



# Our BiodiverCity: How Are We Doing?

City of Calgary

BiodiverCity Advisory Committee Report 2025:  
Evaluating Calgary's 10-Year Biodiversity Strategy



# Report On Our BiodiverCity: How Are We Doing?

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Special thanks to the members of the Calgary BiodiverCity Advisory Committee who provided their guidance, expertise, and editing skills in the production of this report.

## LAND ACKNOWLEDGEMENT

The BiodiverCity Advisory Committee acknowledges we live, work and gather on the land and sacred sites of the Indigenous peoples who have lived on and stewarded these lands since time immemorial. We are thankful for the enduring gifts of this land and rivers, our sources of life. We also acknowledge our precious plant and animal relations that live and thrive in Calgary, both as permanent residents and visitors coming and going through the seasonal passage of time.

Calgary is located within the ancestral lands and traditional territories of the Siksikaitstapi, comprised of the Kainai, Siksika, Piikani and Amskaapipiikani First Nations, the Chiniki, Bearspaw and Goodstoney First Nations who together form the the Îethka Nakoda Wîcastabi First Nations, and the Tsuut'ina First Nation of the Great Dene Nation. These lands are also home to the Métis Nation of Alberta Otipemisiwak people of Battle River Territory District 5 Nose Hill and District 6 Elbow. We further acknowledge all First Nations, Inuit and Métis people who have made Calgary their home.



## EXECUTIVE SUMMARY

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Calgary is ranked in the top five most livable cities in the world. Calgary owns much of this liveability to nature: natural processes are responsible for contributing to our relatively clean water and air. Calgary also provides its citizens with many opportunities to enjoy the benefits of nature, whether by taking a stroll through the park, breathing in the invigorating scent of wildflowers and trees, enjoying a picnic with friends and family, or catching a glimpse of our wonderful urban wildlife, like the white-tailed deer. No matter where you live in Calgary, nature plays an important role in your community's health and well-being.

What do you think of when you think of nature? Do you think about the birds you see flying over your house, or the multicoloured leaves that crunch underfoot in autumn? Maybe you think of bees buzzing in your garden in the spring, pollinating flowers and creating the vibrant floral displays we enjoy throughout the summer. All these plants and animals (as well as people!) make up an important part of nature called biodiversity. As it turns out, this web of life, or biodiversity, is a key component that makes our city so liveable.

Biodiversity loss has been identified by the World Economic Forum as the second-highest global risk to humanity in the next ten years, alongside ecosystem collapse and extreme weather events. Rising to this threat, The City developed a plan in 2015 to support biodiversity, entitled *Our BiodiverCity: Calgary's 10-Year Biodiversity Strategic Plan, 2015 to 2025*. Alongside this document, City Council appointed the BiodiverCity Advisory Committee (BAC) to provide strategic advice and feedback to Council on biodiversity-related programs, which is made up of Council-appointed City Administration staff and citizens who are subject matter experts. This year in 2025, the *Our BiodiverCity* strategic plan's term comes to an end, and with it the BiodiverCity Advisory Committee. Reflecting on the past ten years, the committee has assessed The City's progress towards these strategic goals and created this report for both Council and our fellow citizens. In our assessment, The City has made good progress on some of the commitments laid out in *Our BiodiverCity*, while falling short of several others and failing to meet the vision described in the strategic plan. The scorecard below (Table 1) illustrates some of these highlights.

Table 1: BAC Scorecard for The City of Calgary’s Progress Towards Our BiodiverCity

Strategy	Grade	BAC Assessment and Advice	Report Reference
“Our BiodiverCity aims to provide a framework for City staff to foster more resilient... neighbourhoods that support positive outcomes for Calgarians...”*	A -	The four-year service plan in the 2023 -2026 budget for Climate and Environmental Management has effectively increased resources for program development and delivery.	Section 4
		Continue effective funding levels for staff and resources to enable staff to both protect and increase biodiversity.	
Deliver a city-wide ecological literacy program	A -	Excellent eco-literacy programs, but these programs are not having a strong enough impact on today’s decision-makers.	Appendix 1
		City councillors need to be leaders, championing eco-literacy and collaborating with landowners and developers to increase and protect biodiversity.	
Develop habitat restoration program	B	Diverse and effective programs for habitat restoration and connectivity on City property.	Appendix 2
		Include design guidelines for innovative lighting solutions in open spaces to reduce light pollution and its impacts on wildlife.	
Complete and track restoration targets	D +	Accomplished only 53% of restoration targets set in 2015. Council voted against a crucial roadway rights-of-way restoration program in 2025. However, a four-year service plan in the 2023 – 2026 budget for the Habitat Restoration Annual Investment Program shows renewed commitment.	Appendix 2
		Continue public and decision-maker education on the importance of habitat restoration and ensure adequate funding for restoration projects.	
Implement strategies to reduce invasive species and their spread in Calgary	C -	Several policies and tools have been developed to track and control invasive species, but their spread continues.	Appendix 2
		Further capacity building for invasive-species education, tracking and eradication.	
Instill biodiversity values across The City of Calgary	C -	Not yet realized despite strong efforts by Administration, as revealed in recent Council decisions on land development proposals and on roadway rights-of-way naturalization.	Appendix 3

		Orient incoming city councillors to the impact of their decision making on urban biodiversity, as well as why healthy biodiversity is crucial.	
Initiate a biodiversity steering committee.	F	The BiodiverCity Advisory Committee has been terminated in 2025 despite continuing global and local concerns and priorities around biodiversity loss.	Section 4 and Appendix 3
		Reinstate a biodiversity advisory committee and provide training to members on how to effectively engage with Council to provide strategic advice.	
Develop policies and guidelines to ensure people are allowed equitable access to areas of biodiversity	C -	Analysis and mapping completed. Policies proposed in the Calgary Plan and in Connect: Calgary's Parks Plan, but not yet approved.	Appendix 3
		Approve policies within the Calgary Plan and in Connect: Calgary's Parks Plan.	
Develop and implement policies and guidelines to conserve and connect ecological corridors through a city-wide review of existing and proposed open spaces	B -	Comprehensive mapping of Calgary's Ecological Network is included in the Calgary Plan. Council has delayed the review and approval of the Calgary Plan until 2026.	Appendix 4
Map and implement a framework to acquire land of high ecological and cultural value that cannot otherwise be protected through the subdivision process	D +	Many hectares of natural ecosystems have been lost in the past 10 years due to land development. However, a tracking tool has been developed, and The City has committed to targets for protection.	Appendix 4
		Prioritize the protection of environmentally significant areas in the land development process. Approve Calgary Plan provisions for an indicator to track natural areas protected, especially those connected to the Ecological Network. Use Conservation Reserve provisions of the Municipal Government Act and create a conservation fund to purchase natural areas. Collaborate with neighbouring municipalities and NGOs to protect environmentally significant land within and outside Calgary.	

\* “Our BiodiverCity aims to provide a framework for City staff to foster more resilient, biologically diverse open space and neighbourhoods that support positive outcomes for Calgarians, visitors, wildlife and plant communities.” *Our BiodiverCity: Calgary’s 10-year biodiversity strategic plan, 2015.*

As Calgarians, we are proud to call this city our home, and of our ranking amongst the world's top five most liveable cities. *Our BiodiverCity* demonstrates The City's commitment to maintaining our position on this list and building a city where people can thrive alongside nature. As humans, we rely on healthy biodiversity for our own health and well-being. That is why we are calling on The City of Calgary to more fully adopt the strategies listed in the *Our BiodiverCity* strategic plan while collaborating with local environmental NGO's, landowners, neighbouring municipalities, and land developers. Together, Calgary can become a leader in biodiversity, keeping our city healthy, liveable, and thriving for generations to come.

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## 1 INTRODUCTION

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Calgary is ranked in the top five most livable cities in the world\*. As Calgarians, The Mayor, City Council (Council), and the people who live here are proud of our reputation. This city attracts many investment opportunities, businesses, tourists, and people looking for a good place to settle down in, raise their families, and build their lives. In Calgary, people benefit from the services that a healthy ecosystem provides, including clean air and water. Our city has many parks and pathways, inviting Calgarians of all ages to get out and explore their city. In all seasons, you can see people out enjoying the beauty of nature, whether you prefer a gentle walk in the park, going skating at the pond, taking photos of Calgary's urban wildlife, enjoying a picnic with your friends and family, or listening to the cheery chirp of birdsong from your backyard. Our city is full of vibrant, engaging, revitalizing life – which is actually what makes it so liveable.

The term biodiversity is short for biological diversity, which refers to the variety of life on Earth. Biodiversity includes everything from people as well as different species of animals and plants, to the variety of ecosystems that function to support life on our planet. In recognition of how crucial biodiversity is to human health and well-being, as well as in response to the growing local and global threat of biodiversity loss, The City of Calgary (The City) adopted a strategic plan in 2015 to support biodiversity, entitled *Our BiodiverCity: Calgary's 10-year biodiversity strategic plan, 2015 to 2025*. Additionally, to provide strategic advice and feedback to City Council on related city programs, Council appointed City Administration (Administration) staff and citizens who were subject matter experts to the BiodiverCity Advisory Committee (BAC).

While engagement with Council has been extremely limited, throughout its existence the BAC has been a space for Administration to meet with Calgarians who are knowledgeable about biodiversity and involved in its preservation through employment, education, and/or community involvement. As the strategic plan's term comes to an end this year, and with it the BAC, the public members of the committee have assessed The City's progress in meeting the commitments outlined in *Our BiodiverCity*. Based on this assessment, we have created this report for Council and our fellow citizens, in hopes that it will provide strategic guidance and help Calgary become a global leader in biodiversity protection.



According to The City of Calgary’s year-end Corporate Risk report for 2024, our city’s reputational risk is increasing\*\*. Following through on commitments, including those outlined in the *Our BiodiverCity* strategic plan, is an important aspect of maintaining public trust in our local government. This report offers recommendations which we feel will help Council and Administration uphold those commitments.

The City’s biodiversity strategy started off strong in 2016 when Calgary signed the Durban Commitment, joining an international collective to improve biodiversity planning and management at the municipal level. Biodiversity loss is a concern at local and global levels, and this perspective is explored in more detail in Section 2: Biodiversity is a Global Imperative.

Unfortunately, The City did not maintain this level of support for biodiversity. In our assessment, we discuss how The City has fallen well short of the vision described in *Our BiodiverCity*. A scorecard rating performance against several strategic objectives is presented in Section 3: Rating The City’s Performance.

Calgarians are proud of our place as one of the top five most liveable cities in the world. We value the health, well-being, and economic benefits provided by our city’s biodiversity, and we want our city to thrive for generations to come. The BAC provides key advice to Council to enhance The City’s ability to become a leader in biodiversity protection, which can be found in Section 4: Key Advice to City Council.

In Section 5: Celebrating Calgary’s Biodiversity, we connect readers to Calgary’s vibrant biodiversity by presenting stories about four amazing animals that we share our city with: bees, birds, bats and bobcats. These Calgarian wildlife ambassadors teach us why biodiversity is important and demonstrate how The City’s decisions impact biodiversity and the lives of every Calgarian.

When *Our BiodiverCity* was approved, The City operationalized the strategy by means of biodiversity programs. The results of these programs, as well as the BAC’s suggestions for future improvement, can be found in Appendices 1 through 4.



Appendix 5 provides a list of non-governmental organizations whose work supports biodiversity protection in Calgary and surrounding areas. Over the past ten years, Calgarians from many of these organizations provided advice to the BAC, joining the committee in creating suggestions for The City to progress towards meeting the goals in *Our BiodiverCity*. While we are heartened to know that so many Calgarians will continue to advocate for biodiversity after the committee has been disbanded, it is worth noting that these organizations are independent and do not have the direct line to Administration and Council that was intended, though not fully realized, for the BiodiverCity Advisory Committee.

\* *Economist Intelligence Unit: Global Liveability Index 2024*

\*\* *Livewire Calgary, January 8, 2025*



## 2 BIODIVERSITY: A GLOBAL IMPERATIVE

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In 2016, The City of Calgary signed the international Durban Commitment to acknowledge the importance of, and accept responsibility for, sustaining biodiversity in the urban landscape. Indeed, as cities and towns grow, rapid urbanization continues to be a major factor in the loss of biodiversity worldwide.

In the nearly 10 years since The City's commitment, biodiversity loss has been recognized as one of the greatest threats facing humanity, along with climate change. These two issues are not mutually exclusive: protecting biodiversity is recognized as one of the key strategies to mitigate and adapt to climate change, and climate change is one of the biggest threats to the persistence of many species around the world. The importance of these interconnections has been noted by the World Economic Forum's "The Global Risks Report 2025", which ranks biodiversity loss and ecosystem collapse as the second-highest global risk on the 10-year horizon, after extreme weather events.\* Similarly, in 2024 Policy Horizons Canada, the Government of Canada's centre for excellence in policy foresight, rated the risk of biodiversity loss and the resulting collapse of ecosystems the second-most likely and second-most impactful future global disruption.\*\*

To address the global issue of biodiversity loss, actions have been taken around the world to protect biodiversity.\*\*\* For example, the European Union passed a law requiring its member states to commit to biodiversity initiatives that will repair damaged ecosystems across a whole continent. Also, remote sensing has confirmed that deforestation rates in the Brazilian Amazon have halved in the past two years. Closer to home, off the west coast of Canada, the Gitdizdu Lugeyeks marine protected area has become the world's first Indigenous-led 'blue park'. In 2024, at the United Nations Biodiversity Conference, COP 16, participating countries agreed to a strategy for mobilising \$200bn per year by 2030 to help developing countries conserve biodiversity. \*\*\*\*

Recognized as one of the world's most liveable cities, Calgary is uniquely positioned to increase and sustain our urban biodiversity. We have access within city limits to large



interconnected natural areas and urban parks. With continued effort, we can be part of the good news about biodiversity protection.

Calgary contains a diverse range of ecosystems. The city's west side is nestled in the Parkland Natural Region and its east side lies in the Grasslands Natural Region. Within these regions are several important and interconnecting habitat types including riparian, wetlands, grasslands, and deciduous, conifer and mixed forests. Each of these areas provides valuable ecosystem services that contribute to our overall biodiversity and ecosystem health.

Continued population growth has resulted in city sprawl in all directions, destroying much natural habitat. Unless difficult decisions are made by City Council, ecosystems and their functions will continue to be at risk. While all biomes are interconnected through biodiversity, grasslands are the most threatened and least protected biome on the globe. While generally seen as open land well suited for development, native grasslands support unique wildlife and provide mitigation for flood and drought. Much of this is lost with the development of each new Calgary neighbourhood.

Environmental legislation is in place at the federal and provincial levels that supports biodiversity protection. At the municipal level, there are policies, bylaws and plans that drive how local land is managed and how municipal development takes place. Municipalities are where “the rubber meets the road” or, more to the point, where graders ready the land for development. Municipal leaders are the final decision-makers regarding local land use and therefore have an unparalleled opportunity to influence the wellbeing of biodiversity and help resolve the global biodiversity crisis. To do so, these leaders need to factor in the importance of biodiversity, including the many species at risk that depend on habitats within city limits.

Every aspect of city management plays a role in biodiversity protection. By paying more attention to protecting and increasing biodiversity, especially critical natural habitats, Calgary can have a positive impact on a global scale.

\* *World Economic Forum: The Global Risks Report 2025, January 2025.*

\*\* *Government of Canada, Policy Horizons Canada: Disruptions on the Horizon, 2024*



\*\*\* *Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES):  
Nexus Assessment, December 2024 (Assessment Report on the Interlinkages Among Biodiversity,  
Water, Food and Health)*

\*\*\*\* *Carbon Brief on Climate, February 28, 2025*



### 3 RATING THE CITY’S PERFORMANCE

Following through on commitments is important to maintaining residents’ trust in local government. *Our BiodiverCity* was a strategic plan that promised important changes to the way The City cared for the natural environment. A strategy only guides planning and decision making. Real-world outcomes for biodiversity depend on the actions taken or not taken related to that strategy.

Through an evaluation of objectives set out in the strategy, the public members of the BAC have determined that The City has not achieved the vision described in *Our BiodiverCity*. Although The City has made good progress, there are gaps between that vision and the status of biodiversity in our city today. This is the result of decisions made by City Council, external pressures, and the actions of citizens.

Upon adoption of the *Our BiodiverCity* strategic plan, Administration developed an action plan to address the four procedures by which the plan’s vision could be realized. Their resulting activities and achievements are described in appendices to this report, along with an assessment by the BAC and specific advice on programs to maintain The City’s momentum to protect and increase biodiversity.

The following scorecard compares the initiatives suggested in the strategy to the actual outcomes over the past ten years.

Table 2: BAC Scorecard for The City of Calgary’s Progress Towards *Our BiodiverCity*

Strategy	Grade	BAC Assessment and Advice	Report Reference
“ <i>Our BiodiverCity</i> aims to provide a framework for City staff to foster more resilient... neighbourhoods that support positive outcomes for Calgarians...” *	A -	The four-year service plan in the 2023 - 2026 budget for Climate and Environmental Management has increased resources for program development and delivery.	Section 4
		Continue effective funding levels for staff and resources to protect and increase biodiversity.	



Deliver a city-wide ecological literacy program	A -	Excellent eco-literacy programs, but they have not impacted today's decision-makers.	Appendix 1
		City councillors need to champion eco-literacy and to engage landowners and developers in collaborations to increase and protect biodiversity.	
Develop habitat restoration program	B	Diverse and effective programs for restoration and connection of habitats on City property.	Appendix 2
		Include design guidelines for lighting in open spaces to reduce light pollution and its impacts on wildlife.	
Complete and track restoration	D +	Accomplished only 53% of target set in 2015. Council voted against roadway rights-of-way restoration program in 2025. However, the four-year service plan in the 2023 – 2026 budget for Habitat Restoration Annual Investment Program shows renewed commitment.	Appendix 2
		Continue public education and ensure adequate funding for restoration.	
Implement strategies to reduce invasive species and their spread in Calgary	C -	Several policies and tools developed to track and control invasive species, but their spread continues.	Appendix 2
		Further capacity building for education, tracking, and eradication.	
Instill biodiversity values across The City of Calgary	C -	Not yet realized despite strong efforts by Administration, as revealed in recent Council decisions on land development proposals and on roadway rights-of-way naturalization	Appendix 3
		Orient in-coming city councillors to the impact of their decisions on urban biodiversity, as well as why healthy biodiversity is crucial.	
Initiate a biodiversity steering committee	F	The BiodiverCity Advisory Committee has been terminated in 2025 despite continuing global and local concerns about the loss of biodiversity.	Section 4 and Appendix 3
		Reinstate a biodiversity advisory committee and provide training on engaging Council to provide strategic advice.	



Develop policies and guidelines to ensure people are allowed equitable access to areas of biodiversity	C -	Analysis and mapping completed. Policies proposed in the Calgary Plan and Connect: Calgary’s Parks Plan, but not yet approved.	Appendix 3
		Approve policies within the Calgary Plan and Connect: Calgary’s Parks Plan.	
Develop and implement policies and guidelines to conserve and connect ecological corridors through a city-wide review of existing and proposed open space	B -	Comprehensive mapping of Calgary’s Ecological Network is included in the Calgary Plan.	Appendix 4
		Council has delayed the review and approval of the Calgary Plan until 2026.	
Map and implement a framework to acquire land of high ecological and cultural value that cannot otherwise be protected through the subdivision process	D +	Many hectares of natural ecosystems have been lost in the past 10 years due to land development. However, a tracking tool has been developed, and The City has committed to a target for protection.	Appendix 4
		Prioritize the protection of environmentally significant areas in the land development process. Approve Calgary Plan provisions for an indicator to track natural areas protected, especially those connected to the Ecological Network. Use Conservation Reserve provisions of Municipal Government Act and create a conservation fund to purchase natural areas. Collaborate with neighbouring municipalities and NGOs to protect environmentally significant land within and outside the city.	

\* “Our BiodiverCity aims to provide a framework for City staff to foster more resilient, biologically diverse open space and neighbourhoods that support positive outcomes for Calgarians, visitors, wildlife and plant communities.” *Our BiodiverCity, Calgary’s 10-year biodiversity strategic plan, 2015.*

Table 3: Scoring Rubric

<b>A+</b> Exceptional	<b>A</b> Meets expectations	<b>A-</b> Some areas for improvement
<b>B+</b> Very good	<b>B</b> Solid performance	<b>B-</b> Noticeable gaps
<b>C+</b> Satisfactory	<b>C</b> Adequate	<b>C-</b> Much needs attention
<b>D+</b> Shows effort	<b>D</b> Needs improvement	<b>D-</b> Poor performance
	<b>F</b> Failing	



The advice that follows in Section 4 relates to the leadership on biodiversity protection that is needed at The City of Calgary. We hope that current and future council members take the time to learn about and understand the importance of biodiversity, to care for and protect the biodiversity within Calgary, to preserve the natural areas that Calgary is endowed with and to restore biodiversity that has been lost.

Administration has worked diligently over the last ten years to make progress in restoring open spaces and increasing eco-literacy. Although forward-looking plans, policies and bylaws have been developed and some have been approved, decisions made by Council have not moved Calgary very far in the direction envisioned in *Our BiodiverCity*. For example, Council approved the critical decision on Zoning for Housing, which supports densification, and thus biodiversity. However, opportunities to preserve important natural areas by densifying our city have been passed over in favor of continuing Calgary’s sprawl across the landscape (e.g., approval of critical habitat destruction at Ricardo Ranch, rejection of the Glenmore Landing development proposal, and postponing to 2026 the important decision on the Calgary Plan).

The BAC has encouraged and supported Administration’s programs to protect biodiversity but has not been successful in engaging Council in a way that affects changes in Council’s decision-making.

Education by Administration and advocacy by non-governmental groups has raised Calgarians’ awareness of the importance of biodiversity. However, Calgary is not yet a “BiodiverCity”.



## 4 KEY ADVICE TO COUNCIL

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As Calgary continues to grow, City Council must change how they think about biodiversity and show leadership in addressing the risk of biodiversity loss in the face of pressures to expand the city's land base. Our key advice to City Council is outlined below, organized into four distinct focus areas.

### 1. Prioritize Biodiversity Initiatives

- Councillors must understand the critical link between biodiversity, sustainable communities and economies, and the physical and mental well-being of Calgarians.
- Include eco-literacy in the orientation of new city councillors, focusing on the impact of urban development on biodiversity and the initiatives of other municipalities to protect and expand natural areas.
- Council should reverse its direction to fold biodiversity expertise into the Climate Advisory Committee. It should re-establish a biodiversity advisory committee and provide training on engaging Council to provide strategic advice.
- Develop a new 10-year biodiversity strategy with clear, measurable biodiversity objectives that are reviewed yearly. Quantifiable outcomes will provide structure and accountability, which were lacking in the previous strategic plan.
- Ensure Council decisions are based on approved City policies and plans that prioritize building a city that thrives in balance with nature.
- Approve the Calgary Plan and update its language to specify policy requirements rather than recommendations.
- Approve Connect: Calgary's Parks Plan.
- Maintain consistent funding for biodiversity-related programs to ensure ongoing progress.
- Build eco-literacy into all City programs and projects and incorporate measures to protect and enhance biodiversity.
- Strengthen the role of Parks Ecologists to coordinate activities that will affect a park, open space, or restored natural area, ensuring that actions like maintenance, construction, restoration, and recreation do not undermine biodiversity.
- View all city activities and properties as opportunities to enhance biodiversity.



- Foster cross-department collaboration to advance biodiversity initiatives.
- Take leadership in promoting Calgary’s natural amenities and biodiversity initiatives to attract investment, industry, business, tourism, and talent to the region.

## 2. Protect Natural Areas

- Prioritize the protection of environmentally significant areas, important habitats and natural corridors. Restoration and naturalization efforts cannot replicate fully functioning ecosystems.
- Establish a dedicated conservation fund to buy and protect environmentally significant natural areas and strengthen the ecological network. Consider adding a biodiversity protection line item to property taxes.
- Utilize the Conservation Reserve provisions in the Municipal Government Act to protect those environmentally significant areas that are amenable to development and thus do not qualify to be preserved as Environmental Reserves.
- Choose higher-density development over urban sprawl, while enhancing neighbourhood character, liveability, and local biodiversity.
- Encourage peaceful human and wildlife co-existence by connecting natural ecosystems for wildlife movement through the protection of environmentally significant areas during land development and restoration.
- Collaborate regionally with other municipalities and the Province to expand natural corridors for biodiversity protection. Imagine a natural corridor extending from High River, Okotoks, Bragg Creek, Chestermere, and Cochrane, through Calgary to Airdrie.
- Continue the important work of natural asset valuation to increase our understanding of the economic values of:
  - Carbon sequestration
  - Pollination of natural areas, gardens, agricultural crops, and grazing lands
  - Clean air
  - Flood mitigation and clean water storage
  - Physical and mental health
- Enforce bylaws to prevent damage to natural areas and protect wildlife (e.g., managing off-leash dogs and cats, cleaning up pet feces, and proper garbage disposal) by establishing Parks and Open Spaces Bylaw Officers.



### 3. Restore Open Spaces

- Champion the restoration of open spaces to increase biodiversity and increase carbon dioxide sequestration.
- Renew the commitments in *Our BiodiverCity* to restore The City’s open spaces, setting new targets and an aggressive timeline for action.
- Adopt the mantra that all biodiversity restoration is beautification, and all site beautifications will be natural biodiversity restoration.
- Revise bylaws and increase public education to support the naturalization of private property and city property, including road rights-of-way, while maintaining good neighbour standards.
- Continue the Branching Out initiative and add new programs to protect and expand our urban tree canopy.
- Learn about invasive species management and support its enforcement.
- Understand and support initiatives to “restore the night” by minimizing light pollution. This is important for our health as well as that of wildlife and is critical for maintaining biodiversity.

### 4. Engage All of Us

- Continue and expand Indigenous engagement and consultation so that Indigenous people have opportunities to participate in and shape biodiversity initiatives and incorporate traditional knowledges and practices.
- Council should actively consult about biodiversity with their advisory committees and communities, as well as educational institutions, non-governmental organizations (NGOs), and businesses.
- Engage the land development industry, together with related post-secondary institutions, NGOs, and practicing experts, in collaborative problem-solving for the crisis of biodiversity loss in Calgary. Working together across sectors will promote more balanced decision-making.
- Engage landowners within Calgary and in surrounding municipalities to encourage land endowments and conservation easements that protect natural areas for future generations.



- Partner with conservation and parks NGOs (see Appendix 5) to establish endowment funds offering opportunities for donors to contribute through cash, stock, wills, and other legacy gifts to acquire and manage natural areas in and around Calgary.
- Highlight the negative impacts individuals can have on nature, such as through off-leash pets, making new trails, overharvesting plants, feeding wildlife, improper waste disposal, invasive garden plant choices, and noise and light pollution.
- Foster and reward sustainable conservation behaviors through recognition and incentives.



## 5 CELEBRATING CALGARY'S BIODIVERSITY: BIRDS, BEES, BATS, AND BOBCATS

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As Calgarians, we are fortunate to share our city with a diverse range of animals. Four animals were chosen by members of the BiodiverCity Advisory Committee as biodiversity ambassadors: birds, bees, bats and bobcats. Four committee members have shared the following stories about their relationships with these ambassadors. They highlight the vital role biodiversity plays in our in our city and its importance to the plants, animals, and people who call Calgary home.



Bees



Birds



Bats



Bobcats



## 5.1 Birds

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### The Tiny Urban Forest: A Backyard Haven for Birds, but for How Long?

by *Berna-Dean Holland*

#### A Passion for Conservation Begins at Home

According to the World Wildlife Fund's Living Planet Report 2024, habitat loss remains a dominant threat to wildlife populations. Signs of this decline have been present for decades. In 1998, after building our home in Northeast Calgary, we decided to landscape our backyard with native trees, shrubs, and forbs — plants of ecological and Indigenous traditional significance.

As a Métis woman deeply connected to wildlife conservation, this effort felt both logical and necessary. Over time, our backyard transformed into a haven for birds, offering shelter, food and a safe space in an increasingly urbanized world.

#### The Growth of a Tiny Urban Forest

As the years passed, our little urban forest flourished. Fruit-bearing shrubs became productive, native wildflowers completed their cycles from flower to seed, and a diverse insect population emerged. Birds began visiting regularly, treating us to their songs and brilliant colors.

Each year, we welcomed an array of bird species:

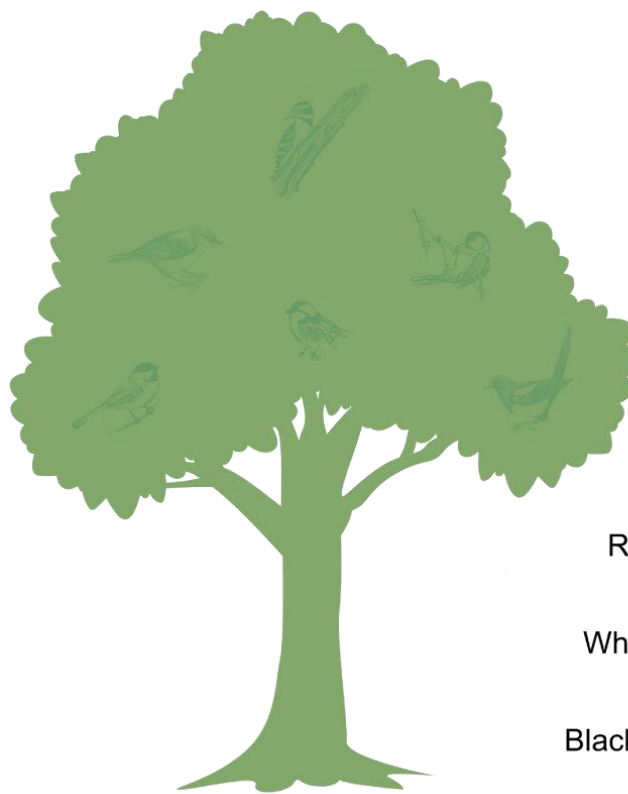
- **Regular visitors:** White-crowned and white-throated sparrows, dark-eyed juncos, house finches, chickadees, American goldfinches, and Canada and yellow warblers.
- **Unexpected guests:** Gray catbirds, ruby-crowned kinglets, house wrens, brown creepers, and both red and white-breasted nuthatches.
- **Birds of prey and woodpeckers:** Merlins, sharp-shinned hawks, flickers, and both hairy and downy woodpeckers.

One of our greatest joys was watching robins nest nearby, raising their young, and foraging for Saskatoon berries from our trees. Each year, we felt like adoptive grandparents to their fledglings, eagerly spotting and counting them as they sheltered on tree branches or the ground under shrubs.



**Birds Observed in the Tiny Urban Forest**

House Sparrow	American Robin	White-crowned Sparrow
European Starling	Common Grackle	Red-winged Blackbird
Dark-eyed Junco	Blue Jay	Brown-headed Cowbird
House Wren	Red-breasted Nuthatch	American Tree Sparrow
Gray Catbird		Savannah Sparrow
Brown Creeper		Song Sparrow
Yellow Warbler		Redpoll
Merlin		Rosy Finch
Canada Warbler		Purple Finch
American Goldfinch		Ruby-crowned Kinglet
Downy Woodpecker		White-throated Sparrow
American Redstart		Black-capped Chickadee
Hairy Woodpecker	Mountain Bluebird	Black-billed Magpie
Sharp-shinned Hawk	Great- Horned Owl	Golden-crowned Kinglett
Northern Flicker	Brewer's Blackbird	Chipping Sparrow
House Finch	White-breasted Nuthatch	American Crow



### The Turning Point: A Decline in Bird Populations

Around 2018, we began noticing a shift. Bird visits became less frequent, and diversity declined. The devastating 2020 hailstorm, with ice stones the size of golf balls, stripped our trees bare and sent an eerie silence over the yard. I reassured myself that the birds had found shelter, but I couldn't shake the feeling that something had changed.

The numbers continued to drop. Without formal monitoring, I can't provide exact figures, but personal observation — backed by science — suggests that climate change, habitat loss, and disease are taking their toll.

### The Bigger Picture: Alarming Trends in Bird Populations

Our small backyard observations reflect a much larger crisis:

- **Grassland birds in Canada have declined by 67% since 1970** due to habitat loss from urbanization and large-scale agriculture (Birds Canada).
- **North America has lost nearly 3 billion birds since 1970**, with major declines in migratory songbirds and insectivores (Cornell Lab of Ornithology).
- **The 2024 International Union for the Conservation of Nature (IUCN) report indicated 12% of Birds are threatened with extinction** (IUCN Red List).
- **Waterfowl populations have increased by 46%**, benefiting from wetland conservation, and agriculture crop expansion, but this masks the severe losses in native grasslands, which have led to a 67% decline in grassland bird species (Birds Canada).
- **Avian flu is a growing threat**, with recent outbreaks devastating waterfowl and raising concerns about spillover to mammals.

### What Can Be Done? A Call to Action!

Our backyard project was a small step toward mitigating biodiversity loss, but more action is needed — especially at the community level.

#### 1. Expand Urban Green Spaces

The City of Calgary must prioritize the planting of native trees, shrubs, and vegetation based on ecological science. Well-planned green spaces support not only birds but also pollinators and small mammals. This will align with The City's goal to increase the urban forest canopy. Such



actions not only help wildlife, but provide shade and beautify spaces for humans, while helping to mitigate the effects of climate change through carbon capture.

## 2. Implement Stricter Pet Policies

Feral and free-roaming cats are a significant threat to birds, killing an estimated 100 to 350 million birds annually in Canada. Calgary has a responsible pet ownership bylaw to keep cats indoors but should consider enforcing stricter bylaws on feeding and managing feral cat populations.

## 3. Tackle Climate Change and Habitat Loss

Urban expansion must be balanced with conservation efforts. Developers should integrate native habitat corridors into new communities. The protection of grasslands is crucial to reversing the decline of grassland birds.

## 4. Support Bird-Friendly Initiatives

Individual citizens and The City of Calgary can take action by:

- Planting native trees and flowers in their yards.
- Keeping cats indoors or using cat enclosures.
- Turning lights off at night to prevent collisions.
- Placing stickers on windows to prevent bird collisions.
- Ensuring backyard bird feeders and bird baths are kept clean.
- Supporting national, international and local bird conservation groups such as The Nature Conservancy of Canada (NCC), Bird Friendly Calgary - Nature Canada, Birds Canada, the Calgary Urban Species Response Team, BirdLife International, the National Audubon Society, Ducks Unlimited, American Bird Conservancy (ABC), Partners in Flight (PIF), the North American Bird Conservation Initiative (NABCI), the Alberta Institute for Wildlife Conservation (AIWC) and the Calgary Wildlife Rehabilitation Society (CWRS).
- Engaging in local conservation initiatives that support bird habitat.
- Take part in seasonal and annual bird counts.
- Reporting bird sightings to citizen science programs like eBird and iNaturalist.
- Buying bird friendly products like organic, shade grown coffee.



### Final Thoughts: Why Birds Matter

Birds are more than just beautiful visitors to our backyards. They play a vital role in maintaining ecosystems by controlling insect populations, pollinating plants, and dispersing seeds. Ground foraging birds also provide active aeration as they probe the ground for grubs and worms and provide nutrients for the soil as bird waste can be fertilizer. Birds can provide cleaning services on the landscape by scavenging dead animal carcasses, which in turn can have beneficial outcomes, especially in rural communities and properties, because they quickly remove attractants for other wild animals that might end up in situations of human-wildlife conflict.

Birds can also stimulate economies via tourism-related industries such as travel, hotel, restaurant, outdoor equipment and interpretive-guiding services and even Provincial and National Park visitor gate and camping fees. Bird songs and sights bring joy to humans, have a calming effect and can be a constant muse for many genres of artists including painters, photographers, artisans and musicians who in turn bring everlasting joy to others. And outdoor activities including bird watching can be done alone or with others – it is great for our brains to learn to identify birds and their habits, it gets us out for outdoor exercise, and it can provide social opportunity for people of all ages. The presence of birds, or their absence, serves as an early warning system for environmental health.

As I look out my window today, the decline of birds and the silence is becoming deafening compared to years past. The "Tiny Urban Forest" still stands, but the birds that once filled it are fewer. This should serve as a wake-up call. **If we don't act now, the future may be one where birds become a rare sight, rather than an everyday joy.**

Let's work together to ensure that doesn't happen.

#### References:

*Habitat loss and degradation and overharvesting, driven primarily by our global food system are the dominant threats to wildlife populations around the world, followed by invasive species, disease and climate change.* (World Wildlife Fund Living Planet Report, 2024).

Birds Canada (2025). *The state of Canada's Birds.* <https://naturecounts.ca/nc/socb-epoc/report/2024/en/>

Cornell Lab of Ornithology (2024). <https://www.birds.cornell.edu>

IUCN (2025). *The IUCN Red List of Threatened Species.* <https://www.iucnredlist.org>



## 5.2 Bees

### If a Bee Could Talk

*by Amanda Dickson*

Have you ever wondered what it would be like to have a conversation with a bee? Now's your chance to find out! Check out the infographic on pages 22 – 25 to learn why there's so much buzz about bees and biodiversity!

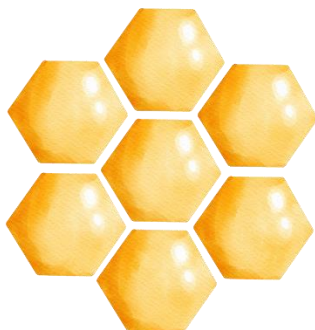
#### References:

1. Dornhaus, A., & Chittka, L. (2005). Bumble bees (*Bombus terrestris*) store both food and information in honeypots. *Behavioral Ecology*, 16(3), 661-666.
2. City of Calgary (2025). *Bee a polli-neighbour*.  
<https://www.calgary.ca/parks/wildlife/pollinators.html>
3. UN Environment Programme. (2022, May 18). *Why bees are essential to people and planet*.  
<https://www.unep.org/news-and-stories/story/why-bees-are-essential-people-and-planet>
4. Bee City Canada. (2025). *Bee City Canada*. <https://beecitycanada.org/>
5. City of Calgary. (2025). *Bees in Calgary*. <https://www.calgary.ca/parks/wildlife/bees.html>
6. Neame, T., Ritchie, S., and Summers, M. (n.d.). *Bumble Bees of Calgary: A key and illustrated guide for identification of the bumble bee species found in Calgary, Alberta*.



## HEY THERE, NEIGHBOUR!

You may have seen me buzzing around the flowers in your garden before – my large, fuzzy body makes me hard to miss! I'm a bumble bee, one of over 200 types of native bees who call Alberta home. While some bees, like bumble bees, live in groups, others live alone. Even though we come in many different colours and sizes, we're all part of one big family known as Apidae!



Bumble bees form groups called colonies. Our colonies build nests in the ground and in tree cavities, but we don't build hives, make honey, or swarm (you might be thinking about our relative, the European honey bee!). Our colonies are home to three different kinds of workers: queen bees, worker bees and drones. Each kind of worker has an important role to play in the colony!



As you might imagine, bumble bees are also quite social! We rely on our excellent communication skills to share the best places to find food. When I find a particularly tasty snack, I flap my wings and release chemicals called pheromones, letting my friends know that dinner is nearby.

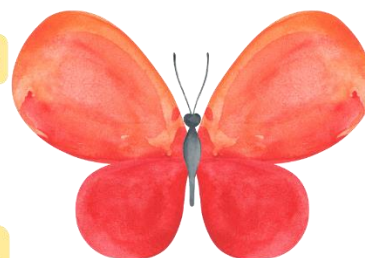


Speaking of dinner, what are some of your favourite foods? Bumble bees love pollen and nectar, which come from plants. While snacking, we also move pollen around and pollinate plants!



Did you know that most species of flowering plants rely on pollinators, like bees, to help seeds grow? But that's not all! Some plants are a bit harder to pollinate, and bumble bees are the perfect fit for the job. That loud buzzing sound that we're known for is the result of a special skill called buzz pollination. We can vibrate super quickly and shake pollen loose from plants such as tomatoes and wild roses (Alberta's provincial flower!).

About 1/3 of the food you eat depends on pollinators! Many crops need pollinators to grow, like the tasty fruits and vegetables you eat. Pollinators also help maintain biodiversity and healthy ecosystems, which are important to human health and the economy! While bumble bees are fantastic pollinators, many other species of bees (as well as bats, hummingbirds, beetles, and other insects and animals) help to pollinate plants as well!



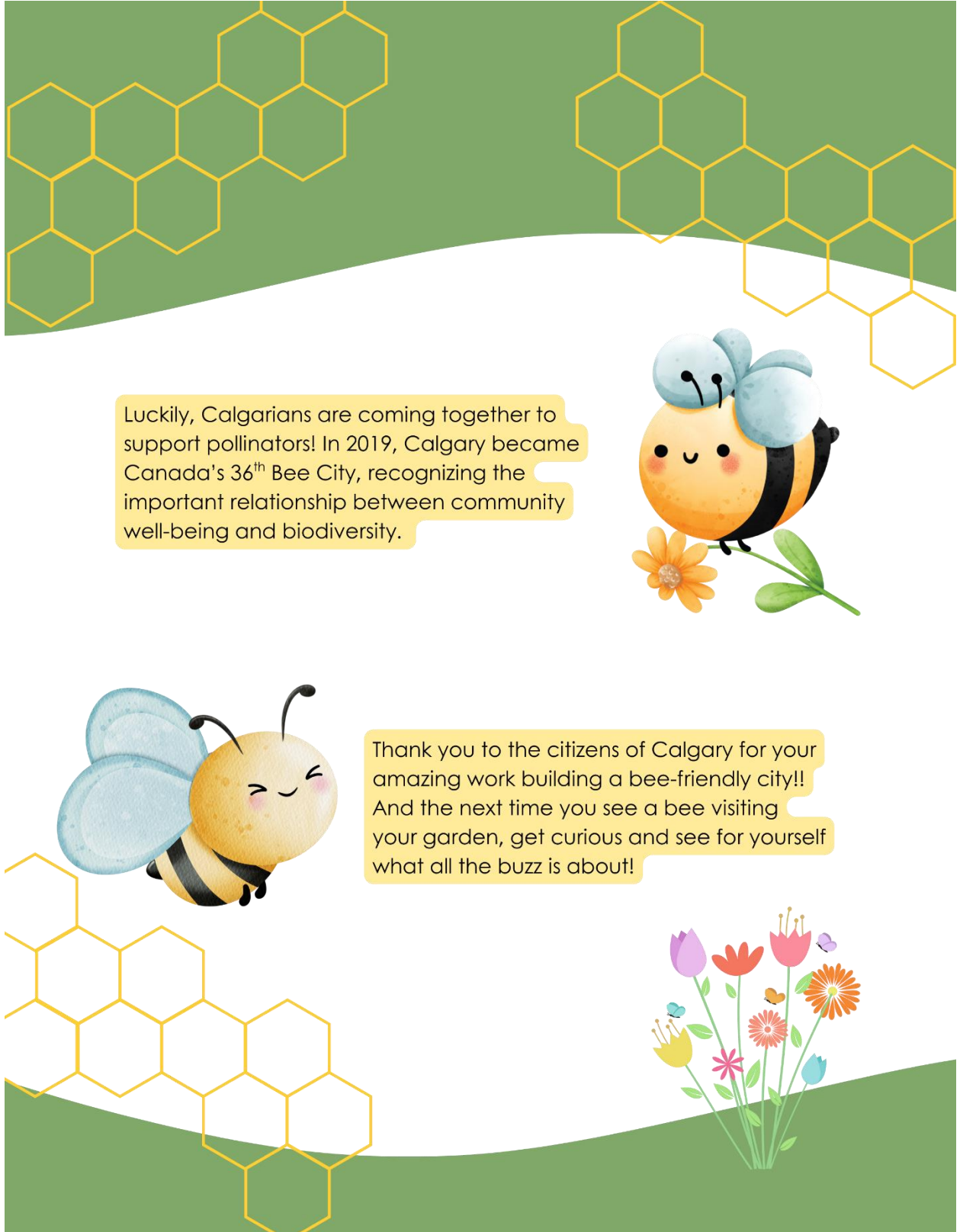
Unfortunately, bees are threatened by habitat loss and fragmentation, pesticide use, disease, loss of native flowers, invasive species, increased human land-use, and climate change. Because bees are so important to ecosystems, threats to bees are also threats to people.



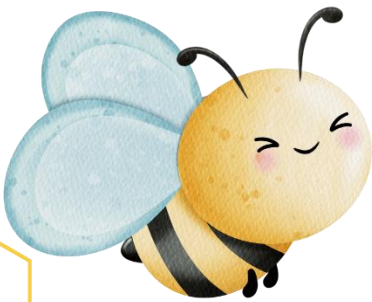
Luckily, you can help bees thrive in your city! Here are some simple steps that you can take in your own backyard that make a big difference for bees like me:

- Plant native wildflowers in your garden
- Build a bee hotel
- Leave dead leaves and plants in your yard until the frost is gone in spring!
- Give bees access to fresh water (a shallow fountain with rocks works nicely!)
- Avoid using pesticides, which are harmful to bees
- Get to know the locals by exploring Calgary's many parks, green spaces, and natural areas
- Embrace your inner shutterbug! Take photos of your bee-autiful neighbors and share your observations on iNaturalist or Bumble Bee Watch
- Share your cool new bee knowledge with your family and friends!
- Let The City of Calgary know that bees are important to you!





Luckily, Calgarians are coming together to support pollinators! In 2019, Calgary became Canada's 36<sup>th</sup> Bee City, recognizing the important relationship between community well-being and biodiversity.



Thank you to the citizens of Calgary for your amazing work building a bee-friendly city!! And the next time you see a bee visiting your garden, get curious and see for yourself what all the buzz is about!



Resources:



## 5.3 Bats

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### Discovering and Helping Our Nighttime Neighbours

by **Matthew Rygus**

Unbeknownst to many, Calgary is home to at least seven bat species. This includes three long distance migratory species – the Hoary Bat (*Lasiurus cinereus*), Silver-haired Bat (*Lasionycteris noctivagans*) and Eastern Red Bat (*Lasiurus borealis*) – and four species that remain in the province year-round, including the Little Brown Myotis (*Myotis lucifugus*) and Big Brown Bat (*Eptesicus fuscus*). These nocturnal mammals play a vital role in ecosystems in and around Calgary by controlling insect populations, including agricultural and forestry pests as well as disease-carrying mosquitoes. A single bat can consume up to half its body weight in insects each night, reducing the need for pesticides to regulate insects.

The contribution of bats to public health and the economy are substantial, though often unrecognized. A recent study published in *Science*\* revealed that counties experiencing reductions in bat populations due to White-Nose Syndrome (WNS) saw a 31% rise in pesticide use. This increase in chemicals for insect control was linked to a 7.9% rise in infant mortality rates, demonstrating the unintended consequences of losing natural pest control. Given the recent detection of WNS in Alberta, Calgary's bat populations face a significant threat that could ripple through local ecosystems and public health systems.

WNS is one of the greatest threats to bats in Calgary and across North America. It's a fungal disease that has already devastated bat populations in various jurisdictions, leading to mortality rates that can exceed 90% of an infected colony. As WNS spreads westward, Calgary's bats are at great risk, especially the Little Brown Myotis which is already listed as an endangered species in Canada. Other significant threats to bats include urban expansion and habitat destruction. Bats rely on mature trees, rock crevices and human-made structures such as barns and attics for roosting. However, deforestation and land development eliminate these key areas for bats. Further, light pollution disrupts nocturnal feeding patterns, making it harder for bats to hunt successfully.



Protecting bats goes beyond conservation – it’s about safeguarding Calgary’s biodiversity, economy and public health. There are strategic actions we can take together to protect our nighttime neighbours, whether it’s through direct efforts to minimize the impacts of urban expansion and habitat destruction, or indirect efforts like building resilience in bat populations to withstand threats from WNS. Here’s how Calgary residents, businesses and city leaders can help:

- Preserve roosting sites: protect old trees, rock outcroppings and wetlands that offer safe habitat for bats.
- Build bat houses: providing alternative roosting sites can support displaced bats. Wildlife Conservation Society (WCS) Canada offers guidelines for designing and installing effective bat houses, found at the following two links: [https://wcscanada.org/site/assets/files/5230/bat\\_house\\_bmp\\_brochure-1.pdf](https://wcscanada.org/site/assets/files/5230/bat_house_bmp_brochure-1.pdf) and [https://www.albertabats.ca/wp-content/uploads/Alberta\\_Bat\\_House\\_Guidelines.pdf](https://www.albertabats.ca/wp-content/uploads/Alberta_Bat_House_Guidelines.pdf).
- Minimize pesticide use: reduce pesticide reliance to support natural pest control and protect bats from indirect poisoning.
- Reduce light pollution: remove unnecessary lighting, use warmer light colours such as red or yellow and install downward-facing, motion-activated lighting to maintain dark skies for foraging bats.
- Monitor and report on populations: anyone can participate in Alberta’s Citizen Science Bat Monitoring Program, tracking roosting sites and supporting conservation efforts. Refer to WCS Canada’s instructions here: <https://www.albertabats.ca/communityscience/>.

To ensure the above conservation efforts are well understood by all Calgarians and properly executed in a timely manner, it is recommended that they be incorporated into: city bylaws and their enforcement (regarding roosting site protection, light pollution and pesticide use), codes/guidelines for all land development in Calgary, the design and use of natural areas and public education programs.

Bats are often given a bad reputation as scary, rabies-spreading creatures of the night. In truth, they are remarkable animals that enable us to live healthier, better lives in natural and urban landscapes. With the knowledge provided here, we can work together to protect Calgary’s bats and reshape their public perception. For more information on Alberta’s bats, including their needs,



threats and how to help them, please refer to the following resource:

<https://www.albertabats.ca/wp-content/uploads/AlbertaBFC.pdf>.

\* Frank, E. G. (2024). The economic impacts of ecosystem disruptions: Costs from substituting biological pest control. *Science*, 385(6713).



## 5.4 Bobcats

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### A Surprise but Welcome Visitor in Our Backyard

by Sara Jordan-McLachlan

My young daughter and I were outside one morning, looking at my garden. She kept repeating the name of our brown tabby, Thomas. “Yes, Thomas”, I kept repeating back, “Thomas is our cat”. Suddenly, a bobcat jumped up onto the fence! It wasn’t Thomas she was talking about. This bobcat had been comfortably hanging out in the yard until our wandering disturbed them. We mustn't have been too much of a disturbance, though. After jumping onto the fence, it casually walked along, through a group of house wren fledglings, and down into the neighbour’s yard. I was shocked and in awe of what had happened. That was the first time we saw a bobcat in our area. It would be another four years before our neighbours began seeing bobcats on a regular basis and before we got the pleasure of seeing one sharing our yard again.

Twenty years ago, a story like this would have created a real buzz in Calgary, and funny looks from anyone I told. That’s because just twenty years ago, bobcats were a rare sighting on the fringes of the city and thought not to exist here. Today, this is becoming a more common narrative, a bobcat seen walking along a fence in the middle of the day, a mom with her kittens under the deck, or a bobcat hunting urban squirrels.

Historically ranging in Southern Alberta along the Milk River and into the Rocky Mountains, bobcats (*Lynx rufus*) are a “neonative species” to Calgary. That is, a species native to North America that has managed to expand their range thanks to ideal habitat conditions. For bobcats, this includes natural cover to move through, and the shelter provided by forest, riparian vegetation and tall grasses. Low snowfall and cleared pathways in winter provide ease of travel and of course there’s an abundant food supply. All this appears to have encouraged the recent population growth across the city.

Typically considered elusive, bobcats are proving to be very adaptable to our urban environment. Despite being comfortable in built-up areas, research in Calgary and other urban areas has shown that bobcats have a strong connection to our green spaces (natural or manicured) and are rarely



found more than a few hundred meters away from those spaces. Roads present a barrier, with studies throughout their range showing that females are reluctant to cross high-volume roads while males only cross when necessary. Stoney Trail and Deerfoot Trail are formidable challenges for a wandering bobcat.

Although bobcats are relatively new on the scene inside the city, their impact in terms of ecosystem services is already evident. While other predators such as coyotes and red foxes may enter urban areas and prey on small rodents and hares, bobcats have proven more adept at tackling the obstacles presented in neighbourhoods, such as fences and interactions with people and their pets. Bobcats have been seen preying on hares, cottontail and feral domestic rabbits, mice and voles, birds, and squirrels (including the introduced, non-native Eastern grey squirrels).

Healthy ecosystems with natural predators are generally able to maintain control of herbivore populations. Without bobcats hunting in urban areas, feral domestic rabbit populations would continue to grow and become susceptible to disease, such as rabbit hemorrhagic disease, a highly contagious and fatal disease that can spread to our native hares and rabbits.

Growing rabbit and hare populations in our city can also negatively impact vegetation by stunting the growth of shrubs or trees. That reduction in shrub and tree height can impact birds by reducing cover and nesting habitat. Hares and rabbits reduce the densities of forbs and perennials and reduce flowers for pollination. This impacts insect populations, possibly causing a cascade through insectivorous animals such as bats and birds.

Bobcats are uniquely able to control Eastern grey squirrel populations. These squirrels directly affect bird populations by targeting eggs and chicks and taking over nesting cavities that would otherwise be occupied by birds. They also compete with birds for forage since seeds and fruit are high on the list of preferred foods for both. While some raptors, like Cooper's hawks and Goshawks are capable of hunting Eastern grey squirrels, the impact on their populations is negligible compared to that of bobcats.



Threats to bobcats in the urban environment include vehicles, fragmentation of green spaces, secondary rodenticide poisoning, other predators including coyotes and domestic dogs, and disease transfer from domestic animals.

To mitigate these threats and support bobcats and their valuable ecosystem services, there are easy steps we can take, including:

- Reducing fragmentation of natural habitats, and supporting ecological corridors, so bobcats and other wildlife can travel safely without encountering people
- Providing mitigation for wildlife movement around high-volume roads including fencing and intentionally designed underpasses or overpasses for wildlife
- Restricting the use and sale of rodenticides and educating about alternatives
- Keeping dogs on-leash in natural areas and cats indoors or in “catios”
- Mitigating potential conflict with domestic animals by reducing attractants for prey animals like mice and birds, such as improperly stored garbage



## APPENDIX 1

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### Procedure 1: Foster ecological literacy

Administration embraced the intent of *Our BiodiverCity* and provided excellent opportunities for citizens to increase their eco-literacy and learn ways to support and increase biodiversity. Their objectives were to:

- Deliver a city-wide ecological literacy program; and
- Provide a range of programs and tools that encourage Calgarians to engage with biodiversity in the city's built and natural environments.

The public members of the BiodiverCity Advisory Committee (BAC) admire the resulting programs, materials, and activities that have been delivered. The assigned score of **A** - (see the BAC Scorecard in Section 3 of this report) reflects the success of these programs, but also the fact that they haven't reached, or appear to have affected, those who make decisions that impact biodiversity in Calgary.

Our primary advice on this topic for Council and Administration is to engage large landowners, land developers, and business leaders in learning about the criticality of biodiversity and participating in finding solutions. See more detailed advice below, following this summary of The City's eco-literacy programs.

### City of Calgary's Eco-literacy and Activation Programs

#### School Programs

- Education is offered to all grades at Ralph Klein Park or Inglewood Bird Sanctuary, with a focus on connecting students with biodiversity. Approximately 150 classes and almost 5000 participants attend yearly.
- Nature kits are available for schools to use, exploring city parks together with students.
- The Mayor's Environmental Expo includes session on biodiversity, and typically reaches over 1000 students each year.



### Community Programs

- Nature programs, such as pond dipping at Stanley Park and drop-in family programs at Ralph Klein Park, are offered to families and the community free of charge, making biodiversity education more accessible.
- General and personalized programs are offered to community groups.
- Self-guided walking tours highlighting diverse ecosystems are available to encourage park users to appreciate our natural environments
- Nature kits emphasizing biodiversity are available to visitors at Ralph Klein Park and Inglewood Bird Sanctuary.
- Nature Zone booths are set up in parks and at events to teach the public about biodiversity, with a range of possible topics depending on community interest.
- A wide range of park facilities are available to encourage Calgarians to enjoy natural areas, such as firepits and alcohol-designated tables that see approximately 1000 bookings yearly.
- Public events such as International Migratory Bird Day attract upwards of 1000 participants and foster appreciation of biodiversity.

### Ambassadors

- Park ambassadors roam parks on busy days, educating park users about biodiversity and teaching them how to respect natural areas. Ambassadors have conversations with over 5,000 park users throughout the year.
- Good Park User Guide educates the public on appropriate activities in parks, e.g., keeping dogs on leash, not feeding wildlife, leaving plant material where it's found, and not attaching things to trees.

### Tree Programs

- Extensive public education available about trees in Calgary, including about which species thrive, how to care for trees, and tree maps, which are all available on The City website.
- In-person workshops on tree care are held annually.



### **BAC Advice on Eco-literacy Programming**

- 1) Continue these effective and city-wide eco-literacy programs.
- 2) Expand the reach of eco-literacy initiatives to land developers, the professionals in the land development industry, property managers, local industry and business groups, and post-secondary classrooms to engage the interest of people who impact larger parcels and properties. Specifically, engage them in collaborative problem-solving.
- 3) Evaluate eco-literacy programs for effectiveness and current relevance. Engage non-governmental organizations to reach their membership, utilize focus groups, set up pop-up booths that provide prizes for public engagement, present at community meetings, and ask for public feedback.
- 4) Collaborate with Indigenous organizations to deliver eco-literacy programs that reflect their Indigenous knowledge systems.
- 5) Collaborate with newcomer service providers to deliver multi-language eco-literacy programs to recent immigrants.
- 6) Tailor unique program offerings for teens, post-secondary students, adults, and seniors.
- 7) Continue collaboration with the Calgary Youth Science Fair to encourage youth to learn about and develop a passion for biodiversity research.
- 8) Build Calgary citizens' understanding of the economic value of ecosystem services and how these services relate to city budgets and development.
- 9) Educate Calgarians on the impacts of light pollution on humans and wildlife and teach people how to use outdoor lighting responsibly. Extend this education to individuals in the lighting industry.
- 10) Conduct tours of Calgary's natural ecosystems to highlight their unique attributes; invite developers, land use planners, and architects.
- 11) Work with NGOs to organize a large multi-day migratory bird festival, using birds as wildlife ambassadors to teach people about biodiversity and natural areas. This could potentially grow to become a tourist attraction, like the bird festivals in Invermere and Creston.
- 12) Collaborate with NGOs, sports stores, and communities to deliver an urban bicycling event that highlights access to multi-use trails through open spaces and natural areas. Use this as an opportunity to teach about biodiversity and collect feedback on The City's eco-literacy programming.



13) Collaborate with Run Calgary to educate their event participants about the importance of biodiversity in the open spaces they enjoy and responsible trail use.

14) Encourage and reward conservation behaviors, such as naturalized lawn competitions, nature quizzes, and on-the-spot rewards for compliance; offer inexpensive prizes and public acknowledgements.

15) Encourage, support, and facilitate citizen science and other involvement that contributes to The City's and Calgarians' knowledge and appreciation of our biodiversity.



## APPENDIX 2

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### Procedure 2: Improve The City of Calgary's ecological functions

The public members of the BiodiverCity Advisory Committee commend the efforts made to restore a significant portion of Calgary's open spaces to enhance biodiversity.

A score of **B** has been assigned to program development and implementation, current funding levels, and the promotion of land restoration across Administration programs and to private property owners.

A notable recent achievement is the inclusion of the Ecological Network map in the draft Calgary Plan. This tool will help identify and prioritize critical areas for restoration projects and for conservation during the development process.

A target for restoration was established in *Our BiodiverCity* (the sole metric in the strategic plan). However, the restored hectares received a score of **D +**, as the restored areas fell short of the proposed target. Another disappointment was Council's recent decision to reject the plan for proceeding with roadside rights-of-way naturalization despite pilot projects that demonstrated maintenance cost savings and actionable lessons for future success. However, the outlook for restoration is positive given commitment of the four-year service plan in the 2023 – 2026 budget for the Habitat Restoration Annual Investment Program.

A **C –** was assigned to The City's management of invasive species. Several policies and tools were developed to track and control invasive species, but their spread continues. Further capacity building is needed for education, tracking and eradication.

The following section outlines the development of the habitat restoration program and highlights its key accomplishments.



**A. Implement habitat restoration projects in critical areas for local ecosystem function, structure, quality and resilience.**

1. Develop Habitat Restoration Program:

- Now funded through capital as an Annual Investment Program with \$8.6 million for 2023-2026.
- The *Habitat Restoration Program Manual (2020)* outlines the step-by-step process The City takes to select, plan and implement restoration projects.
- The *HR Community Involvement Guide (2020)* outlines the process and approaches for working with communities on restoration.
- Both documents won awards that were recognized by Council:
  - Canadian Institute of Planners 2020 Award for Planning Excellence for New and Emerging Initiatives -Biodiverse Communities Project – City of Calgary, Intelligent Futures, and Hatfield Consultants
  - Commonwealth Association of Planners 2020 Award for Planning Excellence for Planning for the Climate Emergency - Biodiverse Communities Project – City of Calgary, Intelligent Futures, Hatfield Consultants

2. Complete and Track Restoration:

- Restoration App developed to track progress toward the target. Preliminary numbers exported from the App for this year are shown in Table 4 below.
- Restoration area target is 832 ha.; currently approximately 53% accomplished.
- Since 2015, over 100 projects have been implemented, involving work from multiple City business units and external partners.
- Not all city business units have adopted the Restoration App, so actual numbers of hectares restored are likely larger, and not all projects that count toward the target have been captured.



Table 4: City of Calgary Habitat Restoration Progress

Status	2017	2018	2019	2020	2021	2022	2023	2024 prelim
Completed (Hectares Restored)	16	18	24	88	88	131	171	203
Active (Hectares Under Restoration)	82	144	169	247	247	201	182	238
<b>Combined Total (Hectares)</b>	<b>98</b>	<b>162</b>	<b>193</b>	<b>335</b>	<b>335</b>	<b>332</b>	<b>353</b>	<b>441</b>

**B. Develop and implement management plans for all status species in Calgary parks and open spaces.**

- The *Habitat Management Plan Framework (2022)* was developed to guide the creation of management plans for natural area parks.
- Ten-year Habitat Management Plans are currently being developed for the following high-priority parks within the Ecological Network: Weaselhead-Glenmore, Douglasdale, Edworthy, Medicine Hills, and Haskayne Legacy Park.
- Internal white paper for Gypsy Cuckoo bumble bee (a SARA-listed species) was produced to guide habitat management for that species.

**C. Restore underused manicured park space to increase plant diversity and habitat complexity and function.**

- *Naturalization Guidelines (2017)* developed to guide this work, along with a few public-facing pamphlets.
- Of the total area shown in the above Restoration Progress table, 85 hectares have been or are in the process of being naturalized from previously underutilized mowed/manicured state.
- Council-funded Roadside Greens Naturalization Pilot was completed in 2023 and won the 2023 Environmental Project of the Year Award from the Environmental Services Association of Alberta (ESAA) and received Council recognition.



***D. Encourage the restoration of private, community, business, and institutional lands.***

- Updated Yard Smart materials with native plants:  
<https://www.calgary.ca/water/programs/yardsmart.html>
- Bee a Polli-Neighbour - Guide to Backyard Naturalization: <https://www.calgary.ca/property-owners/yard-naturalization.html>
- Multiple collaborations with external groups on restoration work, for example: Creating Coventry (Northern Hills Community Association), Silver Springs Botanical Garden Naturalization, Friends of Fish Creek Provincial Park Society and Weaselhead Preservation Society partnership
- Mini Forest collaboration with Calgary Climate Hub

***E. Develop and implement landscaping design guidelines to establish appropriate soil fertility, volume and management that support the land use goals of new or redeveloped open spaces.***

- *Soil Handling Recommendations (2018)*
- *2021 Development Guidelines and Standard Specifications: Landscape Construction*

***F. Develop and implement a list of preferred planting species for developers and The City of Calgary.***

- *City of Calgary Plant Lists (2019)*
- *City of Calgary Seed Mixes (2018)*
- Drought-tolerant plant list included in Land Use Bylaw IP2007 as a part of The City Building program.

***G. Implement strategies to reduce invasive species and their spread in Calgary.***

- IPM Collector App developed to track invasive plants and their control.
- Updated *IPM plan and policy (2020)*

***H. Develop and implement alternative open space management practices including grazing, prescribed burns, and restoration, as well as educational messages and opportunities for public understanding.***



- *Targeted Grazing Guidelines (2017)*: a guide for scoping a livestock grazing project to accomplish specific invasive plant species and land management goals.
- Grazing is now a standard land management practice and has been employed in several natural area parks across the city (e.g., Confluence Park, McHugh Bluff, Ralph Klein Park, Nose Hill).
- City staff contributed to the external document: Recommended Monitoring Protocols for Targeted Grazing Projects (2021).
- Burn plan developed for Nose Hill in 2016 but was not implemented due to public safety concerns.
- Internal city-wide Wildfire Risk Assessment was completed in 2019.
- *Management Practice for Grassland Management using Haying (2024)*.

### BAC Advice on Restoration to Increase Biodiversity

- Renew the commitments in *Our BiodiverCity* to restore Calgary's open spaces, setting an aggressive timeline and targets for action and reporting progress yearly.
- Adopt the viewpoint that all biodiversity restoration is beautification, and all site beautifications will be natural biodiversity restoration.
- Restoration of open spaces and naturalization of city parks must include "restoring the night" strategies by modifying lighting in ways that significantly reduce impacts on wildlife that are active at night.
- Increase public education on modifying night lighting near Calgary's open spaces to reduce impacts on wildlife, especially birds and pollinators. Extend the reach of this eco-literacy topic to City departments, related post-secondary classrooms, professional associations, property managers, and businesses.
- Further capacity building to increase education, tracking and eradication of invasive species.
- Revise bylaws and increase public education to support the naturalization of private property and city property, including road rights-of-way, while maintaining good neighbour standards.
- Continue the Branching Out initiative and add new programs to protect and expand our urban tree canopy



## APPENDIX 3

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### **Procedure 3: Instill biodiversity values across The City of Calgary**

*Our BiodiverCity* describes the intent to collaborate across The City of Calgary’s departments to establish conservation values and practices in planning, managing and operating The City of Calgary. This objective was embraced by many staff at The City. Significant progress has been made and so the BAC score for this procedure is **C -**. There continues to be gaps in awareness and coordination between some departments, and most importantly, Council hasn’t fully committed to biodiversity values.

The following section highlights the steps that The City took to implement Procedure 3, and BAC’s advice to further these objectives.

#### ***1. Initiate a biodiversity steering committee with representatives from The City, Council, local businesses, environmental non-governmental organizations, academia and citizens at large to advance the commitments of “Our BiodiverCity”.***

The BiodiverCity Advisory Committee will be dismissed this year. The degree of engagement with Council expected by BAC was not achieved during its operation. Although Administration was active in the committee and representatives from many programs met with the committee to discuss and receive feedback on their programs plans, this initiative is rated **F** due to lack of engagement with Council.

#### ***2. Continue to identify and align with other City plans, strategies and programs that have biodiversity related components.***

The commitment to make conservation and protection of the environment an important driver of policies is evident in Connect: Calgary’s Parks Plan. Furthermore, the inclusion of the Ecological Network as part of the urban structure in the Calgary Plan also shows that biodiversity values are being instilled across The City of Calgary. Unfortunately, Council has pushed the review and approval of the Calgary Plan to 2026.

#### ***3. Develop and implement a biodiversity project recognition program for community, private business and City projects.***



This was not accomplished, but it is a good plan to raise awareness and encourage public participation. We recommend also involving experts in the fields of conservation, landscape architecture, urban planning, and the land development industry to developing and implement an impactful recognition program.

**4. Develop policies and guidelines to ensure people are allowed equitable access to areas of biodiversity.**

Comprehensive mapping has been completed that illustrates the distance of households to a multi-functional park and to nature, and those neighbourhoods within a driving distance of 5 kilometers to Calgary’s regional parks. Policies have been developed and targets established to increase the percentage of households within 400 metres of a multi-functional park. These policies are recommended in the draft Calgary Plan and the draft Connect: Calgary’s Parks Plan.

Ranked 25th in the world by Mercer’s Quality of Living City Ranking 2024\*, “Calgary is known for its vibrant economy and high standard of living. Its unique combination of urban growth and natural beauty makes it a standout city in Canada.” One of the factors cited is its “Family-Friendly Atmosphere: the city’s clean neighbourhoods, excellent schools, and abundant green spaces make it ideal for families.” Calgary’s reputation on the global stage includes access to nature, however, residents in many neighbourhoods do not benefit from this celebrated amenity.

The BAC has scored this initiative as **C** - as the Calgary Plan and Connect: Calgary’s Parks Plan have yet to be approved by Council.

\*[mercer.com/insights/total-rewards/talent-mobility-insights/quality-of-living-city-ranking/](https://mercer.com/insights/total-rewards/talent-mobility-insights/quality-of-living-city-ranking/)



## APPENDIX 4

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### **Procedure 4: Integrate with wildlife, plants, and natural heritage**

The public members of BAC are impressed with the work done to recognize the value of natural areas and develop strategies to protect them. The progress warrants a score of **B-**, with the proviso that the Calgary Plan and Connect: Calgary's Parks Plan are approved, a conservation fund is established, and Council acts to preserve and protect important natural areas within and around Calgary.

The tragic loss of significant environmental areas in the 10 years since *Our BiodiverCity* was approved would warrant a failing grade, however, a **D +** is assigned due to progress in mapping Calgary's ecological corridor, tracking the loss of natural areas and developing policies to protect them.

The objectives of The City are presented below, along with the BAC's comments and advice.

#### ***1. Develop and implement an assessment of existing Calgary parks that would aid in setting conservation priorities and monitoring health to create and sustain functional habitat.***

The Habitat Condition Rating Tool was developed in 2016 to assess the health of Calgary's terrestrial parks, including its improvements or deterioration. A complementary tool was developed in 2023 to assess the health of wetlands. These are important steps for protection and restoration.

#### ***2. Develop and implement policies and guidelines to conserve and connect ecological cores and corridors through a city-wide review of existing and proposed open space.***

A city-wide ecological network has been identified and mapped. It was peer reviewed by the Conservation Biology Institute and received outstanding commentary. The Ecological Network map was included in the Calgary Plan along with a suite of policies to protect, restore and connect natural spaces throughout the planning process.

This would be an impactful accomplishment, but Council has delayed for a year the adoption of the Calgary Plan and its important policies.



**3. Map and implement a framework to acquire land of high ecological and cultural value that cannot be otherwise protected through the subdivision process.**

*Table 5: Percentage of ESA\* That Were Not Protected in New Neighbourhoods at the Outline Plan Stage*

2019	47% of ESA lost through development (53% were protected)
2020	48 % lost
2021	38% lost
2022	76% lost
2023	19% lost

\*ESA: environmentally significant areas

Despite the aspirations presented in *Our BiodiverCity*, many hectares of significant environmental areas have been lost in the past 10 years. Administration plans to explore the establishment of a conservation reserve fund to purchase and protect environmentally significant areas not protected as environmental reserves during land development. The BAC encourages this initiative, but time is of the essence as new communities continue to be planned and developed. Natural areas contain important biodiversity and ecological functions that cannot be replaced through restoration of disturbed land. The Conservation Reserve provisions in the Municipal Government Act allow municipalities to protect these environmentally significant areas.

Ways to grow the conservation reserve fund could include:

- Budgeting in advance for this critical need,
- Adding a biodiversity protection line item to property taxes,
- Engaging landowners within Calgary and in surrounding municipalities to consider land endowments and conservation easements that protect natural areas for future generations
- Partnering with conservation and parks NGOs (see Appendix 5) to establish endowment funds offering opportunities for donors to contribute through cash, stock, wills, and other legacy gifts to acquire and manage natural areas in and around Calgary.



***4. Establish data sharing agreements with government, industry, research organizations, other municipalities, and the public.***

Data sharing of regional mapping of environmentally significant areas (ESA Mapping) has been initiated to allow a common approach and collaboration for the protection of natural areas and the creation of connected ecological corridors. We recommend that The City continue to improve and share this data.

***5. Work collaboratively with neighbouring and regional municipalities to identify opportunities to increase biodiversity across the region.***

Examples of collaborative work are Calgary Captured, Call of the Wetland, and the Bow River Basin State of the Watershed.

Despite the Province's withdrawal of funding for the Calgary Regional Municipalities Board, The City must continue to work with the municipalities in our region, and with the Province, to increase biodiversity, especially protecting ecological corridors. BAC suggests involving conservation and parks NGOs to utilize their connections and knowledge.

***6. Develop and implement an incentive program to promote the use of ecological easements.***

BAC supports the development of an incentive program and encourages pursuing endowments.



## APPENDIX 5

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### Calgarians Protecting Biodiversity

Calgarians understand the importance of protecting biodiversity, with many people participating in non-governmental organizations (NGOs) and contributing to initiatives that actively protect biodiversity in and around our city.

Over the past ten years, Calgarians belonging to NGOs have provided advice to the BiodiverCity Advisory Committee and joined in discussions about ways in which The City of Calgary can progress towards the goals outlined in *Our BiodiverCity*. While we are heartened to know so many Calgarians will continue to advocate for biodiversity after the committee has been disbanded, it is worth noting these organizations are independent and do not have the direct line to Council that was intended for the BAC.

The BAC's public members encourage The City of Calgary to collaborate with these organizations to share information, brainstorm ideas, and build connections that will have a meaningful impact on our city, our citizens, and our biodiversity. Together, we can collaborate and build a thriving city that Calgarians can enjoy, both today and for many generations to come.

Nature Calgary	<a href="http://naturecalgary.com">naturecalgary.com</a>
Bird Friendly Calgary	<a href="http://birdfriendlycalgary.ca">birdfriendlycalgary.ca</a>
Calgary Climate Hub	<a href="http://calgaryclimatehub.ca">calgaryclimatehub.ca</a>
Calgary River Valleys	<a href="http://calgaryrivervalleys.org">calgaryrivervalleys.org</a>
Friends of Nose Hill Society	<a href="http://fonhs.org">fonhs.org</a>
Nose Creek Preservation Society	<a href="http://savenosecreek.com">savenosecreek.com</a>
Save the Slopes	Save Paskapoo Slopes (fb)
Weaselhead/Glenmore Park Preservation Society	<a href="http://theweaselhead.com">theweaselhead.com</a>
Miistakis Institute	<a href="http://rockies.ca">rockies.ca</a>
Parks Foundation Calgary	<a href="http://parksfdn.com">parksfdn.com</a>
Friends of Fish Creek Provincial Park Society	<a href="http://friendsoffishcreek.org">friendsoffishcreek.org</a>
Calgary Wildlife Rehabilitation Society	<a href="http://calgarywildlife.org">calgarywildlife.org</a>
Calgary Urban Species Response Team	<a href="http://calgaryurbanspecies.ca">calgaryurbanspecies.ca</a>
The Royal Astronomical Society of Canada, Calgary Centre	<a href="http://calgary.rasc.ca">calgary.rasc.ca</a>
Calgary Horticultural Society	<a href="http://calhort.org">calhort.org</a>



Ann and Sandy Cross Conservation Area	<a href="http://crossconservation.org">crossconservation.org</a>
Glenbow Ranch Park Foundation	<a href="http://grpf.ca">grpf.ca</a>
Alberta Native Bee Council	<a href="http://albertanativebeecouncil.ca">albertanativebeecouncil.ca</a>
Alberta Wilderness Association	<a href="http://albertawilderness.ca">albertawilderness.ca</a>
Alberta Invasive Species Council	<a href="http://abinvasives.ca">abinvasives.ca</a>
Alberta Environmental Network	<a href="http://aenweb.ca">aenweb.ca</a>
Alberta Science Network	<a href="http://albertasciencenetwork.ca">albertasciencenetwork.ca</a>
Alberta Conservation Association	<a href="http://ab-conservation.com">ab-conservation.com</a>
Alberta Institute for Wildlife Conservation	<a href="http://aiwc.ca">aiwc.ca</a>
Alberta Community Bat Program	<a href="http://albertabats.ca">albertabats.ca</a>
Canadian Parks and Wilderness Society, S. Ab. Chapter	<a href="http://cpaws.org">cpaws.org</a>
Bow Habitat Station	<a href="http://bowhabitat.alberta.ca">bowhabitat.alberta.ca</a>
Bow River Basin Council	<a href="http://brbc.ab.ca">brbc.ab.ca</a>
Elbow River Watershed Partnership	<a href="http://erwp.orb">erwp.orb</a>
Alberta Prairie Conservation Forum	<a href="http://albertapcf.org">albertapcf.org</a>
Nature Alberta	<a href="http://naturealberta.ca">naturealberta.ca</a>
Nature Conservancy of Canada	<a href="http://natureconservancy.ca">natureconservancy.ca</a>
Ducks Unlimited	<a href="http://ducks.ca">ducks.ca</a>
Freshwater Conservation Canada (Trout Unlimited Canada)	<a href="http://freshwaterconservationcanada.org">freshwaterconservationcanada.org</a>
Birds Canada	<a href="http://birdscanada.org">birdscanada.org</a>
Canadian Wildlife Federation	<a href="http://cwf-fcf.org">cwf-fcf.org</a>
Nature Canada	<a href="http://naturecanada.ca">naturecanada.ca</a>

