



Report to: General Committee

Meeting Date: April 9<sup>th</sup>, 2018

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**SUBJECT:** City of Markham's Wildlife Services - Inventory of Programs and Services

**PREPARED BY:** Christy Lehman, Acting Supervisor of Licensing and Standards

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**RECOMMENDATION:**

- 1) That report entitled "*City of Markham's Wildlife Services - Inventory of Programs and Services*" be received for information; and,
- 2) That Staff be authorized and directed to do all things necessary to give effect to this resolution.

**PURPOSE:**

This report provides an overview of the legislative framework governing the City of Markham's interaction with wildlife. It also summarizes all of the current programs, practices and services that the City has in place to promote and protect wildlife. Finally, the report identifies suggested improvements to Markham's current programs.

**BACKGROUND**

The City of Markham's interactions with wildlife are guided by the following principles that were informed by Building Markham's Future Together, the Official Plan and The Greenprint:

1. Wildlife has intrinsic, ecological, economic, social and cultural value.
2. Markham residents desire healthy and sustainable wildlife populations.
3. The City will endeavor to identify and protect natural heritage systems and wildlife habitats to conserve biodiversity for future generations.
4. The City recognizes the importance of planning and managing natural heritage resources at a landscape/watershed-scale in order to provide for wildlife connectivity, a diversity of habitat types and sizes, and to consider water-related functions.
5. Everyone is responsible for preventing and managing human-wildlife conflicts.
6. The City's actions to address human-wildlife conflicts:
  - o Will be ecologically sound.
  - o Will not negatively impact the survival and recovery of species at risk.
  - o Will be based on the best practices found in other jurisdictions.
7. Prevention of human-wildlife conflict is achieved through proactive efforts and an adaptive management approach. The City will utilize sound scientific and applied technical knowledge to enhance human-wildlife conflict prevention efforts and minimize risk to human health and safety.
8. Effective outreach and education are important for mitigating for human-wildlife conflicts.

Staff have been asked to report back with an overview of the legislative framework governing the City's interactions with wildlife and to provide a summary of Markham's current wildlife-related programs and services.

### **OPTIONS/ DISCUSSION:**

The City of Markham's obligations with respect to the recognition, protection and promotion of wildlife are enumerated in various pieces of Federal and Provincial legislation. To address these requirements, and to assist with minimizing the municipality's impact on wildlife, Markham has implemented numerous programs and services. Although wildlife considerations broadly impact all areas of the Corporation, they are most significant in Legislative Services and Corporate Communications (Animal Services), Environmental Services, Operations, Planning and Urban Design, Engineering, and Sustainability and Asset Management Departments.

What follows is a summary of the legislative framework governing each of the key Departments in terms of wildlife, a summary of the wildlife programs and services offered by each, and where applicable, areas for improvement.

## **1. LEGISLATIVE SERVICES AND CORPORATE COMMUNICATIONS - ANIMAL SERVICES DIVISION**

The City's Animal Services Division is responsible for the welfare of both domestic and wild animals within Markham. The Division is also responsible for educating the public on a broad range of animal issues. In so doing, the Division is governed by both Provincial legislation and Municipal by-laws (see **Attachment "A"**). The City is a leader in wildlife rehabilitation and a summary of Markham's current wildlife services and programs is included as **Attachment "B"**.

In 2012, the City retained a consultant (DPRA) to conduct a comprehensive review of Markham's animal services programs and to provide feedback on possible improvements. While the resulting report indicated that the City's wildlife practices exceeded the standards of most municipalities, the consultant identified an opportunity enhance the wildlife services being provided by Markham (see the full DPRA report included as **Attachment "C"**). Specifically, DPRA recommended the City implement a wildlife rehabilitation program. The City subsequently entered into an agreement with a service provider for the provision of rehabilitation services.<sup>1</sup>

To-date, Markham remains one of only two Ontario municipalities that provide funding for wildlife rehabilitation, the other being Richmond Hill. In fact, Markham's Animal Services staff are routinely contacted by other municipalities seeking information about Markham's wildlife services. The City is also one of the only municipalities in the Province to have an Advisory Committee solely dedicated to animal welfare. The City's

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<sup>1</sup> The City has now offered wildlife rehabilitation services for 6 years. Markham's current contractor is Shades of Hope Wildlife Refuge. They respond to approximately 1352 calls annually and care for an average of 327 animals (representing 49 different species) from Markham.

Animal Care Committee (ACC) has played an integral part in framing Markham's animal services delivery model and the ACC's fundraising efforts contributed to the establishment of the innovative and extremely successful Cat Adoption and Education Centre. The ACC's active participation in community events has also assisted with the education of the public on an array of animal welfare issues.

#### Opportunities for Improvement in Markham's Wildlife Services

- 1) Public education – Staff believe public education is the key to preventing harmful interactions between residents and wildlife. Feedback received by Animal Services Staff through focus groups and contact with the public, point to an opportunity to increase awareness of wildlife issues in Markham. To this end, the City has made efforts to increase public education around wildlife issues and plans to hold additional educational wildlife-related seminars throughout the City. There are currently 2 seminars booked for 2018, one which relates to coyote behavior. City of Markham Animal Control Officers also offer free wildlife audits of homes upon request in order to assist residents with wildlife mitigation and management on their property.
- 2) Amendments to Markham's Animal Control By-law - Staff has identified gaps in the current By-law's wildlife regulations. One gap identified is in the area of feeding of wildlife. The City does not currently prohibit the feeding of wildlife but, feeding wildlife is a nuisance in residential areas because it attracts wildlife and is hazardous for animals as they become dependent on someone feeding them, (which causes a loss of natural instinct to forage for food. Once the food supply stops, the animals may not be able survive. Staff plan to bring forward by-law amendments to address this issue in 2018.
- 3) Conflicting City regulations - Staff has identified conflicting municipal regulations regarding the treatment of wildlife. For instance, while the Animal Control By-law prohibits the removal of wildlife from City property, the Parks By-law permits fishing in certain Markham parks (i.e., the removal of fish). These conflicting regulations are confusing to the public and will be addressed through future by-law amendments to better ensure a cohesive treatment of wildlife throughout the City.

**2. OPERATIONS** The City's Operations Department is responsible for the maintenance, repair, restoration and management of City owned or managed parks, roads, urban forest and their related infrastructure. Parks, especially those with valley lands, provide habitat and serve as corridors to support and facilitate the movement of a wide range of wildlife species. It is incumbent upon Operations to manage any works or related activities to prevent unintended harm or damage to the habitat of any given species of wildlife. To this end, a regulatory framework of five Federal and four Provincial acts, serve to govern and inform any work activity that has the potential to cause harm to wildlife or their habitat. Practically speaking, the *Canada Migratory Birds Act* and the four Provincial acts, effectively comprise the full set of legislative measures that govern the timing and prescriptions of work plans, whenever impacts to wildlife might arise (see **Attachment "D"**).

Legislative controls for wildlife protection are applicable to any in-stream work, including the removal of debris jams or beaver dams. Removal of these obstructions is

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required in order to address serious issues related to flooding. Ensuring removals are done outside of spring/fall fish spawning seasons and that there is a gradual release of water downstream by incremental removal of dams or debris jams, are mandated and enforced under this legislation. To ensure full compliance of any work where this legislation becomes applicable, Operations has contracted the qualified professional services of a not for profit organization whose mandate is dedicated to the protection and restoration of wetland and aquatic habitats in York Region. Their expertise in the field eliminates the risk of exposure to the significant liability that could result due to work found to be non-compliant with any laws.

The most notable instances where the *Ontario Endangered Species Act (ESA)* comes into effect are along certain reaches of the Rouge River and its tributaries that are either active or designated as 'recovery habitat', along with the German Mills Meadow and Natural Habitat. These areas are probable nesting sites for breeding pairs of Eastern Meadowlarks and Bobolinks, both listed as threatened species under the province's ESA. In Red Side Dace habitat, permits (Letters of Advice) also apply to any restoration work such as tree or shrub planting to maintain a buffer area determined by a 30 meter plus meander calculation. This is to ensure that the streambank vegetation is appropriate for Red Side Dace habitat, which is low in height and comprised mostly of herbaceous species. In order to ensure the survival and maximize the successful fledging of Bobolink or Eastern Meadowlark hatchlings, parks staff suspend all maintenance activity off of the pathway system, from April 1 to at least August 15, to avoid the possibility of disturbing or damaging their nests. Operations have worked with the local residents association to create and install park signage to enlist the help of park visitors to protect the birds by remaining on pathways with their pets on leash, during the breeding season.

Since 2007, Markham's Trees for Tomorrow Program has helped to support a large number of habitat restoration projects in parks and natural areas across the City. By increasing the area of wildlife habitat and connectivity of corridors throughout the City's parks system, the frequency and number of incidents of wildlife conflicts should be seen to decline as the trees and shrubs continue to grow over time. A 2015 woodland assessment by the Region of York has determined that, the City of Markham's inventory of woodland habitat has been measured to have increased in area by more than 230 hectares since 2009, the second highest increase of the Region's nine second tier municipalities over this period.

In collaboration with the David Suzuki Foundation, the City of Markham became Canada's first 'Monarch Friendly City' in April 2016. At this point in time, milkweed seeds collected from the City's milkweed nursery at Milne Conservation Area undergoing stratification (cold treatment) for planting out in the spring. In addition to improving the health of and increasing the ecological services provided by the City's parks and natural areas, both initiatives have involved the active participation of the community through planting events and follow up stewardship activities. Community engagement of this kind serves to increase public awareness, understanding and appreciation of the important role nature plays in urban settings, to the betterment of our own well-being.

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A full overview of current programs in the Operations Department Division can be found in **Attachment “E”**.

### **3. PLANNING AND URBAN DESIGN**

The Planning and Urban Design Department is responsible for preparation and implementation of Markham’s Official Plan (OP) to guide future development and to manage growth. A key component of the OP is the identification of a City-wide Greenway System to protect and preserve a connected network of natural heritage and hydrologic features and to maintain viable wildlife populations over the long term. The Greenway System are protected lands that are not available for urban land uses and development. As part of the environment first approach of the Official Plan, Core Area and Core Linkage Enhancements have also been identified which represent priority restoration locations that will support connectivity for plants and wildlife, and create larger contiguous blocks of wildlife habitat.

Prior to development adjacent to the Greenway System, Environmental Impact Studies (EIS) may be required to address potential impacts to natural heritage features. The purpose of the EIS is to provide recommendations to avoid, minimize, or mitigate the impacts of development. These recommendations may include protection of natural heritage features, establishing environmental buffers (vegetation protection zones), tree protection fencing, erosion and sediment controls, design of stormwater management facilities, and construction timing windows to avoid sensitive wildlife breeding periods. These studies are reviewed by City and TRCA staff to ensure that the development proposal meets policy requirements and follows best practices. Proponents of development are also required to abide by a number of Provincial and Federal legislation. A list of frequently encountered legislation is provided in **Attachment “F”**.

The City has been an early adopter of progressive natural heritage planning policy as demonstrated through the approval of Official Plan Amendment (OPA) 52 (Natural Features Amendment, 1997), OPA 140 (Rouge North Management Plan, 2009), the City’s OP 2014 (Greenway Systems policies), and through policy studies such as the City’s Bird Friendly Guidelines. A comprehensive list of recent policy initiatives related to wildlife can be found in **Attachment “G”**.

#### Opportunities for Improvements in Planning and Urban Design:

- 1) Applied research of impacts of road design on wildlife movements (Road Ecology) – There is increasing acknowledgement of the impacts of roads on wildlife. Consideration for wildlife movement can be incorporated into road design through the use of wildlife culverts, span bridges, and the selection of the road alignment. Staff are working with the TRCA to better understand how to build these ecological principles into our development practices.
- 2) Inventory of wildlife species – The sole City-wide inventory of wildlife species in Markham was undertaken in the early 1990s as part of the Natural Features Study (OPA 52). At the time, 77 bird species, 7 amphibian/reptile species, and 12 mammal species were identified that reside in Markham. Given the changes to the landscape since this was last completed, an updated wildlife study and inventory may provide useful insights and information on species and habitat diversity and

- help inform future updates to the Official Plan or other policy documents (e.g., Significant Wildlife Habitat and/or Greenway System policies).
- 3) Identification of specialized habitats – The City’s data on natural areas is generally available at a fairly coarse level (e.g., the OP identifies lands as woodland, wetland, or valleyland/watercourse). Similar to point 2 above, more detailed field studies would be helpful to identify specialized habitat locations within these natural areas that may require more active management or attention. For example, for White-tailed Deer, are there locations where they overwinter in Markham that must remain connected to other habitats? For Monarch Butterfly, are there grasslands with significant clusters of milkweed that should not be planted with trees?

#### 4. ENGINEERING AND ENVIRONMENTAL SERVICES

The City’s Engineering and Environmental Services Departments are responsible for ensuring that the design and construction of municipal infrastructure such as roads, bridges, sewers, watermain and storm water systems comply with applicable Provincial and Federal legislation and guidelines that protect or enhance wildlife and wildlife habitat. This is achieved through the planning, review, approval and permitting processes established by the City, the applicable agencies at the Provincial level (e.g., Ministry of the Environment and Climate Change, Ministry of Natural Resources and Forestry, Toronto & Region Conservation Authority, etc.) and in some instances, the agencies at the Federal level (e.g., Fisheries and Oceans Canada, Transport Canada, etc.).

The legislation, policies and guidelines that are applied during the planning, design, and construction of municipal infrastructure to ensure that any potential impacts on wildlife are properly identified and mitigated are included in **Attachment “F”** and include:

- The *Environmental Protection Act*;
- The *Environmental Assessment Act*, more specifically the Municipal Class Environmental Assessment provisions;
- Toronto & Region Conservation Authority’s *Living City Policy*;
- Toronto & Region Conservation Authority’s *Crossing Guidelines for Valley and Stream Corridors*; and,
- Toronto & Region Conservation Authority’s *Road Ecology Study and Mitigation*

In addition to the design of the municipal infrastructure having to comply with the above-noted legislations, policies and guidelines, the permitting processes established by the Toronto & Region Conservation Authority and the Province further ensure that construction of municipal infrastructure occurs during times when impacts to wildlife are minimized.

Recent examples of municipal infrastructure projects that involve mitigating impacts and protecting wildlife and wildlife habitat include the Birchmount Road Bridge and Verdale Crossing over the Rouge River in Markham Centre. The design and construction of these projects adhered to and followed the requirements of the above legislations, policies and

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guidelines including obtaining permits from the Toronto & Region Conservation Authority and Ministry of Natural Resources and Forestry. Specific to the protection of terrestrial natural features, the following mitigation measures were considered during the design of the bridges and were approved by MNR and TRCA:

- Maximize the opening size beneath the bridge to preserve wildlife passage through the Rouge River Valley.
- Maximize the height of the opening below the bridge to ensure passage of large mammals.
- Construction materials will not be a barrier to wildlife movement beneath the bridge.

Another example is the recent culvert replacement in Cachet Parkway that resulted in a new square design that permitted daylight to cascade throughout creating a safe passage for turtles versus road crossings.

## **5. SUSTAINABILITY AND ASSET MANAGEMENT**

The Sustainability & Asset Management (SAM) Department is responsible for championing the implementation of the Greenprint, Markham's Community Sustainability Plan; liaising with Parks Canada to establish the Rouge National Urban Park; implementing Bird-Friendly measures on City of Markham buildings and stewards the pest management contract for all City facilities. See **Attachment "H" and "I"** for a detailed list of legislative frameworks and programs.

The Greenprint is Markham's long term plan to make our community one of the most sustainable in North America, it has 12 priority areas including Ecological Integrity. This priority area recognizes the need to Protect, Restore and Enhance Biodiversity. One objective of this priority area is to Develop and Support Wildlife Habitat, this objective has seven recommended actions that range from establishing an interconnected Natural Heritage Network, to connecting disconnected natural spaces, to working partnership with our community to achieve the objective. The Greenprint, as a strategic document has influenced many practices and policies in Markham.

Rouge National Urban Park is the culmination of many decades of environmental conservation by community groups and various levels of government including the City of Markham. Parks Canada has been working with the City of Markham and other stakeholders to establish Rouge National Urban Park, of which a large portion is in Markham. In 2015 the Rouge National Urban Park Act came into force and Parks Canada began accepting land transfers to establish the Park. In 2017, the Federal Government updated the Act to make Ecological Integrity the primary goal of the Park. The City of Markham is working towards transferring its more than 300 acres of land to Parks Canada. The City strongly supports the numerous habitat restoration projects undertaken by Parks Canada and others to date.

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SAM is responsible for implementing Markham's Bird Friendly guidelines on City buildings. To date we have installed Bird Friendly film on 10 buildings at a cost of \$153,359.00 including the Civic Centre, 8100 Warden Administration Building and most recently Angus Glen Community Centre & Library. SAM will continue to apply Markham's Bird Friendly guidelines by targeting buildings that are considered to be the highest risk to bird strikes or have reported bird strikes and will install bird friendly film every second year as budget is allocated by Council. SAM is also responsible for educating the community on how to prevent bird strikes at home; we provide a brochure with recommended actions for private homes at community events like the Unionville Festival and Markham Jazz Festival.

SAM is responsible for managing the contract for pest management for all City facilities and directly responsible for the Civic Centre and 8100 Warden pest management program. The City's Pest Management contractor uses rodenticides in their bait stations and other pesticides for other pests that meet the Federal Pest Control Products Act. The contractor uses tamper proof bait stations that will not allow a rodent that has ingested the rodenticide to leave the bait station, preventing the rodenticide from migrating elsewhere in the food chain.

#### Opportunities for Improvement in Sustainability and Asset Management

- 1) Inventory of Current Practices - It would be helpful to undertake a gap analysis of the inventory of the measures outlined in this report and by other external stakeholders, compared with the recommended actions in the Ecological Integrity priority of The Greenprint and report back with areas of focus. Additional resources and specific expertise will be required to undertake this work.
- 2) Public Education - SAM will partner with Animal Services Division to integrate bird friendly public education into their planned seminars and residential wildlife audits. SAM will also include Wildlife Services educational materials in public engagement initiatives.

#### **CONCLUSION**

While the City is in compliance with legislative requirements and has many sound practices relating to wildlife conservation, there is no comprehensive wildlife management or conservation strategy in place. In conventional terms, wildlife management and conservation are comprised of three dimensions: humans, wildlife, and habitat. Effective wildlife management and conservation address all three of these interdependent dimensions as well as the environment in which they occur. Wildlife conservation is the practice of protecting wild plant and animal species and their habitat.

Wildlife plays an important role in balancing the environment and provides stability to different natural processes of nature. Although the City does have an excellent program for wildlife rehabilitation, steps are being made to enhance overall wildlife conservation. Given our proximity to Canada's first Urban National Park, the Rouge National Park, Markham has the opportunity to become a leader in wildlife management and



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conservation. Wildlife is a feature of the outdoor experience and part of the national heritage of all Canadians. Wildlife considerations should form a critical part of future decision making regarding development, land use and operations as wildlife reflects the conditions of the environment and constitutes a system for measuring environmental change.

Wildlife preservation is entrusted in law to the stewardship of the various governments, including municipalities. Sound protection, conservation and management of all wildlife should be the concern and responsibility of all Canadians.

Staff are continuing to uphold these fundamental practices for wildlife conservation by working collaboratively on improving the City's service delivery model while ensuring legislative frameworks are followed. In order to continue to encourage wildlife conservation, and be on the forefront of municipal wildlife management, a more comprehensive program will be required.

**FINANCIAL CONSIDERATIONS**

N/A

**HUMAN RESOURCES CONSIDERATIONS**

N/A

**ALIGNMENT WITH STRATEGIC PRIORITIES:**

The initiatives described in this report engage our community in the protection of wildlife in Markham and are aligned with the strategic directions contained in both Building Markham's Future Together (BMFT) and The Greenprint, Markham's Community Sustainability Plan.

One of BMFT's four goals is a Safe and Sustainable Community with the sub-objective of Protecting and Respecting our Built and Natural Environment. A second goal that is supported is Engaged, Diverse and Thriving, which seeks to have every person having a roll in building a livable, caring and interconnected community.

The Greenprint, has the priority of Ecological Integrity with the objective to Protect, Restore and Enhance Biodiversity.

**BUSINESS UNITS CONSULTED AND AFFECTED:**

Engineering, Operations, Environmental Services, Planning and Urban Design and Sustainability & Asset Management staff were consulted in the preparation of this report.

**RECOMMENDED BY:**

2018-04-05

**X**

Kimberley Kitteringham  
City Clerk  
Signed by: cxa

2018-04-05

**X**

Brenda Librecz  
Commissioner, Community & Fire Services  
Signed by: cxa

2018-04-05

**X**

Trinela Cane  
Commissioner, Corporate Services  
Signed by: cxa

2018-04-05

**X**

Brian Lee  
Acting Commissioner, Development Services  
Signed by: cxa

**ATTACHMENTS:**[Attachment A-Animal Services Legislative Framework](#)[Attachment B-Animal Services Wildlife Programs](#)[Attachment C-DPRA Report](#)[Attachment D-Operations Legislative Framework](#)[Attachment E-Operations Programs](#)[Attachment F-Planning and Urban Design/Engineering/Environmental Services  
Departments Legislative Framework](#)[Attachment G-Planning and Urban Design Department Wildlife-related Programs](#)[Attachment H-Sustainability and Asset Management Legislative Framework](#)[Attachment I-Sustainability and Asset Management Programs](#)