

2023
**ANNUAL
REPORT**

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KEY BIODIVERSITY AREAS IN CANADA

Key Biodiversity Areas (KBAs) are a tool for identifying sites that contribute to the persistence of biodiversity. KBA designation can inform protected-area and land use planning, stewardship, biodiversity monitoring, and regulatory approaches to conservation. The Global KBA Standard, developed by a broad scientific partnership led by the International Union for the Conservation of Nature (IUCN), identifies sites as KBAs in the following categories, using quantitative thresholds to determine if a significant proportion of specific biodiversity elements are present at a site:

- A** – Areas with rare or threatened species and ecosystems
- B** – Areas with geographically restricted species and ecosystems
- C** – Ecologically intact areas that support large-scale ecological processes
- D** – Areas that support species in large numbers during key life stages (e.g., migration, breeding)
- E** – Areas of irreplaceable habitat

Canada was the first country in the world to develop a national KBA standard (2021), and identifies both national and global KBAs across the country to identify the most important places for Canadian and global biodiversity. Identifying KBAs in Canada is a highly collaborative, 'bottom-up' process that often involves various levels of government, Indigenous Nations and communities, environmental NGOs, academic institutions, and many other knowledge holders. Many of these collaborators participate formally in the Canadian KBA Coalition and share a common goal of protecting nature by recognizing and communicating the importance of KBAs.





PROGRESS TO DECEMBER 2023

Since the launch of the KBA Canada registry and website on October 3, 2022, the careful work of developing expert and stakeholder reviewed KBA proposals to submit to national and global bodies for acceptance has continued steadily. In Canada, a national Steering Committee accepts KBA proposals that are demonstrated to follow criteria and guidelines carefully and that have undergone peer review (see [here](#) for more about the process). Global KBAs are accepted into the World Database of Key Biodiversity Areas by a global Secretariat.

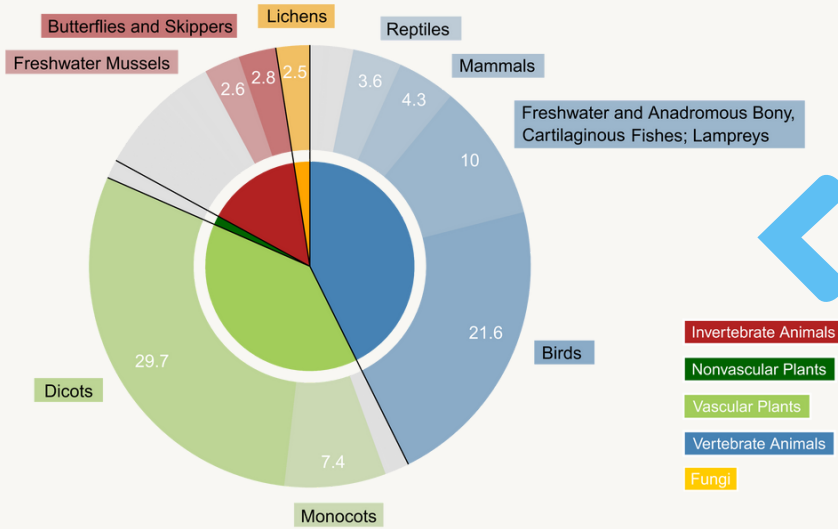
Check out the [KBA Canada Registry!](#)

Important Bird and Biodiversity Areas (IBAs)

IBAs are foundational to identifying KBAs in Canada. IBAs have similar criteria and a 25-year history supporting significant populations of at-risk species and aggregations of birds. Therefore, they are a model for stewardship in KBAs. The IBA program began in the 1980s as part of a global conservation initiative of BirdLife International. In the mid 1990s, Canadian BirdLife partners Birds Canada and Nature Canada led in identifying nearly 600 sites across Canada. Birds Canada has undertaken the assessment of [transitioning qualifying IBAs to KBAs](#) so that these sites are recognized for their importance to both birds and other biodiversity. Integrating existing sites for birds with other taxa and ecosystems, enhances the ecological value of these sites, which may advance existing management practices and stewardship through [the Caretaker Network](#) associated with many of these KBAs.

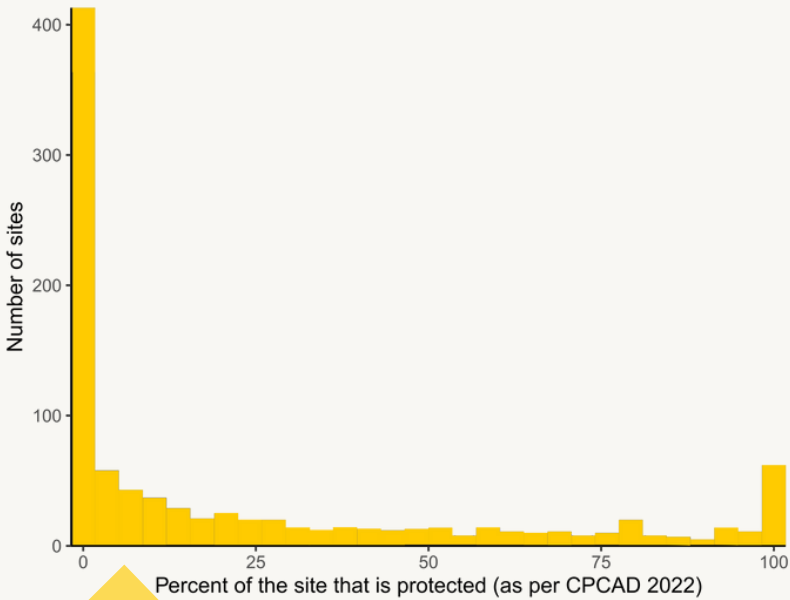
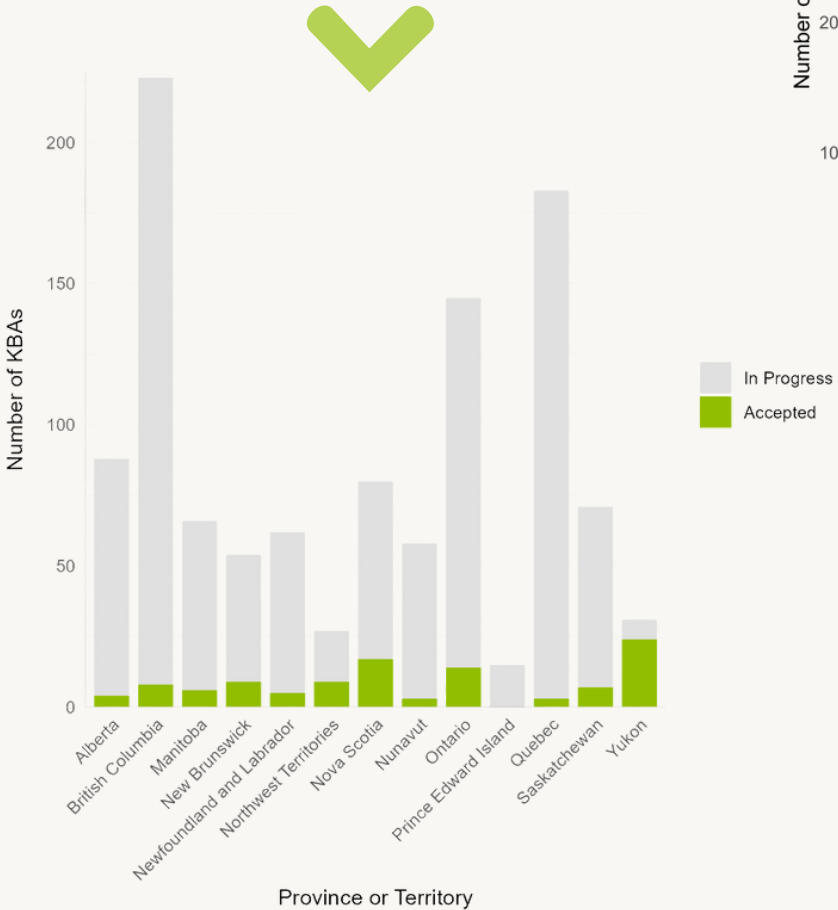


This map shows both 'accepted' KBAs that have been published on the national KBA registry and KBAs in progress across the country, with proposals in development or review. Most KBA proposals will be completed by June 2024, although the period of review for these KBAs may last for several months beyond that. The following page contains figures showing key statistics describing progress and the current status of KBA identification work.



A taxonomic breakdown of species and infraspecies meeting KBA criteria. To date, 661 taxa meet KBA criteria in Canada. Numbers in the pie chart represent percentages of the total number of taxa belonging to each taxonomic group. Note that KBAs can also be identified for ecosystems, which are not represented in this figure.

The figure below shows the number of accepted and in-progress KBAs in every province and territory.



Are you wondering about the protection status of KBAs in Canada? This histogram above shows of the number of KBAs by the percentage of the site that is protected and conserved. Protected and conserved areas include national parks, provincial parks, Indigenous Protected and Conserved Areas, land trust properties, and other forms of conservation (CPCAD, updated in 2022). About 40.5% of all KBAs have less than 1% of their area covered by protected areas, whereas 5.9% of KBAs are more than 99% protected and conserved.

CANADA'S FIRST ECOSYSTEM KBAS

In 2023, the first ecosystem-triggered KBAs were proposed: a total of seven ecosystem KBAs - three for Great Lakes Alvar, one for Great Lakes Dunes, two for Oak-Limestone Woodlands, and one for Manitoba Alvar. All of these sites are currently in the review stage, and all but one also contain species that trigger KBA criteria. The continuing development of the Canadian National Vegetation Classification system will provide the data needed to identify additional KBAs for other rare or threatened ecosystem types.

Meanwhile, work on Criterion C KBAs - large areas with globally outstanding ecological integrity - has continued. In Canada, these highly intact landscapes are predominantly found in the north and most occur on Indigenous traditional territories. A process is being developed to make sure that ecological integrity is defined, measured, and understood from Indigenous perspectives, using both scientific and biocultural indicators that are most relevant to understanding landscape health and integrity.

Marble Ridge Alvar

Manitoba | Očhéthi Šakówiŋ, Cree, Anishiniimowin (Oji-Cree), Anishinabewaki ᐱᓄᓂᐱ ᐱᓄᓂᐱ, and Michif Piyii (Métis) territories | Treaty 1 (Peguis First Nation) and Treaty 2



The exposed bedrock and thin soil layer of Marble Ridge Alvar.

Criteria Met: Global – Threatened ecosystem

Biodiversity Element Trigger(s): Manitoba Alvar

Site Description: Alvar ecosystems are found on flat, near-surface bedrock that restricts moisture drainage, causing extreme seasonal variations from flooding to drought. This results in unusual vegetation communities not found elsewhere, including rare and endemic species. Only about 40 km² of Manitoba Alvar is found in the world, with the Marble Ridge site containing over 60% of the entire ecosystem extent. The biggest risks to this currently unprotected ecosystem type are quarrying, shrub encroachment, and the introduction of invasive species.



UNDER THE HOOD

THE BIODIVERSITY DATA FUELING KBA IDENTIFICATION

In 2023, the number of species observations stored in our centralized workspace database hit 30,000,000 records, thanks to tireless data gathering efforts led by NatureServe Canada. The data originates from over 250 data sources from Canada and around the world. The secure storage of this wealth of biodiversity information is made possible by a rigorous system of data access permissions, first conceived in the early years of the program. NatureServe Canada capped off 2023 with a revamp of this permission system, ushering in capabilities for even more data hosting flexibility and the accommodation of new data providers in 2024.

Additionally, the use of NatureCounts (a Birds Canada-led warehouse of data gathered by volunteers and scientists that is not included in the above database) has been especially helpful for transitioning Important Bird and Biodiversity Areas to KBAs. Around 28,000,000 observations fall within existing IBAs across Canada, most coming from eBird, but also from other Citizen Science programs like Christmas Bird Count and Breeding Bird Atlases. Over 800 different data sources have contributed the bird data used in this part of the project.

THE KBA CANADA REGISTRY

After the formal launch of our website and data platform, the KBA Canada Registry, in October 2022, this year also saw the addition of several new Registry features and enhancements. Among those are the ability to view the quantitative data underpinning each KBA assessment and a refresh of the data download functionality. A number of tools were also built in 2023 to support the Registry, including a data pipeline that automates the weekly import of newly accepted KBAs. Together, these developments will ensure that the most up-to-date KBA information is accessible to all for years to come.

Download KBA data from www.kbacanada.org.

Lake Utopia Complex

New Brunswick | Peskotomuhkati First Nation, the Abenaki / Abénaquis, and the Wabanaki (Dawnland) Confederacy) territories | Treaties of Peace and Friendship



Criteria Met: National – Threatened species

Biodiversity Element Trigger(s): Rainbow Smelt (*Osmerus mordax* pop. 2), Rainbow Smelt (*Osmerus mordax* pop. 3)

Site Description: Lake Utopia's morphologically, ecologically, and genetically unique pair of Rainbow Smelt populations behave as separate species. This lake complex in southwestern New Brunswick is the only place in the world where these rainbow smelt are found.

In The News:

- [2 unique rainbow smelt populations make Lake Utopia special in Canada – CBC](#)

ECOSYSTEM-BASED AUTOMATED RANGE (EBAR) MAPPING PROJECT

NatureServe Canada is continuing to produce expert-validated Ecosystem-Based Automated Range (EBAR) maps, with 190 new maps published to the EBAR web platform in 2023, of which 143 were developed for KBA priority species. Another 608 maps, including 388 for KBA priority species, are currently undergoing expert review. Many range maps were integrated into KBA analyses in 2023, and four EBAR maps fed directly into KBA assessments, providing the range estimates required to qualify four taxa as KBA triggers.

Visit the [Frequently Asked Questions \(FAQ\) section](#) of the KBA website to learn more about KBAs in Canada!

What To Remember About KBAs

- KBAs represent an assessment using data and expert input to identify places that are critical for the persistence of biodiversity at ecosystem and species levels.
- KBA assessment is regionally-focused to access the best data and expertise, and nationally coordinated for consistency, quality control and comprehensiveness.
- KBAs are identified using quantitative criteria with comprehensive guidelines for application, and include all taxa and ecosystems.
- KBAs are broadly recognized across the global conservation community.
- The KBA process in Canada strives to be inclusive and transparent, and welcomes all forms of knowledge and information.
- KBAs are a building block for conservation – they don't provide any protection or management requirements on their own, but the designation is used to guide and support conservation planning and actions on the ground
- The Canadian KBA initiative began in 2019 and is funded by grants from foundations, governments, and in-kind contributions from its network of partners.
- Beyond the identification of KBAs, the end goal of the KBA initiative is to ensure effective and locally appropriate monitoring and stewardship of biodiversity, and a halt to biodiversity loss.

STAKEHOLDER REVIEW AND QUALITY CONTROL

In 2023, over 100 KBAs entered the second review stage that targets stakeholders and rights holders, after undergoing technical review and a quality control check. Our objective is to create space for all interested parties to have the opportunity to learn about the proposed site and participate in the KBA process. Some sites such as the candidate Christmas Hill KBA in Victoria, British Columbia, received feedback from over 20 individuals from various organizations.

Frank Lake (South)

Alberta | Tsuut'ina First Nation, Kainai First Nation, Siksika First Nation, Piikani First Nation, Stoney Nakoda First Nation and the Métis Nation of Alberta territories | Region 3 within the historical Northwest Métis homeland

Criteria Met: Global – Threatened species, National – Key aggregation area of species

Biodiversity Element Trigger(s): Bank Swallow (*Riparia riparia*), Franklin's Gull (*Leucophaeus pipixcan*), Trumpeter Swan (*Cygnus buccinator*)

Site Description: Frank Lake, previously an Important Bird and Biodiversity Area, is considered the most important wetland in southwestern Alberta for swallows and breeding water birds. This KBA also supports significant numbers of waterfowl and shorebirds during both spring and fall migration.

In The News:

- [Foothills Solar Project Threatens Frank Lake Wildlife – Alberta Wilderness Association](#)
- [Foothills Solar Project: A Historic Win for Frank Lake and Birds – Birds Canada](#)

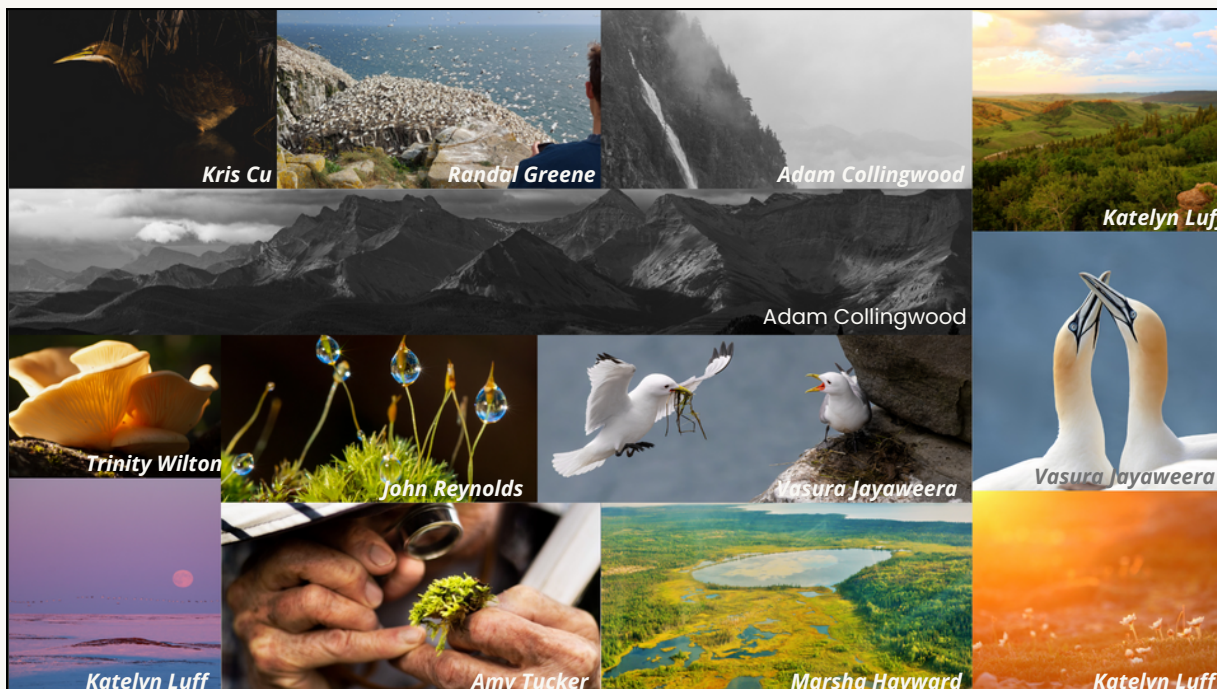




COMMUNICATIONS, OUTREACH & ENGAGEMENT

ENGAGING PARTNERS AND COMMUNITIES AROUND KBAS

To date, thousands of individuals have been involved in KBA Canada, although it is hard to track numbers due to work proceeding in all regions of Canada. Stakeholder, rightsholder, and community outreach is a large part of KBA Canada’s work, and is essential for facilitating collaborative identification of KBAs and ensuring that all potential end-users are aware of KBA information. The KBA Canada Secretariat’s commitment to this was exemplified in 2023 through various projects promoting community science, such as the creation of the [KBA Canada iNaturalist project](#), and working with [Canadian Wildlife Federation](#) to promote visiting urban KBAs [during the 2023 City Nature Challenge](#). Both projects centered on connecting people with nature, and fostering a stronger connection between communities and KBAs near them. The 2023 KBA Canada Photo Contest proved successful at [showcasing peoples connections to nature](#) and will be repeated in future years.



Congratulations
to our Photo
Contest winners!
 Kris Cu - Vasura
 Jayaweera - John
 Reynolds -
 Katelyn Luff -
 Trinity Wilton -
 Marsha Hayward
 - Adam
 Collingwood -
 Amy Tucker -
 Randal Greene.

Collaboration also took center stage as we co-proposed many KBAs with partners this year. Ontario's Ojibway Prairie Complex and Greater Park Ecosystem KBA was proposed with partners at [Caldwell First Nation's Environment and Consultation Department](#) and [Wildlife Preservation Canada](#), while nominating Yukon's Yat'aayi Héen KBA was a collaborative joint effort with [Taku River Tlingit First Nation](#).

KBA Canada also hosted several in-person KBA events to connect directly with partners and experts, including an expert technical workshops at les Îles-de-la-Madeleine (Magdalen Islands) led by the Québec KBA team at Université de Sherbrooke, a workshop on mapping KBAs in Indigenous Lands organized with the [kihci-okâwîmâwaskiy \(Great Mother Earth\) Knowledge Centre](#) at University of Saskatchewan, and working with [BC Nature](#) to sponsoring several tours at the [Okanagan Similkameen Conservation Alliance's 2023 Meadowlark Festival](#).

COMMUNICATIONS AND MEDIA HIGHLIGHTS

Stories about KBAs were published in over 50 news articles this year, reaching an estimated 25.2 million people. Some of the highest profile pieces included a [BBC News video](#) and [Canadian Geographic article](#) on the Castleguard Cave KBA identified with [Parks Canada](#), but dozens of local outlets across the country also published pieces on KBAs near them.

Castleguard Cave

Alberta | Treaty 8 Territory

Criteria Met: Global – Threatened species, Global – Geographically restricted species

Biodiversity Element Trigger(s): Castleguard Cave Stygobromid (*Stygobromus canadensis*)

Site Description: Castleguard Cave was formed nearly a million years ago, influenced by glacial melt waters. Located within Banff National Park, this KBA is Canada's longest known cave system and home to a unique freshwater crustacean whose ecology may give us a glimpse into what life was like during past ice ages.

In The News:

- [Castleguard Cave recognized as a globally significant Key Biodiversity Area - Canadian Geographic](#)
- [Banff National Park cave creature exists 'no where else': Parks Canada - CTV News Calgary](#)
- [Tiny creature unlocks life before ice age - BBC](#)



An example of the rock formations found within Castleguard Cave.

KBA Canada's own communications thrived this year as well. The [KBA Canada newsletter](#) reached a new peak of 504 subscribers in April. Despite a tumultuous year for X (previously Twitter) [KBA Canada's profile](#) on this platform made just under 1 million impressions this year and gained about 100 new followers. KBA Canada's [Instagram profile](#) has a smaller reach, only reaching an estimated 10k accounts this year, but is reaching a key youth demographic, with 50% of followers being under the age of 35.

Supporting community-led monitoring in KBAs by coastal First Nations in B.C.

One of the most challenging regions for biodiversity monitoring falls along the Pacific coastline, where rough weather and remote access make long-term monitoring a huge effort. KBA Canada's provincial partner [B.C. Nature](#) works with coastal First Nations communities and local naturalist clubs to access these areas for monitoring and to gather data that can support KBA identification. In April, surveys with the Kitasoo/Xai'xais Stewardship Authority (KXSA) during the Pacific Herring spawn demonstrated the immense global significance of Gitdisdzu Luyeks to migratory bird populations: Surf Scoter counts of over 40,000 individuals, or almost 10% of every Surf Scoter on the planet, as well as KBA threshold counts of Short-billed Gull and Iceland Gull. This collaborative work has led to the first Indigenous-nominated KBA on the Pacific coast, which in turn supports KXSA's efforts to have the bay recognized as a Marine Protected Area.



Some of the tens-of-thousands of Surf Scoters counted during month-long joint surveys between KXSA and B.C. Nature.

KBA IMPLEMENTATION INTO CONSERVATION PLANS AND POLICIES

This year, KBAs were included in several significant plans and policies, at national and provincial levels. Environment and Climate Change Canada focused on KBAs in their "[Protected Areas Program: Strategic Plan and Vision to 2030](#)" and in the [interim 2030 National Biodiversity Strategy](#). Both documents highlight the role of KBAs, in conjunction with other sources of information, in helping identify priority areas for protection and stewardship while working alongside provincial/territorial, municipal, private, and Indigenous organizations.

In the provinces, [Ontario's Biodiversity Strategy for 2023-2030](#) highlights a role for KBAs, specifically as a tool for informing opportunities for conservation. KBAs are helping NGOs and communities respond to concerns with development in [Alberta](#) and [B.C.](#), and in Atlantic Canada, KBAs are informing Canadian Wildlife Service's approach to offshore wind regional assessments. KBA Canada commissioned an end-user assessment for KBA information in 2023 and findings from this will be shared in early 2024 to guide future discussions with key end-users, with the objective of promoting understanding and use of KBA information to improve biodiversity conservation decisions.

LOOKING AHEAD & THANK YOU!

The intensive phase of proposal development for new KBAs for species will be completed in 2024 in all jurisdictions, with some ecosystem-triggered KBAs remaining to be identified. KBA Canada will remain in place in perpetuity, as KBA information will need to be managed and updated for decades to come, and new KBAs will be identified as biodiversity is surveyed and the distributions of species and ecosystems are better understood. KBA Canada will begin to focus more on monitoring and stewardship, and will look to its network of partners on the ground to support these efforts. Engagement with Indigenous communities and local stewardship groups around each site will be a key step in the development of a broader KBA caretaker network that builds on the existing network coordinated by Birds Canada to include all KBAs and all types of biodiversity found within them.

Thank you to all organizations, communities, Indigenous Nations, governments and individuals that have participated in KBA work, to the KBA Steering Committee and expert advisors, and to the committed staff leading KBA identification and outreach work. Visit the KBACanada.org website to learn more about who is involved.



About KBA Canada: Coordinating KBA Canada is the work of a joint Secretariat comprising Birds Canada, NatureServe Canada, and Wildlife Conservation Society Canada. An enormous network of partner organizations and individuals have also contributed to KBA work, and a Steering Committee meets once per month to provide guidance to the initiative. The Secretariat is responsible for gathering and organizing data and information from the network, communicating about the process and results, developing long term infrastructure for data management and sharing, and coordinating governance of the process to ensure program outputs are seen as highly credible, legitimate and relevant.



www.KBACanada.org



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