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Canid Management Plan (Coyotes, Foxes)

<p>Situation / Principles</p>	<p>The Town of Niagara-on-the-Lake desires to identify and achieve a balance between the importance of human safety as a priority and the natural ecology. Safety is a priority in managing human- canid interactions. The Town of Niagara-on-the-Lake has seen an increase in the number of coyote sightings and reports within the last year.</p> <p>This Canid Management Plan is based on scientific research, understanding of canid ecology and biology in an urban setting and the best-known management practices and management tools.</p>
<p>Objectives</p>	<ul style="list-style-type: none"> ▪ Educate the public on typical canid (e.g., coyote, fox) behaviour, how to prevent human/canid/ and pet/canid interactions and/or conflicts and provide guidelines that identify and promote best practices for healthy and safe co-existence with wildlife. ▪ Develop a strategy for canid conflicts to address food and/or human conditioned canid behaviour (such as approaching or attacking humans and pets) and the problematic human behaviours (intentionally or unintentionally feeding wildlife, and unattended pets outside) that may contribute to wildlife having a closer proximity tolerance to people, pets and residential areas, leading to conflict. ▪ Achieve a community-wide program that involves residents, which is necessary for achieving co-existence between people, canids (coyote, foxes) and pets. ▪ Removal programs should only be considered based on a defined set of behaviours and classification.
<p>Definitions</p>	<p>CANID: Any various widely distributed carnivorous mammals of the family Canidae, which includes the foxes, wolves, dogs, jackals, and coyotes. For the purposes of this document, this includes the red fox and the eastern coyote which are established in this geographic region.</p> <p>COEXISTENCE: Humans and canids exist together. Humans take an active role in helping canids in their community stay wild by removing attractants, taking responsibility for pet safety, hazing coyotes in their neighborhood and learning about canid ecology and behavior.</p> <p>ENCOUNTER: A direct meeting between humans and canids with no physical contact and which is without incident.</p> <p>AVERSION CONDITIONING (commonly referred to as Humane Hazing (“Hazing”)): A method of negative association. When a coyote or other animal is in an area where it is not wanted, scaring it away will make it less likely to return. Hazing can include making loud noises (yelling, not screaming), waving arms, popping open an umbrella, shaking car keys or other noisy objects, throwing objects near, but not at the animal.</p> <p>FIELD OBSERVATION: The act of observing signs of canids in the landscape, such as tracks, scat, or vocalizations, but without visual observation of the canids.</p>

HUMAN ATTACK: A human is bitten by a canid.

Provoked: An attack where the involved human encourages the coyote to engage. Examples include a human hand-feeding a canid, approaching a canid with pups or intervening in a pet/canid interaction.

Unprovoked: An attack where the involved human does not encourage the canid to engage.

INCIDENT: A conflict between a human and a canid where the canid exhibits any of the following behaviors: growling, baring teeth, lunging or making physical contact with the person. A human is not bitten.

LIVESTOCK LOSS/DEPREDAATION: Canid(s) kills or injures livestock.

LOCATE/ELIMINATE: A trapping program to be implemented only if absolutely necessary, based on the strategy identified herein to locate and trap a problem canid to eliminate threat based on the advice sought by staff from a recognized wildlife expert. Proceeding with such a program will be at the full discretion of staff in consultation with the CAO, unless Council direction is received or requested by Staff. An evaluation of all facts of the situation/event to be confirmed and investigated prior to proceeding, including an understanding of the area and all associated risks.

PET ATTACK: Canid kills or injures a domestic pet.

Attended: Pet is on a leash less than six feet in length or is in the presence of a person less than six feet away.

Unattended: Pet is free-roaming, walking off-leash more than six feet from a person, or on a leash longer than six feet.

SIGHTING: A visual observation of a canid. A sighting may occur at any time of the day or night.

Coyote Biology / Behaviour

The coyote species in Ontario is the eastern coyote. The eastern coyote is a relatively recent addition to the biodiversity of Ontario. The species is the result of hybridization between Western coyotes from the prairies and Algonquin wolves that occurred over a century ago. The Eastern coyote is established in urban and rural settings of Ontario and across North America. Their average weight is 14 to 18 kilograms generally appear larger than they actually are because of their long legs and thick coats. The small amount of DNA they share with wolves does not affect their behaviour in terms of humans safely coexisting with this highly adaptable and intelligent canid.

Since coyotes are naturally very skittish and afraid of humans, they are not regularly seen. Thus, their signs (including prints, scat and vocalizations) may be a better indicator of their presence. Coyote prints are similar to those of a domestic dogs, but are usually observed in a straight line, as opposed to the meandering path of domestic dog tracks. More commonly, coyote howling or other vocalizations may be heard. Coyotes produce a variety of sounds including howls, barks, whines and yips to communicate with one another and defend their territory. Two to three coyotes vocalizing may sound like a dozen to the listener. This auditory illusion is called the “*bau geste*” effect.

Coyotes also use scat (feces) to communicate by depositing it in the middle of a trail or on the edge of their territory. Coyote scat is similar to dog scat in size and appearance, but unlike dog scat, it is rope-like and typically filled with hairs, seeds and bones.

Diet: Coyotes are adaptive omnivores with great flexibility in their diet. They generally hunt small mammals such as mice, rats, moles, and rabbits, but will also eat fruit, nuts, insects and berries and will even scavenge road-killed animals. In urban areas, coyotes are also known to eat pet food, unsecured garbage and compost. They may also prey on unattended domestic pets such as free-roaming cats and small dogs. Coyotes may view domestic dogs as a threat or competition for food resources. This does not indicate a danger to humans but is rather a natural coyote behavior. This behavior can be prevented by reducing human-associated food attractants in urban areas, not feeding pets outdoors, and not letting pets outside unattended unless protected by a wildlife-proof enclosure that includes a roof

Social Structure: Coyotes (called resident or territory coyotes) live in related families with one adult breeding pair and offspring Coyotes are successful solitary or lone foragers and hunters but as a family, will defend their established territory from other non-related coyotes. Other coyotes (called transient coyotes) live alone utilizing landscapes that do not have an established family.

Coyotes mate once per year, during their breeding season, which occurs from January through February in our region. During the pup season (April – August), the breeding pair will give birth to pups, typically in April or early May. Litter size depends on the health of the mated pair, available resources and habitat. Coyotes often use the same den repeatedly. Coyote dens are found in logs, soft soils, burrows, rock crevices and underbrush, as well as in open areas. They have also been known to use infrastructure like outbuildings to create a den. The gestation period for the female coyote is approximately 60 to 63 days. The average litter size is four to seven pups. The mother coyote uses the den for the first four to five weeks. After that, the pups will be moved to a rendezvous site or a safe location. The parents leave them there while their parents hunt and forage. Within families, there are dispersal of pups at various points in the year. They will leave the family group in search of their own territory and potential mate. Mortality rate for canid families is as high as 70%. It is important to note that each coyote is an individual and each coyote family is unique and will respond and react to environmental changes accordingly.

	<p>Habitat: Coyotes are naturally diurnal and are most active at dawn and dusk, but often shift to more nocturnal activity in urban and suburban areas in an effort to avoid people. Coyotes prefer open space and natural preserve areas over human-dominated landscapes but are extremely adept at living in proximity to people. Coyotes thrive in these areas because food, water, and shelter are abundant. Home range sizes vary for each individual coyote. Research has shown that home range sizes for resident urban coyotes average 5-15 km², while transient coyotes have larger territories. Territories are not static due to environmental and infrastructure changes that influence the viability of an established territory.</p>
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Coyote-Specific Strategy		
Coyote Behaviour	Classification	Response
Coyote heard; scat or prints seen	Observation	Distribute educational material and information on normal coyote behavior.
Coyote seen moving through area (day or night)	Sighting	Distribute educational material and information on normal coyote behavior.
Coyote seen resting in area (day or night)	Sighting	If area frequented by people (i.e. park), educate on normal coyote behavior and provide hazing information. Look for and eliminate (if possible) any attractants in area where sighting occurred.
Coyote entering a yard (no person present outside)	Sighting	Educate on normal coyote behavior and provide hazing information. Complete yard audit.
Coyote following or approaching a person with no incident	Encounter	Educate on normal coyote behavior and provide hazing information. Look for and eliminate any attractants in area where encounter occurred.
Coyote following or approaching a person and pet with no incident	Encounter	Provide information on hazing techniques and encourage responsible pet ownership. In an open area, post coyote sign(s) 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.
Coyote entering a yard with pets, no incident	Encounter	Educate on coyote attractants and responsible pet ownership. Provide information on hazing techniques and complete yard audit.
Coyote entering a yard with people and pets, no pet attack occurring	Encounter	Educate on coyote attractants and responsible pet ownership. Provide information on hazing techniques and complete yard audit.
Coyote injures or kills unattended pet in back yard (<i>distance greater than 6' from human</i>)	Unattended Pet Attack	Gather information on specific animals involved and reported circumstances. Educate on coyote attractants and responsible pet ownership. Provide information on hazing techniques and complete yard audit.
Coyote injures or kills pet off-leash in open space area	Unattended Pet Attack	Gather information on specific animals involved and reported circumstances. Educate on responsible pet ownership and hazing. Look for and eliminate (if possible) any attractants in area where incident occurred. 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. Develop hazing team in area. Levy fines (for leash by-law violations) when appropriate.
Coyote injures or kills livestock	Livestock Loss/Depredation	Gather information on specific animals involved and reported circumstances. Educate on proper livestock husbandry (including the use of secure enclosures, livestock guarding animals, and/or proper fencing).
Coyote injures or kills pet off leash with human nearby (<i>within six feet</i>)	Attended Pet Attack	Gather information on specific animals involved and reported circumstances. Educate on responsible pet ownership, coyote attractants, and hazing. Perform yard / neighborhood / public area audit. Post coyote sign(s) and / or send educational materials to residents in the area. Implement high intensity hazing techniques (by Animal Control Officers, police, trained volunteer groups etc.). If multiple confirmed incidents have occurred in the same vicinity within a short amount of time, locate/elimination of problem coyote may be required.

<p>Coyote aggressive toward person, showing teeth, back fur raised, lunging, nipping without contact</p>	<p>Incident</p>	<p>Gather information about incident and reported circumstances. Educate on responsible pet ownership (if applicable), coyote attractants, and hazing. Perform yard / neighborhood / public area audit. Post coyote sign(s) and / or send educational materials to residents in the area. Implement high-intensity hazing techniques (Animal Control Officers, police, trained volunteer groups etc.) If confirmed multiple incidents have occurred in the same vicinity within a short amount of time, locate and elimination of problem coyote may be required.</p>
<p>Coyote has bitten human (an attack where the involved human does not encourage the coyote to engage)</p>	<p>Unprovoked Human Attack</p>	<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). 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. Animal Control Staff will notify the Clerk and / or CAO, the Niagara Regional Police Services (NRPS), and the Ministry of Natural Resources and Forestry (MNRF). Town staff will work with animal control staff, the NRPS, MNRF and/ or other community partners to identify the responsible coyote which, at the discretion of the MNRF may be eliminated and which tested for rabies, and may be given a full necropsy to determine general health and whether feeding was involved. Town staff will educate residents on coyote attractants, hazing, and responsible pet ownership. Town staff will also perform yard / neighborhood / public area audit. Implement high-intensity hazing techniques (Animal Control Officers, police, trained volunteer groups etc.).</p>
<p>Coyote has bitten human (human encouraged coyote to engage by hand feeding, approaching coyote with pups, intervening during pet attack, etc.)</p>	<p>Provoked Human Attack Provoked Human Attack</p>	<p>Identify and gather information on all details of attack (including action of victim before and after attack, whether feeding or pets were involved, action of victim towards coyote, and how incident was resolved). 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. When known, animal control staff and the Clerk and / or CAO will coordinate efforts to notify the Niagara Regional Police Services (NRPS), and the Ministry of Natural Resources and Forestry (MNRF). Town staff will work with animal control staff, the NRPS, MNRF and/ or other community partners to identify the responsible coyote which, at the discretion of the MNRF may be eliminated and which tested for rabies, and may be given a full necropsy to determine general health and whether feeding was involved. Town staff will educate residents on coyote attractants, hazing, and responsible pet ownership. Town staff will also perform yard / neighborhood / public area audit. Fines (for wildlife feeding and / or leash law violations) when appropriate. Implement high-intensity hazing techniques (Animal Control Officers, police, trained volunteer groups etc.)</p>

Locate/Eliminate Control

Locate/eliminate trapping control programs may seem a like a quick fix to problems among canids, people and pets. However, removal programs are not effective in reducing canid populations or addressing the root causes of conflicts. Coyote removal programs are costly due to the difficulty of catching coyotes, and controversial among the public.

When implementing such control, it is extremely difficult to ensure that problem-causing coyotes will be the ones located and relocated/killed. Since firearms are usually unsafe to use in urban and suburban areas, traps, which are by design non-selective for particular coyotes, are generally the method used. Because coyotes are so intelligent and wary of human scent, it is very difficult to catch any coyote in a trap, even more so the problem-causing coyote.

Research has shown that when lethally controlled, coyotes exhibit a “rebound effect” (a surge in their reproductive rates), allowing for quick regeneration of their population numbers. The disruption of their family group structure leads to an increase in the number of females breeding in the population, and the increase in available resources leads to larger litter sizes, earlier breeding ages among females and higher survival rates among pups. This allows coyote populations to bounce back quickly, even when as much as 70% of their numbers are removed through lethal control efforts. There is also a challenge in relying on lethal removal because of correct or accurate identification of the offending animal. For these reasons, lethal programs are not effective at reducing coyote populations, and non-selective coyote trapping programs are not effective at solving conflicts.

In addition, coyotes removed from an area will quickly be replaced by transient coyotes looking for a vacant home range. If the root causes of human-coyote conflicts have not been addressed, incoming coyotes may quickly become nuisance coyotes as well. It is far better to have well-behaved resident coyotes that will hold territories and keep transients at bay than to risk opening up the landscape to unknown newcomer coyotes. Lethal responses (coyote removal) should be considered only in the event of an unprovoked, confirmed attack on a human, unless the situation within the strategy warrants particularly consideration. If implemented, lethal control efforts should focus on the offending coyotes only, rather than the coyote population at large. This requires significant surveillance efforts to make sure that the correct animal is targeted and removed.

Lethal control should be considered as only one of a suite of management interventions (e.g. removal of attractants, hazing, etc.) that involve an array of humane and non-lethal measures. It is worth remarking that if non-lethal control techniques are effective enough to reduce human-coyote interactions and conflicts to acceptable levels, then the lethal control limited option may remain in the toolbox without being used.