

## **A Draft Biodiversity Strategy for Toronto**

**Date:** July 3, 2018

**To:** Parks and Environment Committee

**From:** Chief Planner and Executive Director, City Planning Division

**Wards:** All

### **SUMMARY**

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This report presents a draft Biodiversity Strategy for Toronto (the draft Strategy) for the purpose of public consultation. The draft Strategy recognizes that biodiversity is a key component of a sustainable city and supports the vision of Toronto being home to biodiverse communities that contribute to resilient urban ecosystems.

The United Nations' Environment Programme (UNEP) defines biodiversity as a combination of "bio" (life) and "diversity", generally referring to the variety and variability of life on Earth. Biodiversity can be visualized as an interconnected web of life – the variability among living organisms from all sources, including terrestrial and aquatic ecosystems.

The draft Strategy aims to increase the quality and quantity of natural habitat within the City in order to support healthier, more robust biodiversity and increase access to and awareness of nature. Once complete, the Strategy is intended to position Toronto as a leader in conserving urban biodiversity.

The draft Strategy was developed in collaboration with the Parks Forestry and Recreation Division (PFR), the Environment and Energy Division and the Toronto and Region Conservation Authority (TRCA). Input to the Strategy has also been received through work on the Biodiversity Series and the May 2017 former Chief Planner Roundtable on Biodiversity from the Royal Ontario Museum (ROM), universities, environmental groups, biodiversity experts and citizen scientists.

### **RECOMMENDATIONS**

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The Chief Planner and Executive Director, City Planning recommends that:

1. The Parks and Environment Committee direct the Chief Planner and Executive Director, City Planning in collaboration with the General Manager, Parks, Forestry and Recreation, the Director, Environment and Energy and the Chief Executive Officer and

Secretary-Treasurer of the Toronto and Region Conservation Authority to undertake public consultation on the attached draft Biodiversity Strategy and report back with a final recommended Biodiversity Strategy in the second quarter of 2019.

## **FINANCIAL IMPACT**

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There are no financial implications resulting from this report.

The Interim Chief Financial Officer has reviewed this report and agrees with the financial impact information.

## **DECISION HISTORY**

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On September 18, 2015, the Parks and Environment Committee referred a letter from Councillor Mike Layton requesting that Toronto develop a biodiversity strategy to the City Manager for a report back to Parks and Environment Committee.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.PE5.6>

## **COMMENTS**

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Toronto has detailed Official Plan policies and other tools in place to protect the Natural Heritage System. Recently completed Plans for the Port Lands and the Downtown and emerging Secondary Plans such as Don Mills Crossing encourage new development to incorporate biodiversity through creating habitats, planting a variety of species that are pollinator friendly, and designing green roofs to be more biodiverse. In 2015, Council approved the designation of 68 new Environmentally Significant Areas (ESAs) in the Official Plan along with additional policies for their protection. These policies were approved by the Minister of Municipal Affairs in June 2016. Much of the City's robust biodiversity can be found in the ESAs; they contain over 1049 species of plants (including 369 significant plant species), at least 175 species of birds, many species of insects including migrating monarchs and numerous species of butterflies, as well as a variety of reptiles and amphibians and mammals. Additional tools to protect natural heritage include the Ravine and Natural Features Protection By-law (administered by Parks, Forestry and Recreation) which protects the forested areas by requiring a permit for destruction of trees; and the Toronto and Region Conservation Authority (TRCA) Fill Regulation which protects valley and stream corridors by prohibiting certain activities unless a permit has been issued. The Toronto Green Standard further serves to protect biodiversity by requiring new development to treat grass to protect migratory birds; to plant only native species when adjacent to the natural heritage system (50% native everywhere else); and prohibiting the planting of any invasive species.

The City has also, in collaboration with PFR, the TRCA, the ROM, universities, environmental groups, biodiversity experts and scientists, produced the Biodiversity Series. Each booklet focuses on a different type of taxa, such as butterflies, bees, mushrooms and spiders, which creates awareness of the many different species that can be found in Toronto. The panelists on the former Chief Planner's Roundtable on

Biodiversity held in May 2017 stressed the importance of biodiversity to the health of Toronto's natural systems and the city in general. The panelists identified a number of opportunities to enhance biodiversity, such as the need to increase public awareness of its value through education programs and stewardship activities. These opportunities have been captured in the draft Biodiversity Strategy.

The Ravine Strategy, adopted by Council in September 2017, guides future investments and stewardship for ravines to achieve a healthy ravine system that connect people with nature in a positive and sustainable way. The Pollinator Strategy, adopted by Council on April 24, 25, 26 and 27, 2018, sets out a series of priority actions for protecting native pollinators. The City also works directly with local citizens groups to support biodiversity. An example is working with Swiftwatch to identify chimney swift habitat in Toronto for protection.

While the City has already engaged in protecting our local biodiversity, much more can be done and the Strategy will serve as a guide for the City in moving forward.

## **What is Biodiversity?**

The United Nations' Environment Programme (UNEP) defines biodiversity as a combination of "bio" (life) and "diversity", generally referring to the variety and variability of life on Earth. Biodiversity can be visualized as an interconnected web of life – the variability among living organisms from all sources, including terrestrial and aquatic ecosystems.

## **Why is Biodiversity Important?**

Our health, well-being and economic progress depends on a healthy, diverse natural environment. The diversity of an ecosystem helps to keep it robust and resilient to future stresses. Clean water and air are essential to our health and quality of life. We depend on a healthy forest cover and wetlands to manage stormwater flows and help clean water. Forests help regulate climate and mitigate against climate change by absorbing solar radiation and acting as carbon sinks. A healthy forest also supports oxygen production and air purification. Biodiversity also contributes to our resilience as a city by helping in the recovery from destructive invasive pests like the Emerald Ash Borer. It also is important for pollination of flowers that enable plants to produce seeds and fruits that animals need to survive. The sound of song birds in the spring, watching a salmon struggle upstream or chasing a monarch butterfly as it finds its way along the shoreline on its fall migration south are experiences that enrich our lives.

## **What is the Purpose of the Biodiversity Strategy?**

The aim of Toronto's first Biodiversity Strategy is to increase the quality and quantity of natural habitat within the City in order to support healthier, more robust biodiversity and increase access to and awareness of nature. It is intended to address challenges to biodiversity in Toronto such as loss of habitat and connections, loss of species, invasive

species, climate change and impacts from humans and pets. The Strategy is intended to position Toronto as one of the leaders in conserving urban biodiversity.

The draft Strategy was developed in collaboration with the Parks, Forestry and Recreation Division, the Environment and Energy Division and the Toronto and Region Conservation Authority. Input to the Strategy has also been received through work on the Biodiversity Series and the May 2017 former Chief Planner Roundtable on Biodiversity, from the Royal Ontario Museum (ROM), universities, environmental groups, biodiversity experts and scientists.

## **Draft Biodiversity Strategy**

The draft Strategy is based on the following principles:

- Biodiversity is fundamental to the health of natural ecosystems and humans
- Biodiversity has an intrinsic value in itself that must be respected and protected
- Integrate Biodiversity into all aspects of city life
- Focus on habitat
- Use evidence-based planning
- Incorporate the knowledge, innovations and practices of indigenous communities
- Collaborate with a broad range of partners
- Consider climate change
- Measure success

## **Proposed Themes and Actions**

The draft Strategy sets out 19 actions to enhance the quantity and quality of biodiversity and increase awareness of and access to nature grouped under the themes of Restore, Design and Engage. Each section includes stories on successful initiatives in the City and elsewhere to illustrate and inspire.

### **Restore**

To restore biodiversity in the City and protect species at risk, healthy habitats need to be enhanced and expanded. Healthy habitat is about places that provide refuge, shelter, food and water sources and breeding grounds. Proposed actions under this theme include development of Regional Species of Concern Action Plans which would comprise enhancing and creating habitat, measures for protection and monitoring lifecycles. Other proposed actions include identifying priority sites to remove invasive species, and seeking opportunities to integrate the objectives of the Biodiversity Strategy in the development of planning studies and new secondary plans.

### **Design**

If we think of the city as part of nature – how can our urban environment best cohabit with the natural world? How can we design our built form to support healthy

ecosystems, to grow and spread along street right-of-way's, on rooftops, in tiny rain gardens, and backyards, and to reduce bird deaths from collisions with buildings? Strategic habitat interventions and corridors will better integrate the city's natural heritage system and open space network and contribute to a more biodiverse and resilient urban ecosystem.

Proposed actions include continuing to advance Design Best Practices for Biodiversity for buildings, sites and the public realm; and identify opportunities for eco-passages to facilitate wildlife migration.

## **Engage**

A key factor for creating a healthier biodiverse ecosystem is the awareness of the public about the importance of biodiversity and the fragility of the existing ecosystem. Toronto has a wealth of engaged citizens who are committed and passionate about biodiversity and our natural areas and who want to contribute their knowledge and experience. This is evident in the collaborative process that produced the Biodiversity Series and the Pollinator Protection Strategy and the many volunteers who participate in planning and restoring natural areas.

Proposed Actions include development of a data base and visualization tool that reconstructs and maps Toronto's original landscape and ecology; developing a self-guided tour with geo-referenced downloadable podcast about urban wildlife along designated routes such as a subway line based on information from the Biodiversity Series and the visualization tool.

## **Next Steps**

This report recommends that public and stakeholder consultation be conducted throughout 2018 to gain feedback and additional information to inform the preparation of a final report and recommended Biodiversity Strategy for Toronto. A variety of consultation methods are envisioned including a workshop of local experts; participation at biodiversity themed events such as bird and butterfly festivals, hawk and butterfly watches; and engaging citizen scientist groups.

## **CONTACT**

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## **SIGNATURE**

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City Planning Division

## **ATTACHMENTS**

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Attachment 1: The Draft Biodiversity Strategy for Toronto