Biological Sciences
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SCARBOROUGH

To: Catherine.McKenna@parl.gc.ca

Minister of the Environment and Climate Change Canada
200 Sacré-Cœur Boulevard
Gatineau, QC K1A 0H3

Re: Ecological Integrity and the Rouge National Urban Park (RNUP) Management Plan

The Honourable Catherine McKenna, Minister of Environment and Climate Change:

Thank you for amending the *Rouge National Urban Park Act* to prioritize "ecological integrity". This letter recommends the creation of a Rouge National Urban Park (RNUP) Management Plan that supports and implements existing conservation plans and Environment Canada's science-based recommendations in "*How Much Habitat is Enough, 2013*" for restoring and sustaining natural biodiversity and processes, and healthy aquatic systems - key requirements for ecological integrity.

I am an Associate Professor at the University of Toronto Scarborough Campus (UTSC) and director of a professional Masters' program in Conservation and Biodiversity, and I teach courses in applied conservation biology and biodiversity. Prior to becoming a UTSC Professor, I was a research scientist with Fisheries and Oceans Canada at the Great Lakes Laboratory for Fisheries and Aquatic Sciences in Burlington, Ontario, where I developed and led the federal aquatic species-at-risk research for the Great Lakes basin. I am also a member of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as a co-chair of the Freshwater Fish Species Subcommittee.

The objective of my research program is to understand better the patterns, processes, and stressors of Canadian freshwater fishes at multiple taxonomic and geographic scales. Such knowledge is essential for the conservation, protection, and recovery of freshwater fish biodiversity in Canada. Freshwater fishes are among the most imperiled taxa in the world. Over 25% of freshwater fishes in Canada are of conservation concern and there are a number of at-risk fish species within RNUP.

The Rouge Watershed and much of RNUP are part of the Toronto "Area of Concern" (AOC) under the international *Great Lakes Water Quality Agreement*. To improve water quality, natural processes and biodiversity, and mitigate environmental damage, federal government policies, staff and funding have contributed to the creation of many conservation plans, such as:

- Toronto's AOC Remedial Action Plan (RAP) and many supporting plans
- Rouge (2007) and Duffins (2003) Watershed Plans and Targeted Natural Heritage Systems
- Rouge North Management Plan (2001) and Rouge Park Natural Heritage Action Plan (2008)
- Draft Federal Green Space Preserve Master Plan and Implementation Strategy (2003)
- Rouge and Duffins Fisheries Management Plans and Atlantic Salmon recovery plans

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The *Great Lakes Water Quality Agreement* and *Golden Horseshoe Growth Plan* rely on the timely implementation of these plans to mitigate the costly impacts of pollution, flooding, erosion, habitat and biodiversity loss, invasive species, population growth and climate change.

After reviewing many scientific studies, Environment Canada produced the third edition of the Report "*How Much Habitat is Enough*" in 2013 to better inform habitat restoration within Great Lakes "Areas of Concern" like Toronto's waterfront and the Rouge River watershed. This report states:

> *"50% forest cover or more at the watershed scale equates to a low risk approach that is likely to support most species and healthy aquatic systems" (Table 9)*
>
> *"the greater of 10% of each major watershed and 6% of each subwatershed ... should be protected and restored" as wetland cover" (Table 2)*

Rouge Watershed Report Cards, prepared by the Toronto Region Conservation Authority (TRCA), indicate that the Rouge Watershed has only 13% forest and wetland cover - far less than needed to support native species diversity and healthy aquatic systems. Consequently, the Rouge Watershed received a "D" grade for forest cover and "C" grade for water quality in 2018. The TRCA's 2007 Rouge Watershed Plan notes:

> *"Overall, current quality, distribution and quantity of natural cover are* ***insufficient*** *to support existing Rouge watershed communities and species in the long term" (page 39)*
> *"improvements can be made in comparison to existing degraded conditions and anticipated future impacts ...* ***but only if substantial reforestation can be achieved in a timely manner"****(page 64)*

Environment Canada's recommendations for more than 60% forest and wetland cover were largely incorporated within existing Rouge Park, Watershed and Federal Green Space Master Plans. Timely habitat enlargement and defragmentation were deemed necessary to counteract past environmental damage and buffer future pressures from park use, invasive species, climate change and urban land use.

In 2008, Parks Canada and the Canadian Parks Council published "*Principles and Guidelines for Ecological Restoration in Canada's Protected Natural Areas*". Section 1.3 of this report states:

> *"While ecosystem management outside protected areas may be directed towards modifying or controlling nature, producing crops, or extracting natural resources, management efforts within protected areas are directed at maintaining ecosystems in* ***as natural a state as possible****."*

The implementation of Environment Canada's recommendations and existing conservation plans would create a RNUP with approximately 60% of its public lands in "*as natural a state as possible*". This could leave approximately 35% of the park's public lands in private farming leases beyond 2039. This represents a significant accommodation of private leases on public lands in a "protected area" and national park in Canada's endangered and under-protected Carolinian ecozone.

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Conclusion

RNUP contains the largest remaining tract of public land within Canada's endangered Carolinian Forest ecozone and its most populous region. This ecozone is home to approximately 20% of Canada's endangered species, and yet, less than 1% of it has been protected in national and provincial parks - far below the 17% target of the "*International Convention on Biodiversity"* which Canada signed in 2010.
Within this context, the public lands within RNUP, and surrounding it, represent a clear responsibility to restore a large "protected area" which prioritizes ecological integrity. Therefore, the RNUP Management Plan should include and implement:

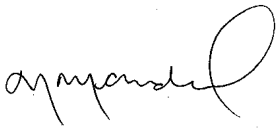
1. Environment Canada's science-based recommendation for more than 60% forest and wetland cover to restore and sustain biodiversity and healthy aquatic systems (ecological integrity);

2. The 2008 Rouge Park Natural Heritage Action Plan and the Ontario Greenbelt Plan and Rouge Park "main ecological corridor" from Lake Ontario to the ORM; and,

3. The draft 2003 Federal Green Space Master Plan, and Rouge and Duffins Watershed and Natural Heritage System Plans for improving Great Lakes water quality and ecological integrity.

The timely implementation of these existing conservation recommendations and plans is essential to address federal mandates under the *RNUP Act, Great Lakes Water Quality Agreement, Paris Climate Change Accord,* and *International Convention on Biodiversity.*
I look forward to your positive response, and opportunities to participate in research in RNUP to conserve its freshwater fishes and to apply conservation biology and landscape ecology principles to restore and sustain the natural biodiversity and processes necessary for ecological integrity.

Sincerely,



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