



Coyote Response & Co-existence Strategy

**General Committee
November 29, 2021**

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Overview

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- Legislative Framework
- Municipal Scan
- Proposed Coyote Response and Co-existence Strategy Overview
 - Key Deliverables
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Background

- On May 31st 2021, staff appeared at General Committee to provide an overview of the current coyote situation in Markham.
- Lesley Sampson of Coyote Watch Canada, Eva Bobak from the Ministry of Northern Development, Mines, Natural Resources and Forestry, and representatives from TRCA were also in attendance at that meeting.
- Staff were asked to report back with a proposed mitigation strategy for coyotes in Markham.





Background Continued

- The City has been offering wildlife services via contract since 2012.
- There have been confirmed coyote sightings in north east Markham.
- Approximately **175** reported sightings of coyotes from April 2021.
- Officers have patrolled areas on a daily basis and have provided education and public outreach to all residents they encounter.
- Coyotes are rarely seen, but when encountered, simple aversion conditioning (humane hazing) typically causes them to retreat.



Background Continued

- There have been no reported coyote attacks on humans in Markham.
- There have been 2 confirmed fatal attacks on dogs; they have been investigated by ACOs and Coyote Watch Canada
- In comparison, domestic dogs have accounted for 32 attacks on other domestic dogs and 15 attacks on humans in the same time frame.





Legislative Framework

- The *Fish and Wildlife Conservation Act* governs wildlife in Ontario.
- Municipalities are limited in the actions they can take to address wildlife related issues.
 - For example: relocation can only be within 1km of where the animal is found due to:
 - Disease control
 - Inhumane to the animal
- Municipalities have the authority to lethally intervene (kill) menacing coyotes and other wildlife under strict guidelines and limitations.
- Markham prohibits the discharge of firearms including guns and crossbows (*By-law 2012-233*).
- Markham prohibits the use of leg traps, snares and kill traps (*By-law 2018-91*).
- Markham can employ a Provincially-licensed trapper, but they must use live traps.



Municipal Scan

- Staff surveyed all Ontario municipalities to determine if they had a coyote mitigation strategy in place.
- Results indicate that most southern municipalities in Ontario are experiencing an increase in wildlife conflict, but no formal Provincial strategy has been developed.
- Very few municipalities have developed their own formal tiered response or a fulsome strategy to respond to coyote-human conflicts – generally due to a lack of resources or local expertise.
- Most municipalities refer the matter to the Ministry of Northern Development, Mines, Natural Resources and Forestry for resolution.



Coyote Response and Co-existence Strategy

- Considerable research and consultation with field experts.
- Guiding principle of the strategy includes promoting a safe, sustainable and biodiverse community.
- Key deliverables include:
 - Increased public education and community outreach;
 - Domestic pet and property management education;
 - Incident escalation framework;
 - Human intervention strategies ;
 - Promote a Provincial approach to Managing Human-Wildlife Conflicts; and,
 - Partnership with a University on further strategy development.
- Document is fluid and will be reviewed regularly to ensure up-to-date research and response as it becomes available



Increased public education & community outreach

Increased methods of public education and community outreach will be implemented. These include but are not limited to:

- Website updates- which already include links to a video training module prepared by Coyote Watch (in coordination with City of Toronto).
- Social media campaigns.
- Educational handouts.
- Local newspapers – use of City page, etc.
- Mail-outs in areas where coyote sightings have occurred.
- In-person community engagement (including local schools).
- Updated Signage in areas where coyote sightings have occurred.





Domestic pet & property management education

- Educating residents on how to reduce interactions with coyotes and other types of wildlife by managing their household pets and maintaining their properties is a critical component.
- Intentional and unintentional feeding can lead coyotes to associate humans with sources of food which can eliminate their ingrained fear of humans.
- Key areas of education include:
 - Food
 - Water
 - Shelter
 - Unattended Household Pets
 - Aversion Conditioning (Humane Hazing)





Incident Escalation Framework

- The proposed Strategy provides a framework for an actioned response to coyote interactions.
- Each interaction is outlined and categorized based on the severity of the interaction.
- Classifications of human/coyote interactions range from:
 - observation
 - sighting
 - encounter
 - unattended pet attack
 - attended pet attack
 - incident
 - unprovoked human attack
 - provoked human attack
- With all points considered, the lethal removal (killing) of coyotes is a last resort for the City.



Incident Escalation and Action Overview

Coyote Behaviour	Classification	Animal Care Services Action
Coyote vocalizations; scat or prints seen	Observation	Distribute educational material and information on normal coyote behaviour.
Coyote seen moving through area (day or night)	Sighting	Distribute educational material and information on normal coyote behaviour.
Coyote seen resting in area (day or night)	Sighting	If area is frequented by people (e.g. park or playground), educate on normal coyote behaviour and provide aversion conditioning (humane aversion conditioning or humane hazing) information. Look for and eliminate any attractants in area where sighting occurred, if possible.
Coyote entering a yard (no person present outside)	Sighting	Educate on normal coyote behaviour and provide aversion conditioning (humane hazing) information. Complete yard audit.
Coyote following or approaching a person with no incident	Encounter	Assess and educate on normal coyote behaviour and provide aversion conditioning (humane hazing) information. Look for and eliminate any attractants in area where encounter occurred, if possible.
Coyote following or approaching a person with pet with no incident	Encounter	<p>Assess and provide information on aversion conditioning (humane hazing) techniques and encourage responsible pet ownership. In an open area, post coyote sign(s) to alert other residents.</p> <p>If it is pup season and there is a known den nearby, consider blocking off the path or area (den) until pup season is over or confirmation that the family has moved on is achieved.</p>
Coyote entering a yard with pets, no incident	Encounter	Assess and educate on wildlife attractants and responsible pet ownership. Provide information on aversion conditioning (humane hazing) techniques and complete yard audit.
Coyote entering a yard with people and pets (no pet attack occurring)	Encounter	Assess and educate on wildlife attractants and responsible pet ownership. Provide information on aversion conditioning (humane hazing) techniques and complete yard audit.



Incident Escalation and Action Overview

Coyote injures or kills unattended pet in back yard (distance greater than 6' from human)	Unattended Pet Attack	<p>Gather information including a historical overview of area and human-wildlife activity and the animals involved and reported circumstances.</p> <p>Assess and educate on wildlife attractants and responsible pet ownership. Provide information on aversion conditioning (humane hazing) techniques and complete yard audit.</p>
Coyote injures or kills pet off-leash in open space area	Unattended Pet Attack	<p>Gather information including a historical overview of area and human-wildlife activity and the animals involved and reported circumstances. Assess and educate on responsible pet ownership and aversion conditioning (humane hazing). Look for and eliminate any attractants in area where incident occurred, if possible.</p> <p>Post coyote sign(s) in open area to alert other residents. If it is pup season and there is a known den nearby, consider blocking off the path or area until pup season is over or confirmation that the family has moved on is achieved. Zero tolerance approach for leash law violations.</p>
Suspected coyote injures or kills livestock	Livestock Loss/Depredation	<p>Legislation under Ontario Ministry of Agriculture, Food and Rural Affairs governs livestock valuation and handling of deadstock. Gather information on specific animals involved and reported circumstances. Assist livestock investigator where necessary.</p>
Coyote injures or kills pet off leash with human nearby (within six feet)	Attended Pet Attack	<p>Gather information including a historical overview of area and human-wildlife activity and the animals involved and reported circumstances. Assess and educate on responsible pet ownership, coyote attractants, and aversion conditioning (humane hazing).</p> <p>Perform yard/neighborhood/public area audit. Post coyote sign(s) and/or send educational materials to residents in the area (100m radius).</p> <p>Implement high intensity aversion conditioning (humane hazing) techniques by Markham's Animal Care Officers.</p> <p>If multiple confirmed incidents have occurred in the same vicinity within a short amount of time, further action may be required.</p>



Incident Escalation and Action Overview

Coyote approaches a person, showing teeth, back fur raised, vocalizing, lunging, nipping without contact	Incident	<p>Gather information including a historical overview of area and human-wildlife activity and the animals involved and reported circumstances.</p> <p>Educate on responsible pet ownership (if applicable), coyote attractants, and aversion conditioning (humane hazing). Perform yard/neighborhood/public area audit. Post coyote sign(s) and/or send educational materials to residents in the area.</p> <p>Implement high-intensity aversion conditioning (humane hazing) techniques by Markham's Animal Care Officers. If confirmed multiple incidents have occurred in the vicinity within a short amount of time, further action may be required.</p>
Coyote has bitten human (an attack where the involved human does not encourage the coyote to engage)	Unprovoked Human Attack	<p>Identify and gather information on all details of attack (including action of victim before and after attack, action of victim towards coyote, and how incident was resolved).</p> <p>Any human bitten by a coyote(s) will need to seek the advice of their physician concerning the administration of a post exposure rabies vaccination.</p> <p>Animal Care Staff will notify the City Clerk and/or CAO, York Regional Police (YRP), York Region Public Health, and the Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMRF).</p> <p>City staff will work with the YRP and/or MNRF and Ministry regulated licensed trappers to locate and eliminate the responsible coyote, which will be tested for rabies, and also be given a full necropsy to determine general health and whether feeding was involved.</p> <p>City staff will educate residents on coyote attractants, aversion conditioning (humane hazing), and responsible pet ownership. City staff will also perform yard/neighborhood/public area audit. Implement high-intensity aversion conditioning (humane hazing) techniques by Animal Care Officers.</p>
Coyote has bitten human (human encouraged coyote to engage by hand feeding, approaching coyote with pups, intervening during pet attack, etc.)	Provoked Human Attack	<p>Identify and gather information on all details of attack (including actions of victim before and after attack, whether feeding or pets were involved, actions of victim towards coyote, and how incident was resolved).</p> <p>Any human bitten by a coyote(s) will need to seek the advice of their physician concerning the administration of a post exposure rabies vaccination.</p> <p>When known, animal care staff will notify the City Clerk and/or CAO, York Regional Police (YRP), York Region Public Health, and Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMRF). City staff will work with YRP and/or MNRF and ministry regulated licensed trappers to locate and eliminate the responsible coyote, which will be tested for rabies, and also be given a full necropsy to determine general health and whether feeding was involved. City staff will educate residents on coyote attractants, aversion conditioning (humane hazing), and responsible pet ownership. City staff will also perform yard/neighborhood/public area audit. Fines (for wildlife feeding and/or leash law violations) when appropriate. Implement high-intensity aversion conditioning (humane hazing) techniques by Animal Care Officers.</p>



Human Intervention Strategies

- Individual management of human-coyote risk remains one of the most effective tools.
- Human Interventions include:
 - Removing food resources from coyote foraging areas;
 - Isolating domestic pets from areas of coyote activity;
 - Actively using aversion conditioning (humane hazing) techniques when a coyote is observed; and,
 - Carefully recording and reporting all coyote sightings to Markham Animal Services via telephone by calling **905 415 7531**
- If a coyote's attempts to gather food from the immediate area are unsuccessful, due to lack of food/water or from aversion conditioning, this can significantly reduce the probability of a return visit.



Promote a Provincial approach to Managing Human-Wildlife Conflicts

- The issue of human-wildlife conflicts is complex and Ontario municipalities are generally ill-equipped to deal with this issue.
- It must be dealt with as part of the broader issue of environmental sustainability and habitat preservation.
- Staff encourage the Province of Ontario to take a leadership role.





Partnership with a University

- In 2021 there has been a notable increase in the number of reported coyote sightings.
- Sensational news stories regarding rare attacks by coyotes on domestic pets and/or on humans have increased resident's concerns.
- Little academic research or formal studies of human-coyote conflicts in Ontario have been undertaken to-date.
- Staff are committed to investigating a formal partnership with a university or academic group to expand local knowledge of coyote behaviour.



Stakeholder Engagement

- The proposed Strategy was reviewed by Coyote Watch Canada and the Animal Care Committee, who provided the following comments:
- Coyote Watch Canada:
 - Strategy approach has been endorsed by the organization
 - Staff will continue to cooperatively work with the organization on all future coyote concerns
- Animal Care Committee:
 - Supports the focus on educating residents, which is crucial in reducing conflicts and ensuring appropriate responses based on interactions.





Conclusion

- The City of Markham is committed to ensuring a sustainable and resilient community where residents safely coexist with wildlife.
- It is evident that more research is needed in Ontario to understand coyote behavior.
- Staff believe the Provincial Government has a significant role to play in the development of an Ontario-wide approach to managing human/coyote interactions.
- The proposed Strategy is meant to be a living document and City Staff will continue to connect with organizations and other municipalities to review best practices.
- Staff will also continue to utilize an evidence based approach to the City's coyote response while keeping human safety at the forefront.



Recommendations

1. That the report entitled *Proposed City of Markham Coyote Response and Co-existence Strategy* be received; and,
2. That the proposed *Coyote Response and Co-existence Strategy* outlined in **Attachment “F”** be approved; and,
3. That Council request the Premier of Ontario to direct the Ministry of Northern Development, Mines, Natural Resources and Forestry to formally review the complex issue of human/coyote conflict in Ontario and to develop a comprehensive, Province-wide solution to address same; and,
4. That Council direct staff to investigate the feasibility of partnering with a post-secondary institution in Ontario to conduct research on the effects of urbanization on coyotes, human/coyote conflicts in an urban setting and best practices and evidence based approaches to address related issues; and,



Recommendations Cont'd

5. That Staff review the *Coyote Response and Co-existence Strategy* on a regular basis to ensure the information included is relevant and in compliance with evolving research and legislation; and,
6. That a copy of this resolution be sent to Ontario's 444 municipalities, the Association of Municipalities of Ontario (AMO), the Association of Municipal Managers, Clerks, and Treasurers of Ontario (AMCTO); the Toronto Region Conservation Authority (TRCA), and the Federation of Canadian Municipalities (FCM); and further,
7. That Staff be authorized and directed to do all things necessary to give effect to this resolution.



Questions?