MEMORANDUM OF UNDERSTANDING (“MOU”)

FOR PARTNERSHIP AND COLLABORATION

B E T W E E N:

TORONTO AND REGION CONSERVATION AUTHORITY
(“TRCA”)

and

BOARD OF MANAGEMENT OF THE TORONTO ZOO
(“TORONTO ZOO”)

BACKGROUND

A. TRCA is a body corporate under the Conservation Authorities Act 1990, dedicated to the conservation and management of natural resources including, community action on environmental matters.

B. Toronto Zoo operates a zoological garden and related facilities in the City of Toronto. A portion of the lands on which the zoological garden and related facilities are situate are owned by TRCA.

C. TRCA and the Toronto Zoo have had a longstanding collaborative working relationship involving land management initiatives and ecological restoration projects.

D. TRCA has extensive knowledge and experience delivering projects in the areas of mitigating flooding and erosion hazards, protecting, restoring and enhancing terrestrial and aquatic habitat, and invasive species management and wildlife and ecosystem management.

E. TRCA and the Toronto Zoo recognize that there are opportunities for cooperation and collaboration and agree to establish a framework for an ongoing collaborative relationship.

F. TRCA and the Toronto Zoo are entering into this non-binding MOU to agree upon the general principles which will guide cooperation and collaboration between the two organizations.

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1. Commencement and Term

1.1. Each of TRCA and the Toronto Zoo is a “Party” under this MOU and together are the “Parties.”

1.2. This MOU shall commence upon the date it is signed by both Parties and it will expire on ##, unless the term is extended.

1.3. Prior to its expiry, this MOU shall be reviewed by the Parties to determine whether a new MOU should be executed by the Parties.

2. Areas of Cooperation and Collaboration

2.1. The Parties agree to the following underlying general principles as the basis for their relationship:

2.1.1. It is important for the two organizations to have open lines of communication at all levels and, as such, they will strive to facilitate open and timely communication with each other.

2.1.2. To the extent that one Party bring forward a project or projects to the other Party seeking support and/or approval, such other Party will commit to exploring the projects(s).

2.2. Areas of collaboration and cooperation between the Parties may include:

- Strategic Planning
- Community Engagement and Outreach
- Education Opportunities
- Sharing Best Practices

2.3. TRCA may be engaged by the Toronto Zoo to undertake work on behalf of the Toronto Zoo on a cost recovery basis, as detailed in Schedule A.

1. Erosion Hazard Mitigation
2. Biogas facility
3. Forest Management and Aboricultural Services
4. Review of TRCA Permit Applications under O. Reg. 166/06
5. Coordination with City of Toronto Urban Forestry - Ravine and Natural Feature Protection By-law staff
6. Terrestrial and aquatic restoration
7. Invasive Species Management Plans and Implementation
8. Restoration Opportunities Planning & Prioritization
9. Wildlife and Ecosystem Management Services
10. Carbon accounting and Energy Management
11. Trails and Facilities, Design, Permitting, Construction

3. Implementation and Project Delivery

3.1. Responsibility for implementing this MOU is shared equally by the Parties.

3.2. The Parties shall meet regularly to identify and explore opportunities for the implementation of the commitments in this MOU.

3.3. Where TRCA undertakes cost recovery work on behalf of the Toronto Zoo, the form of Letter Agreement included as Schedule “B” shall be used as the agreement for that work.

4. General

4.1. The Parties acknowledge that as this MOU does not create any binding obligation. The parties intend to enter into separate Letter Agreements to cover specific commitments and responsibilities for delivery of specific projects.

4.2. Amendments to this MOU can only be made by the written agreement of the Parties.

4.3. The Parties are independent parties and nothing in this MOU shall create the relationship of principal and agent, employer and employee, partnership or joint venture between the Parties.

4.4. This MOU will not restrict either Party from entering into supplemental or other agreements with each other, or other participating organizations, sponsors, media or other third parties. Nothing in this MOU shall preclude the Parties from conducting their business affairs in the usual manner.

4.5. This Agreement may be executed in counterparts. Either Party may send a copy of its executed counterpart to the other party by email instead of delivering a signed original of that counterpart. Each executed counterpart (including each copy sent by email) will be deemed to be an original; all executed counterparts taken together will constitute one agreement.

This MOU is entered into by the following representatives of the Parties:

Toronto and Region Conservation Authority

Date: _____

John MacKenzie
Chief Executive Officer

Board of Management of the Toronto Zoo

Date: _____

Dolf Dejong
Chief Executive Officer

Schedule "A" to MOU between
TRCA and Toronto Zoo

DESCRIPTION OF AREAS FOR SERVICE AGREEMENTS

1. Erosion Hazard Mitigation

TRCA's Engineering Projects (EP) group has a longstanding Erosion Risk Management Program (ERMP) that focuses on the identification, long-term monitoring, and remediation of erosion hazards throughout TRCA's jurisdiction. TRCA's EP group is a full service team of environmental, engineering, and construction professionals that are able to see projects through the entire life cycle including: hazard identification, detailed design development, project management (obtain all permits & approvals for construction), topographic surveying, and construction. This expertise relates predominantly to the implementation of remedial erosion control works. EP staff are also able to oversee a variety of other activities related to construction in sensitive areas.

Under the ERMP, TRCA has been monitoring 1 erosion control structure within the Toronto Zoo property since 2004 and an erosion hazard monitoring site that poses a long-term threat to the Zoomobile since 2016. In 2015, TRCA conducted a detailed inventory of the watercourse and assessed the condition of Toronto Water and other erosion control infrastructure. A table and map containing additional information on the sites can be found under files ERMP.

2. Biogas facility

NTD for Zoo – Do you require any support from TRCA on this?

3. Forest Management and Aboricultural Services

TRCA's forestry expertise allows it to offer comprehensive and integrated forest management, reforestation, restoration, hazard management, and arboricultural services. Active management of forests greatly improves forest health, biodiversity, resilience to insects, disease and climate change, and provides direct risk management to ensure public safety.

Specifically TRCA's expertise allows us to offer arboricultural, hazard tree management, and forestry services. TRCA's complement of ISA certified arborists, hazard tree technician, and Registered Professional Forester (RPF) are able to provide a complete suite of arboricultural and forestry management activities and services, such as;

- Butternut health assessments,
- Individual tree health assessments and prescriptions,
- Tree inventories,
- Arborist reports,
- Forest management plans,
- Tree removals and mitigation
- Tree retainment and injury mitigation
- Development and certification of City of Toronto's Ravine and Natural Features Protection (RNFP) permit applications
- Development of Tree Protection and Plan Review (TPPR) to obtain permits and approvals for trees situated on public and private lands within the City of Toronto
- Complete coordination of the application and approval process of all City of Toronto tree protection, and permitting processes

TRCA also operates and supplies native trees and shrubs form its own native plant nursery. Locally collected seed is used to grow highly desirable hardy native plant materials that is well adapted to our local growing conditions.

4. Review of TRCA Permit Applications under O. Reg. 166/06

Review of TRCA Permit Applications under O. Reg. 166/06, including water resource engineering, geotechnical engineering and ecology.

5. Coordination with City of Toronto Urban Forestry - Ravine and Natural Feature Protection By-law staff

Permits are required for tree removal or injury under the by-law. If TRCA staff are completing a project for the zoo on behalf of the zoo, TRCA could coordinate the ravine permit approvals. When TRCA is reviewing a permit application submitted by the zoo, we will coordinate our approval with that of the ravine by-law, which is helpful and streamlines the process.

6. Terrestrial and aquatic restoration

TRCA is a global leader in ecological restoration, with more than 50 years of experience protecting, enhancing, restoring and monitoring impaired natural habitats. The Restoration Projects (RP) group of TRCA strives to protect, enhance and regenerate natural resources within the TRCA jurisdiction through various restoration projects. These projects focus on: improving natural cover; improving riparian areas; restoring wetlands; stream restoration using natural channel design principles; and enhancing essential wildlife habitat. Through a detailed understanding of ecology and the interconnected roles of hydrology, natural habitats, and flora and fauna, RP group is able to identify the environmental needs at a site and set appropriate restoration targets to enhance and restore natural areas. Our ecological restoration programs are essential to maintaining a robust and resilient natural system that can benefit human health and well-being — especially as the Greater Toronto Area continues to experience environmental pressures of urbanization and climate change.

The RP group has a long history of cooperation with the Toronto Zoo and both groups have successfully partnered in the past to implement multiple successful ecological restoration projects including: improved vernal pool habitat for amphibian breeding; The Weston Pond wetland restoration; continued studies on water quality improvements in the zoo waterway; Beare road wetland habitat improvements; The Blandings turtle head start program; and most recently a wetland restoration project targeting habitat for the threatened Western Chorus Frog species.

7. Invasive Species Management Plans and Implementation

Closely connected to ecological restoration is invasive species management, in particular invasive plant management. TRCA's focus on invasive species management targets prevention, early detection and rapid response; eradication, containment and control; protection of high priority areas; and coordination, knowledge transfer and awareness. Using best

management practices, TRCA develops site specific invasive plant species management plans that typically include the objectives of reducing invasive infestation and restoring the site to native natural cover to provide optimal ecological function. Invasive species management plans generally include 3-5 years of staff-led control, followed by restoration and a long-term monitoring program to identify and manage new infestations. Depending on the site and the species, long-term management can often include community involvement.

8. Restoration Opportunities Planning & Prioritization

Ecosystem restoration planning requires an integrated approach considering many components of the natural system when prioritizing where and what to restore. Toronto and Region Conservation (TRCA) and partners have developed a multi-discipline and multi-benefit approach to restoration planning that facilitates effective restoration works, which contribute to delisting targets, realizing regional watershed objectives and provides development compensation options. Through various long-term monitoring and modelling initiatives TRCA has amassed a wealth of knowledge on terrestrial biodiversity, aquatic ecosystems, hydrology, and headwater conditions. The aim of Integrated Restoration Prioritization (IRP) is to identify impairments and threats to ecosystem function to improve the delivery of ecological goods and services. Consolidating data and comparing discrete areas based on different parameters and thresholds has helped direct decision making for future restoration initiatives. The first iteration of the IRP analyzed existing datasets, identified gaps, and made recommendations for future monitoring. Specifically, the IRP will ensure habitats and corridor linkages are protected, enhanced or rehabilitated throughout the Toronto and Region Area of Concern by identifying where impairments to ecological function are located, and prioritize upstream and local catchments that could contribute most to improving the natural system.

9. Wildlife and Ecosystem Management Services

Urban areas can often create conditions that result in human-wildlife conflict. Examples of this range from the fouling of manicured areas by Canada Geese, to beaver dams that impound water, to road ecology issues. As experts in wildlife habitat, TRCA has the knowledge and experience to undertake site specific management and reduce conflict. In most cases, human-wildlife conflict can be mitigated by undertaking appropriate ecosystem management measures, as well as education, rather than managing the wildlife itself. For example, vegetation impacts caused by white-tailed deer herbivory can usually be addressed through exclusion techniques that prevent deer access to vegetation. Wildlife mortality (i.e., small mammals and reptiles) due to vehicles can be mitigated through the proper design and installation of eco-passages and associated fencing. Wildlife management also includes a significant educational component to improve understanding, awareness and tolerance of urban wildlife, as well as to ensure the public understands actions they can take to improve their safety (i.e., coyote encounters).

10. Carbon accounting and Energy Management

Staff in Corporate Sustainability currently process both practical experience based knowledge and intensive course-work based training that demonstrates a high-level understanding of carbon accounting practices and standards. Capabilities of staff include how to scope, count,

track, verify, validate and report greenhouse gas emissions using the GHG Protocol Corporate Standard, ISO 14064:3 and CDP reporting practices. They maintain and utilize a digital library of GHG emission factors, global warming potential values, emission calculation tools, reporting templates and standards to assist in the quantification of sources to create an inventory, the calculation of emissions and monitoring procedures for project scale to corporate scale requirements.

Staff in Community Transformation, STEP Energy and PPG have technical knowledge and experience in energy benchmarking and diagnostics, level 1 energy auditing, building energy management, district energy systems and renewable energy and renewable fuels. These skills are available to assist our corporate partners in addressing their own energy management issues including development of building or corporate energy management plans, evaluation of energy management and generation options to address cost or GHG.

11. Trails and Facilities, Design, Permitting and Construction

As one of the largest landowners in the Greater Toronto Area, TRCA is a leader in the planning, design, implementation and management of trails and associated infrastructure that provide safe, enjoyable recreational trail experiences for area residents and visitors. These offerings are developed such that the natural and cultural heritage resources are protected. TRCA's trail management activities also complement TRCA's aim to provide nature-based recreation experiences for a growing population while protecting and restoring the form and function of existing ecological systems. This experience which includes designing, construction and permitting related to infrastructure and facilities could be utilized by the Zoo in work on new facilities including exhibits proposed within sensitive environments in this section of the Rouge Valley.

12. Education and Community Learning

The science of conservation and watershed management that TRCA undertakes within the Toronto region is a unique discipline that mirrors much of the Toronto Zoo's work related to species and habitat conservation both locally and globally. The applied science and ecosystem management expertise of TRCA and the Toronto Zoo provides a foundation for learning that other out-of-class learning providers, including school boards, camps and nature centres do not possess; for TRCA and Toronto Zoo the science that is taught is the science that is practiced. These represent unique differentiating opportunities to both connect the on-the-ground work of TRCA and the Toronto Zoo to the communities we serve, as well as continue to enhance the ability of TRCA and the Toronto Zoo to tell the story of ecosystems together by building stronger partnerships with school boards, advocating for increased investment in out-of-class learning opportunities for students and developing new science-based, curriculum-linked learning experiences.

Additionally, TRCA can support the expanded use of the Toronto Zoo as community space by building on TRCA's experience in re-imagining Black Creek Pioneer Village, the Kortright Centre

for Conservation and Bolton Camp as tourism and community destinations. TRCA can provide support related to leveraging the unique nature of the Toronto Zoo to enhance program, business development and delivery models that continue to diversify the economic model of the Toronto Zoo, while learning from the experience of the Toronto Zoo as a significant tourism attraction.

Schedule "B" to MOU between
TRCA and Toronto Zoo

LETTER OF AGREEMENT TEMPLATE