



BiodiverCity Advisory Committee Report

MANDATE

To provide Council and Administration with strategic advice on matters affecting urban biodiversity in The City of Calgary and advance the commitments and procedures identified within *Our BiodiverCity, Calgary's 10-year biodiversity strategic plan (2015-2025)*, The Durban Commitment: Local Governments for Biodiversity, and the Climate Strategy.

COMPOSITION

15 Members:

- 10 Public Members (including 1 youth)
- 5 Administration

ANNUAL UPDATE & KEY ACCOMPLISHMENTS

Biodiversity is critical to Calgary's continued growth and resilience. Protecting and promoting biodiversity supports the City's recently approved Climate Strategy - Pathways to 2050 and associated targets, the new Connect: Calgary Parks Plan (coming in 2024) and the core indicators in the Municipal Development Plan.

This past year the BiodiverCity Advisory Committee updated our terms of reference, specifically around communication with Council, to better support the critical importance of biodiversity to the City in the face of climate change, local population growth, and global species extinction. We also added a youth representative to the committee to add focus to the future impacts of the City's current actions.

Our responsibilities include linking biodiversity to the City's related policies, such as:

- climate change
- sustainable development
- strong neighbourhoods
- community resilience
- human wellness

This year's report focuses on five themes: climate change, environmentally sensitive areas, open spaces restoration, ecoliteracy, and the 10-year BiodiverCity Strategic Plan. For more details see Attachment A: Key Areas of Concern and Accomplishments as well as Attachment B: The City of Calgary BiodiverCity Awards for the Calgary Youth Science Fair.

The BiodiverCity Advisory Committee applauds Council's declaration of a climate emergency in 2021 and the adoption of the Climate and Environmental Management Plan and Budget for 2023 to 2026.



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Calgary is losing Environmentally Sensitive Areas at an alarming rate although the City appears to be gaining momentum in protecting these important areas. ESAs provide important ecosystem services such as flood and drought mitigation and biodiversity. Restoration of open areas through naturalization cannot totally replace natural areas once they have been developed.

Ambitious targets are in place to restore Calgary's open spaces. Habitat restoration is proceeding but these targets will not likely be met.

In 2022, the City acted on advice from the committee to proclaim the International Day of Biological Diversity in May and also to engage citizens in choosing a City Bird: the Black-capped Chickadee. Ecoliteracy leads to an engaged public who will support City efforts to increase biodiversity.

Our BiodiverCity, Calgary's 10-year biodiversity strategic plan continues to be relevant and the City has made great strides to meet its intent. However, the measures of success will need to be evaluated at the end of 2025, and unfortunately, we will be falling short of expectations in some areas. A new strategic plan will need to be developed soon.

CHALLENGES

The BiodiverCity Advisory Committee aims to strengthen communication with City Council. Participation by Councillors and their assistants has been much appreciated as it provided an opportunity to discuss their specific questions and concerns and to hear their advice. Councillors are welcome to join our meetings and committee members would be happy to meet with them at other times.

Given that other city advisory committees have mandates that overlap with ours, e.g., climate change and strong neighbourhoods, we are planning to initiate collaboration.

WORKPLAN FOR THE NEXT YEAR

See Attachment C: BiodiverCity Advisory Committee Work Plan 2023 – 2024.

OPERATIONS

Number of Meetings: Eleven monthly meetings (no meeting in August) were held in 2022, including a work planning meeting in February and a tour of the Bioengineering Demonstration and Education Site along the Bow River in September.

Meeting Format: Our first post-COVID in-person hybrid meeting was held in November 2022. Meetings from 2020, 2021 and 2022 had been held in MS Teams. The public has been



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welcome to join meetings in person or on MS Teams and there was one member of the public who participated in several meetings. Committee alumni participated in the September meeting at the Bioengineering Demonstration and Education Site. Other than for this field trip there were no perceived barriers to participation. City councillors have joined some of our meetings as have some of their assistants.

Committee meetings consist of presentations by City administration staff, or by outside experts, on topics related to biodiversity and the City's progress in meeting the goals of the BiodiverCity Strategic Plan. The Committee discusses what the City could do to move forward with increasing biodiversity and has offered advice to Council in the form of information emails.

See Attachment D: Presentations to BiodiverCity Advisory Committee in 2022 and Committee Recommendations.

ATTACHMENTS

Attachment A: Key Areas of Concern and Accomplishments

Attachment B: The City of Calgary BiodiverCity Awards for the Calgary Youth Science Fair

Attachment C: BiodiverCity Advisory Committee Work Plan 2023 – 2024

Attachment D: Presentations to BiodiverCity Advisory Committee in 2022 and Committee Recommendations



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Attachment A

Key Areas of Concern and Accomplishments

Climate Change

The BiodiverCity Committee applauds Council's declaration of a climate emergency in 2021 and the adoption of the Climate and Environmental Management Plan and Budget for 2023 to 2026. Biodiversity increases resilience to climate change and contributes to the reduction of carbon emissions.

We will work with the city administration, Climate Advisory Committee, and City Council to address climate change by finding opportunities to increase biodiversity within the city.

Environmentally Sensitive Areas

The BiodiverCity Committee continues to be concerned about the ongoing losses of Environmentally Sensitive Areas (ESAs). ESAs are natural components of the regional landscape providing ecosystem services of: flood and drought mitigation, drinking water, maintenance of regional biodiversity, and preservation and connection of unique habitats.

The City of Calgary is improving its performance at protecting these land areas. In 2021 62% of the ESAs identified in greenfield developments were retained.

There is a significant cost associated with restoring natural areas through the Habitat Restoration program and the biodiversity and quality of habitat in restored areas is never like that of undisturbed areas such as ESA's. In order to have 20% of the City's open space naturalized by 2025, as per The Durban Commitment, it is important to consider protecting ESA's prior to development as well as restoring existing open areas.

Another concern is that significant natural areas that are amenable to development are not being protected, particularly native grasslands, which offer rich biodiversity and carbon-sequestering properties and are threatened globally. Increasing budgets for conservation reserves, as well as more community outreach to build support, will increase the likelihood of success.

The Municipal Government Act includes a section in the Calgary City Charter that allows for the development of bylaws expressly for the purpose of

(h.1) the well-being of the environment, including bylaws providing for the creation, implementation and management of programs respecting any or all of the following:

(i) contaminated, vacant, derelict or under-utilized sites;



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- (ii) climate change adaptation and greenhouse gas emission reduction;
- (iii) environmental conservation and stewardship;
- (iv) the protection of biodiversity and habitat;
- (v) the conservation and efficient use of energy;
- (vi) waste reduction, diversion, recycling and management;

of which protection of ESA's could fall under a number of these areas.

Calgary's Environmental Reserve Setback Policy could be revised to reflect these changes to the Municipal Government Act.

Open Spaces Restoration

The increase in the Parks and Open Spaces Plan and Budget for 2023 to 2026, with dedicated funding for habitat restoration, will move us towards the City's restoration target of a 20 percent increase in our open space by 2025 as outlined in the BiodiverCity Strategic Plan. However, 2021 data shows that restoration efforts were on track to meet only about 36% of the 20 percent restoration target for 2025. The increased budget received for this work will help progress towards this target, but the target will not be met. Continued financial support, more community outreach, and continued monitoring are critical.

To meet the targets for naturalizing open spaces, other departments outside of Parks and Open Space will need to be involved. Utility rights-of-way and road rights-of-way contain a significant amount of the City's open space that could be naturalized. Bee boulevards are an example of this type of collaboration that has been successful.

The City should work with developers to promote the use of climate change-resilient and biodiversity-friendly landscaping. The City should also promote the use of native vegetation in place of mowed grass lawns on private property as allowed in the Community Standard Bylaw.

Ecoliteracy

Citizens of Calgary are great supporters of the open spaces available to enhance our physical and mental health, and well-being. Building ecoliteracy will increase citizens' support of the City's initiatives to grow a city that is biologically diverse and resilient to climate change, as well as to meet economic and social changes in the future. The Committee appreciates the City's support in 2022 of our initiatives:



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Calgary's City Bird: in 2022 the Black-capped Chickadee was chosen as Calgary's city bird. The BiodiverCity Advisory Committee suggests that a resolution be prepared for Council to approve continued support of this initiative.

Calgary Youth Science Fair – Ecoliteracy Awards: The City continues to support these three prizes. See Attachment B.

City of Calgary 2022 International Day of Biological Diversity Proclamation: The BiodiverCity Committee appreciates the Council's action to draw public awareness to the importance of biodiversity.

These initiatives complement the City's Bee City designation in 2020 and ongoing efforts to establish pollinator gardens on city land and private property.

The City could also promote the use of citizen science tools such as iNaturalist and eBird.

Our BiodiverCity: 10-year Biodiversity Strategic Plan

The City of Calgary committed to complete key actions by 2025 to protect, develop and manage its natural and built environments in support of biodiversity. These were:

- evaluation of landscapes and setting targets for conservation;
- restoration of 20 percent of open space to increase biodiversity;
- and identification of invasive species and completed strategies for their management.

The BiodiverCity Advisory Committee was established to support this strategic plan, and we look forward to continuing our support of City Council to meet the challenges set out in the plan. The City will need to prepare a report on how the strategies were implemented, and the results, as well as develop updated strategies. We hope that there will be a positive report issued in 2026 and a renewed commitment to increasing biodiversity in Calgary.



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Attachment B

The City of Calgary BiodiverCity Awards for the Calgary Youth Science Fair

Senior or Intermediate

Robert Lin, Grade 10

Flocculation: A Novel Method of Extracting Microplastics from Soil Using Polysaccharides and Divalent Calcium Ions

Intermediate or Junior

Clare Park Milou van de Camp, Grade 9

Locating Toxin-Eating Microbes

Junior or Elementary

Hamsika Chandramouli, Grade 5

Soil Erosion and How to Prevent It



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Attachment C

BiodiverCity Advisory Committee Work Plan 2023 – 2024

2023: BiodiverCity Advisory Committee - Annual Work Plan			
2023: BiodiverCity Advisory Committee - Annual Work Plan	Biodiversity Program Area	Start Date	End Date
Calgary Youth Science Fair award	Ecoliteracy	31-Jan-23	22-Apr-23
Calgary Biodiversity Day proclamation	Ecoliteracy	31-Jan-23	22-May-23
Annual written report to Community Development Committee - June 14, 2023	Biodiversity Planning	01-Mar-23	21-Jun-23
Annual verbal report to Community Development Committee - June 14, 2023	Biodiversity Planning	01-Mar-23	21-Jun-23
Biodiversity Action Plan	Biodiversity Planning	11-Feb-23	TBD
Communicate with Council more effectively	Biodiversity Planning	11-Feb-23	ONGOING
Provide input on strategic planning matters	Biodiversity Planning	11-Feb-23	ONGOING
2 Billion Trees - Nature Canada	Habitat Restoration	11-Feb-23	ONGOING
Calgary's River Valley Plan	Habitat Connectivity	11-Feb-23	ONGOING
Calgary's Drought Plan	Stewardship	11-Feb-23	ONGOING
Calgary Parks Open Space Plan rewrite	Habitat Restoration	11-Feb-23	ONGOING
ESA loss analysis	Stewardship	ONGOING	ONGOING
Restoration analysis	Habitat Restoration	ONGOING	ONGOING
HCR analysis	Habitat Restoration	ONGOING	ONGOING
Environmental Dashboard	Biodiversity Planning	11-Feb-23	ONGOING
Jurisdictional scan - municipalities with progressive planning documents	Biodiversity Planning	11-Feb-23	ONGOING
Explore citizen science, enviro education opportunities	Ecoliteracy	11-Feb-23	ONGOING
Explore how to communicate the ongoing biodiversity work more effectively at the city	Biodiversity Planning	11-Feb-23	ONGOING
Montreal Pledge	Biodiversity Planning	11-Feb-23	ONGOING
Policy report card	Biodiversity Planning	11-Feb-23	



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Appendix D

Presentations to BiodiverCity Advisory Committee in 2022 and Committee Recommendations

	<p><u>Bird Friendly City</u></p> <ul style="list-style-type: none"> • Calgary became a Bird Friendly City in 2021 which recognizes achievements and ongoing work to support biodiversity in Calgary • designating a City Bird is one part of the certification to encourage community engagement and education • citizens chose the Black-capped Chickadee as our City Bird • ongoing support of the BFC certification will be required from Council to remain a Bird Friendly City <p>Recommended City Action: Continued support and communication to maintain certification.</p>
	<p><u>Calgary Youth Science Fair</u></p> <ul style="list-style-type: none"> • winners presented their projects to the BAC • promotes ecological literacy and science education <p>Recommended City Action: Continued financial support to CYSF.</p>



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	<p><u>Bee City</u></p> <ul style="list-style-type: none">• Calgary was designated as a Bee City in 2020• almost 200 known bee species in the Calgary• supports bees and other insects by decreasing pesticides and increasing insect-friendly plants and habitat• supports collaborative research into native pollinators and their needs• citizen science programs contribute to knowledge and engage communities <p>Recommended City Action: Continue education about native plants and pollinators and provide avenues for people to contribute meaningfully.</p>
 <p>Calgary Drought Conditions</p>	<p><u>Drought Resilience Plan</u></p> <ul style="list-style-type: none">• drought is a major potential impact of climate change in Calgary• the city is looking for input regarding measures such as watering schedules, water-wise landscaping, water reuse, and financial and rate-based strategies <p>Recommended City Action: Seek further input throughout implementation to better meet plan goals.</p>


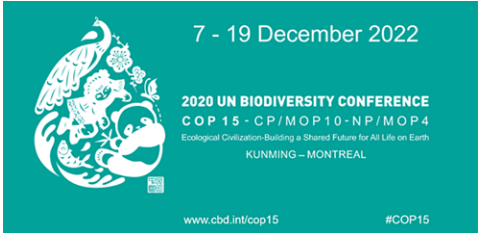


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	<p><u>ImagineParks strategy</u></p> <ul style="list-style-type: none"> to connect people, open space, and governance in a way that supports stewardship and individuality while respecting natural areas to maximize collaboration and resource use measuring Parks success involves nine themes, each with targets and indicators of success <p>Recommended City Action: continue to monitor progress on targets through annual reporting.</p>
	<p><u>2021 Habitat Restoration Update</u></p> <ul style="list-style-type: none"> takes time, involves research and collaboration aims to maximize societal and environmental benefits by end of 2021, restoration efforts were on track to meet ~36% of the 20% restoration target for 2025. increased budgets, more community outreach, and further monitoring will increase the likelihood of success <p>Recommended City Action: increase support for habitat restoration and monitoring.</p>






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 <p>Protection of Great Blue Herons: A discussion of conservation tools in the planning process</p>	<p><u>City Planning Conservation Tools</u></p> <ul style="list-style-type: none"> • case study on protecting blue herons • municipal and provincial policies and plans support conservation in environmentally significant areas (ESA's). • include environmental, municipal, and conservation reserves, conservation easements, donations, and land purchases • all these options still do not guarantee that any will be used to protect ESA • Committee advice most effective at the strategy level <p>Recommended City Action: Support the use of all conservation tools for ESA's to maintain wildlife habitat and connectivity.</p>
	<p><u>COP 15</u></p> <ul style="list-style-type: none"> • the 7th summit focused on sub-national government contributions in a post-2020 global biodiversity framework • to support protection of 30 % of the earth's land by 2030 urban areas need to focus on ecological, social, and climate resilience • sub-national governments can fill gaps and take action that national governments cannot; funding is critical • Indigenous knowledge and leadership, and urban-rural connectivity, will be important to achieve goals <p>Recommended City Action: Create meaningful and measurable goals; support collaboration with Indigenous nations and rural governments.</p>



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	<p><u>Open Space Plan Rewrite</u></p> <ul style="list-style-type: none"> to create expectations for Council, developers, and public decision-making tool for Calgary Parks and Open Spaces a modern framework for equity, climate, and economic resilience <p>Recommended City Action: Continue dialogue with Committee.</p>
	<p><u>Bioengineering Demonstration and Education Site Tour</u></p> <ul style="list-style-type: none"> valuable and practical information on bioengineering as it relates to biodiversity in Calgary, flood and watershed resiliency, and ecoliteracy <p>Recommended City Action: Continue such demonstration projects and implementation of lessons learned.</p>
	<p><u>Invasive Species Threaten Biodiversity</u></p> <ul style="list-style-type: none"> more cost-effective to proactively invest in prevention of invasive species rather than eradication or containment PlayCleanGo promotes cleaning gear after fishing etc. to avoid transporting invasive species Grow Me Instead Guide provides alternatives to popular invasive species in gardens <p>Recommended City Action: Manage invasive species through prevention, eradication, and containment.</p>