conservation efforts. (October 9, 2025) · [Read Blog](#)

UNIVERSITY OF ALBERTA / THE GATEWAY

Listening to the wild: Tracking wildlife with HawkEars

Wildlife monitoring and innovation: featured HawkEars and ABMI's bioacoustics research. (September 2, 2025) · [Read Article](#)

CBC EDMONTON AM

AI for the birds

An interview with computer scientist Jan Huus and bird researcher Elly Knight (ABMI) about HawkEars and how it's part of the rapid evolution of wildlife research and monitoring methods. (July 1, 2025)

UNIVERSITY OF ALBERTA / FOLIO

Tuning in to the sounds of Canada's wildlife

How AI is transforming how researchers monitor and study birds and amphibians with HawkEars, a software package that analyzes audio recordings to identify bird and amphibian species. (June 30, 2025) · [Read Article](#)

CANADIAN PRESS

'Everyone's neighbour is a magpie': Edmonton makes magpies official city bird

The ABMI's expertise in urban wildlife focusing on the ubiquitous magpie. (July 9, 2025) · [Read Article](#)

Financial Statements

Year ended March 31, 2026

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of Alberta Biodiversity Monitoring Institute

Opinion

The summary non-consolidated financial statements, which comprise the non-consolidated summary statement of financial position as at March 31, 2026, and the non-consolidated summary statements of revenues and expenditures and changes in net assets for the year ended March 31, 2026 and are derived from the audited non-consolidated financial statements of Alberta Biodiversity Monitoring Institute for the year ended March 31, 2026.

In our opinion, the accompanying non-consolidated summary financial statements are a fair summary of the audited non-consolidated financial statements, in accordance with Canadian Accounting Standards for Not-for-Profit Organizations.

Summary Financial Statements

The summary non-consolidated financial statements do not contain all the disclosures required by Canadian Accounting Standards for Not-for-Profit Organizations. Reading the summary non-consolidated financial statements and the auditor's report thereon, therefore, is not a substitute for reading the audited non-consolidated financial statements and the auditor's report thereon. The summary non-consolidated financial statements and the audited non-consolidated financial statements do not reflect the effects of events that occurred subsequent to the date of our report on the audited non-consolidated financial statements.

The Audited Financial Statements and Our Report Thereon

We expressed an unmodified audit opinion on the audited non-consolidated financial statements in our report dated September 10, 2026.

Management's Responsibility for the Summary Financial Statements

Management is responsible for the preparation of the summary non-consolidated financial statements in accordance with Canadian Standards for Not-for-Profit Organizations.

Auditor's Responsibility

Our responsibility is to express an opinion on whether the summary non-consolidated financial statements are a fair summary of the audited non-consolidated financial statements based on our procedures, which were conducted in accordance with Canadian Auditing Standard (CAS) 810, *Engagements to Report on Summary Financial Statements*.

Edmonton, Alberta
September 10, 2026


CHARTERED PROFESSIONAL ACCOUNTANTS

ALBERTA BIODIVERSITY MONITORING INSTITUTE
Non-Consolidated Statement of Financial Position
March 31, 2026

	2026	2025
ASSETS		
CURRENT		
Cash	\$ 482,474	\$ 173,328
Short term investments	1,741,170	870,417
Accounts receivable	4,764,152	4,079,600
Goods and services tax recoverable	-	3,755
Prepaid expenses	48,837	106,207
Due from related party	214,720	215,003
	7,251,353	5,448,310
CAPITAL ASSETS	171,590	342,048
INTANGIBLE ASSETS	48,813	89,420
LEASE DEPOSIT	22,326	22,326
	\$ 7,494,082	\$ 5,902,104
LIABILITIES AND NET ASSETS		
CURRENT		
Accounts payable	\$ 1,169,768	\$ 1,061,792
Goods and services tax payable	\$ 8,952	-
Deferred contributions	510,768	1,043,989
Due to related party	3,418,501	62,491
Deferred capital contributions	-	137,944
	5,107,989	2,306,216
NET ASSETS	2,386,093	3,595,888
	\$ 7,494,082	\$ 5,902,104

ON BEHALF OF THE BOARD

[Signature] Director

[Signature] Director

ALBERTA BIODIVERSITY MONITORING INSTITUTE
Non-Consolidated Statement of Revenues and Expenditures
Year Ended March 31, 2026

	2026	2025
REVENUES		
Government of Alberta	\$ 7,468,664	\$ 8,620,556
Private sector	3,928,140	1,387,668
Government of Alberta Oil Sands Monitoring	2,601,880	4,470,425
Application Centre	1,401,385	940,918
Expense recoveries	399,182	348,691
Government of Canada	298,750	827,165
Interest income	83,542	208,113
Other government funding	16,000	82,500
	16,197,543	16,886,036
STAFFING EXPENSES		
Executive Office	576,126	492,917
Science Centre	1,183,365	923,345
Information Centre	1,523,944	1,359,446
Monitoring Centre	2,149,502	2,164,747
Lab Processing and Identification Centre	1,277,670	1,349,737
Operations Centre	1,422,428	1,039,050
Geospatial Centre	1,590,220	1,328,832
Imaging Centre	1,585,762	1,508,303
Application Centre	283,093	160,820
	11,592,110	10,327,197
OPERATING EXPENSES		
Executive Office	606,851	376,694
Science Centre	34,721	59,575
Information Centre	325,896	237,724
Monitoring Centre	1,838,847	1,889,572
Lab Processing and Identification Centre	170,761	304,309
Operations Centre	643,642	320,317
Geospatial Centre	10,926	237,740
Imaging Centre	1,191,181	2,298,406
Application Centre	992,403	707,150
	5,815,228	6,431,487
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENSES	\$ (1,209,795)	\$ 127,352

ALBERTA BIODIVERSITY MONITORING INSTITUTE
Non-Consolidated Statement of Changes in Net Assets
Year Ended March 31, 2026

	2026	2025
NET ASSETS - BEGINNING OF YEAR	\$ 3,595,888	\$ 3,468,536
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENSES	(1,209,795)	127,352
NET ASSETS - END OF YEAR	\$ 2,386,093	\$ 3,595,888



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