



EC18.8 Developing an Urgent Downtown Coyote Action Plan for the City of Toronto

Background

The City of Toronto boasts remarkable biodiversity, attributed to its location along Lake Ontario and its extensive network of parks, ravines, and green spaces. The city is home to over 1,500 species of plants, 100 species of fish, and a wide variety of birds, including migratory species that use the area as a key stopover. Urban forests, wetlands, and meadows support mammals like raccoons, foxes, and coyotes, as well as numerous pollinators such as bees and butterflies. Efforts to preserve and restore habitats, like the *Toronto Ravine Strategy*, play a crucial role in maintaining the city's rich ecological diversity. Besides the Toronto Ravine Strategy, several other initiatives in Toronto and surrounding regions promote the conservation and restoration of natural habitats for wild animals: Toronto Urban Forestry Programs, Parkland Naturalization Projects, Toronto and Region Conservation Authority projects, Bird-friendly Toronto initiatives, Native Pollinator and Bee initiatives, ongoing habitat restoration in Rouge National Urban Park and community-led initiatives and NGOs, all of which support a rich diversity of wildlife. Connecting with biodiversity is vital for humans in many ways – environmentally, physically, emotionally and economically.

These benefits also sometimes bring difficulties into Toronto's urban neighbourhoods, especially when human inhabitants are uninformed of what actions can be taken to create healthy, safe and peaceful coexistence with wild animals. Misunderstanding of urban wildlife behaviour causes conflicts and sometimes subsequent requests for removal of the animal(s) involved. Considering the enviable strength of Toronto's biodiversity and connectivity of green spaces, ravines, watersheds and parklands, it is imperative that human users of these spaces are knowledgeable and respectful of the other beings that use them.

There are a number of factors in urban spaces that can stress animals and disrupt their natural behaviours. Improper waste management attracts raccoons, skunks and small rodents, which in turn attracts coyotes and foxes. Off-leash dogs can chase or harm wildlife, disturb nesting birds, and damage sensitive habitats. Dog feces left on the ground attracts rodents and subsequently coyotes and foxes. Building or landscaping without considering local ecosystems destroys animal habitats, displacing a wide variety of species. Poisons and certain traps used to control rodents can harm non-target species. Loud noises such as those caused by pyrotechnics, drones, or bright lights can contribute to disruption of natural behaviours. Feeding wildlife encourages them to become dependent on humans for food, often resulting in an unnaturally high population of species that becomes more tolerant of proximity to humans. Killing or harming wildlife can disrupt local ecosystems and is often illegal.

The concept of a "more-than-human community" invites us to recognize that human life is not the only form of existence worthy of our attention and respect. In this framework, humans are but one member of a larger, interconnected web of beings, including animals, plants, and the environments we share. One particularly fascinating subject within this concept is the Eastern



Coyote, an animal whose presence has become a defining feature of many urban ecosystems in North America, particularly in the Northeast and Great Lakes regions.

The City of Toronto is a progressive, flag-ship model in Canada for peaceful co-existence with wildlife. Since 2007, Toronto has operated under a City Council adopted Coyote Response Strategy which has been updated since that time. Other Canadian municipalities have consulted with the City of Toronto because the strategy has been successful.

The Eastern Coyote's Journey

Historically, coyotes were found primarily in the western United States. However, in the 20th century, as urban sprawl expanded and habitat shifts occurred, the coyote population began to migrate eastward. This migration was further fueled by the decline of the Eastern Wolf, which created an ecological void that the adaptable coyote filled. Over time, the Eastern Coyote has evolved to become a distinct subspecies, larger and more resilient than its western relatives, often displaying hybrid traits due to interbreeding with wolves.

This expansion into more populated areas has placed the Eastern Coyote at the center of human-wildlife interaction. As these canids adapt to urban and suburban settings, they often come into conflict with human communities, leading to complex challenges. However, they also present unique opportunities for appreciation and understanding, as they encourage us to rethink our relationship with the non-human world.

Challenges of Coexistence

1. **Human-Wildlife Conflict:** As coyotes move into urban and suburban areas, their interactions with humans can create tension. There are concerns about coyotes preying on domestic animals, particularly pets like small dogs and cats. Additionally, there is a fear that coyotes may pose a danger to human safety, even though attacks on humans are rare.
2. **Habitat Encroachment:** As human populations continue to grow, the encroachment of development into natural habitats has limited the territory available for wildlife like the Eastern Coyote. This has led to coyotes becoming increasingly visible in places like parks, golf courses, and even city streets, which in turn may spark anxiety and distrust among residents.
3. **Canid Response Strategy:** A progressive canid response strategy is required that evolves with emergent environmental conditions caused by urban infrastructure, human population growth, habitat loss and land-use demand.

Ecological Role of the Eastern Coyote

1. **Ecological Benefits:** Despite challenges with negative human interactions, the Eastern Coyote plays a vital role in maintaining ecosystem health. Coyotes' diet consists of some zoonotic and tick-host species, positively impacting human health. Additionally, by controlling populations of smaller mammals such as rodents and rabbits, coyotes help



prevent overgrazing by herbivores, which can protect plant species and preserve habitat for other wildlife. Their presence also signals the health of an ecosystem, as they are top predators that help regulate lower-level species. Coyotes may play an important role as seed dispersers, helping to promote biodiversity and the growth of new flora.

2. **Cultural Significance:** The coyote has long held symbolic meaning in many Indigenous cultures where it is often depicted as a trickster or a figure of transformation. For some, the coyote represents adaptability, resilience, and the capacity to thrive in the face of adversity. In these cultural narratives, the coyote is celebrated for their intelligence, resourcefulness, and ability to navigate shifting environments.
3. **A Call for Coexistence:** The arrival of the Eastern Coyote in urban areas offers an opportunity to rethink how humans coexist with wildlife. Communities around North America are beginning to explore non-lethal ways of managing conflicts, such as using education, wildlife corridors, and humane deterrents to promote coexistence. Some cities have even embraced the idea of cohabiting with coyotes, developing guidelines that encourage respect for these animals while addressing potential risks.
4. **Biological and Evolutionary Insights:** The Eastern Coyote's ability to adapt to various environments, including urban landscapes, provides valuable insights into evolution and adaptation. Their hybridization with wolves demonstrates the complexities of species interaction and the ways in which animals evolve to survive in rapidly changing environments. Studying these animals helps scientists understand the dynamics of wildlife adaptation and resilience.

Case Study: Fort York/Garrison Commons in Toronto

This area of Toronto has undergone significant residential development since 2005, transforming into a high-density neighbourhood. It is estimated that the area is expected to include approximately 6000 condominium residences upon completion. It has also been estimated that there are approximately 7 or more dogs per floor living in condominium buildings. While exact numbers are unavailable, the Fort York and Garrison Common areas in Toronto are known for their high dog population.

In the winter of 2024/2025, residents started to relay information about their dogs being attacked, injured, killed or approached by coyotes in the area. Despite an increase in the intensity of patrols by bylaw enforcement staff to control the number of dogs off leash and look for other triggers that could be causing coyotes to act defensively, complaints of coyote attacks on dogs continued. It was noted that these incidents occurred shortly after the commencement of major construction at the nearby Ontario Place.

Coyote Watch Canada's (CWC) highly trained Canid Response Team attended the area multiple times between the dates of January 29 and February 21, 2025. The following is a brief summary of their observations:

- There are many rabbits living in the area behind the condo buildings, providing common prey for coyotes.
- There is ideal habitat for prey animals under the Bathurst St. overpass.

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- There are railway tracks that run along the northern edge of the park, forming a boundary between Garrison Commons and the neighbourhoods to the north. There are 3 breaches in the fence between the tracks and the park. Coyotes commonly use rail lines to travel from one area to another and were seen using the breaches as exit and entry points in the fence to enter Garrison Commons.



- Up to 50 dogs were observed off leash in Garrison Commons in a given day. Numerous people were observed trespassing with dogs off leash using the nearby Metrolinx rail line. For example, one individual was seen walking west on the rail line from Bathurst St. to Garrison Commons with an off-leash dog trailing behind. This is one instance of a dog guardian not understanding the dangers a dog can face when unsupervised outside.



- Dog feces were observed on sidewalks and grass areas, left behind by dog guardians.
- There are at least six temporary housing structures in the area.



- There are many rodenticide boxes around the condos. These boxes are an attractant to wildlife such as raccoons and skunks. Small rodents will eat the poison in these boxes and become toxic to any animal that consumes the rodents. In the case of coyotes eating a poisoned rodent, the toxin will add a layer of stress to their health and subsequent foraging behaviour.
- The number of educational signs about coyotes in the area was limited.
- CWC Canid Response Team members periodically observed coyotes and applied aversion conditioning using the “bag method”, a loud, firm voice and increasing proximity to the coyotes. All the coyotes observed responded quickly and appropriately by leaving the area.
- Members of the public were observed taking photos and videos of coyotes, but no member of the public was observed applying aversion conditioning to coyotes.

For more detailed information on observations in Garrison Commons, please visit:

<https://www.coyotewatchcanada.com/site/blog/2025/02/05/liberty-village-coyote-update>

Understanding Dog/Coyote Interactions

The following concepts of trigger-stacking has been studied in domestic dogs and through CWC extensive field outreach, has been observed in coyotes. Trigger-stacking refers to the cumulative buildup of stress caused by repeated negative encounters or stressors over time. When dogs continuously harass or chase coyotes, this can lead to heightened stress responses, making the coyote more reactive and defensive in future interactions.



How Trigger-Stacking Works in Coyotes

Each time a coyote is chased or harassed by a dog, he/she may experience a stress response. If these encounters happen frequently or in close succession, the stress accumulates, leaving the coyote in a heightened state of alertness and tension. A coyote that initially flees from a dog might become more defensive over time. As stress levels build, the coyote's tolerance for harassment decreases, making it more likely to stand its ground or react defensively. While coyotes usually choose to avoid confrontation, repeated chases can push them into a defensive mode where they may engage in threat displays, defensive posturing, or even defensive physical reaction to protect themselves. If a coyote is already stressed and feels threatened, it may perceive a persistent dog as a serious threat, leading to escalated defensive behaviour.

Signs of Trigger Stacking in Coyotes

- More frequent defensive posturing (staring, hackles raised, stiff body language)
- Standing ground instead of fleeing
- Loud vocalizations (barking, howling, or yipping at dogs)
- Bluff charges (running toward and stopping short of a threat)
- Increased territorial presence (repeated sightings in the same area)
- Defensive responses with dogs in the area (on and off leash)

Why This Matters for Dog Owners

- Dogs that chase coyotes reinforce a cycle of stress and defensive behaviour, making future encounters riskier.
- Coyotes that experience repeated harassment learn to associate dogs (and sometimes humans) with threats, increasing the potential for conflict.
- If a coyote reaches its stress threshold, it may be more likely to engage in defensive actions rather than retreat.

Preventing Trigger Stacking in Coyotes

- ✓ **Keep dogs on a leash** in areas with known coyote activity.
- ✓ **Avoid letting dogs chase or harass wildlife**, as this can lead to dangerous encounters.
- ✓ **Respect coyote space**, especially during denning season when they are more protective.
- ✓ **Use aversion conditioning (AC) appropriately**, but avoid unnecessary or prolonged use of AC towards coyotes if the issue of dogs off leash aren't resolved.
- ✓ **Educate dog guardians** about how allowing their dogs to be off leash influences wildlife responses.

By understanding trigger-stacking, we can minimize stress for both wildlife and pets, promoting safe coexistence between coyotes and humans. There is a need for research study to better identify the correlation between dog-coyote interfacing, and tension/reactivity involving canids and domestic dogs. In locations with heightened dog-coyote conflict, how to reduce negative encounters and better prepare community when this kind of situation emerges needs attention.

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Coyote Watch Canada Municipal Canid Response Strategy (MCRS)

The Coyote Watch Canada Municipal Canid Response Strategy (MCRS) is effective in fostering citizen empowerment and promoting safe, healthy human-canid dynamics because it provides a structured, science-based framework that prioritizes education, community engagement, and proactive intervention. Here's how it achieves these goals:

1. Citizen Empowerment Through Education & Awareness

- **Knowledge-Based Approach:** The MCRS educates the public on wild canid behaviour, ecology, and the reasons behind their presence in urban and rural environments. This demystifies canid behaviour and reduces fear-based responses.
- **Encourages Responsible Behaviour:** By informing residents about practical steps to reduce attractants (e.g., securing garbage, avoiding feeding wildlife), the strategy empowers individuals to take an active role in minimizing human-canid conflicts.
- **Accessible Resources:** The inclusion of social media campaigns, public workshops, signage, and community meetings ensures that information is widely available and easily digestible for different demographics.

2. Safe and Healthy Human-Canid Dynamics Through Prevention & Response

- **Clear Response Guidelines:** The MCRS outlines specific responses based on different levels of human-canid interactions, preventing unnecessary escalation and promoting non-lethal, humane solutions.
- **Aversion Conditioning:** Trained personnel, such as CWC Canid Response Team/Animal Services officers, and community members can use deterrent techniques (e.g. humane hazing) to reinforce natural avoidance in canids, reducing proximity tolerance to humans and minimizing negative encounters.
- **Investigation of Root Causes:** Instead of reactive measures (such as unnecessary removal), the strategy emphasizes identifying environmental attractants and human behaviours that cause canids to frequent an area.

3. Community Involvement & Collaboration

- **Encourages Citizen Reporting:** Residents are encouraged to report sightings and concerns, fostering a sense of shared responsibility and collective problem-solving.
- **Engagement with Local Officials & Wildlife Experts:** The strategy promotes collaboration between municipalities, wildlife organizations, and enforcement agencies, ensuring a balanced approach between conservation and public safety.
- **Neighbourhood Safety Checklists:** The inclusion of tools like the *Canid-Safe Neighbourhood Checklist* allows communities to proactively assess and mitigate risks in their own environments.



4. Humane, Science-Based Management for Long-Term Coexistence

- **Reduces Fear & Misinformation:** By normalizing canid presence and providing clear, fact-based information, the MCRS reduces unnecessary fear and knee-jerk reactions (e.g., calls for lethal control).
- **Prevents Escalation of Conflicts:** Non-lethal interventions help prevent canids from associating humans with food sources, thereby reducing potential negative encounters. Appropriate pet-guardianship practices are fostered through awareness initiatives.
- **Protects Ecological Balance:** By promoting coexistence rather than eradication, the strategy helps maintain biodiversity and the natural role of canids in controlling rodent populations and ecosystem health, as previously described.
- **Science Advisory:** CWC expertise and programs are actively supported and reviewed by leading canid researchers and biologists.

The MCRS is effective because it shifts the focus from fear and reactive management to empowerment, education, and proactive prevention. By equipping residents with knowledge and practical strategies, fostering community collaboration, and implementing humane, science-backed responses, the strategy ensures that humans and wild canids can coexist safely and sustainably.

CWC Collaboration, Partnerships and Action Plan

Coyote Watch Canada (CWC) collaborates with municipal, provincial, and federal governments to develop canid coexistence programs by providing expertise, training, and science-based strategies tailored to community needs. Their approach emphasizes field investigation, education, prevention, enforcement, and response to ensure a sustainable and humane management of human-canid interactions. Here's how CWC works with government agencies:

1. Policy Development & Advisory Support

- **Assisting in Policy Innovation:** CWC works with municipal governments to develop and refine canid coexistence policies that align with science-based wildlife management principles.
- **Providing Scientific Expertise:** The organization advises policymakers on effective, non-lethal strategies, ensuring that municipal bylaws and response strategies are rooted in ecological knowledge and best practices.
- **Encouraging Humane Legislation:** CWC advocates for policies that discourage lethal control methods (e.g., trapping, culling) and instead focuses on long-term, proven and successful coexistence strategies.

2. Municipal Training & Capacity Building

- **Training for Animal Services & Law Enforcement:** CWC provides hands-on training to municipal bylaw officers, animal control agencies, and law enforcement personnel, equipping them with the skills to handle canid-related situations effectively.

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- **First Responder Support:** CWC offers field training to municipal staff on how to assess and respond to coyote and other wild canid encounters, including aversion conditioning techniques. To date, CWC expert response team has trained approximately 2,200 first responders.

3. Community Engagement & Public Education

- **Developing Public Awareness Campaigns:** CWC collaborates with municipalities to create and distribute educational materials such as brochures, signage, and online resources to inform residents about safe coexistence practices.
- **Hosting Public Workshops & Webinars:** CWC conducts town hall meetings, webinars, and in-person workshops to educate residents, local officials, and enforcement personnel on wildlife behaviour and conflict prevention.
- **School & Youth Programs:** CWC works with schools and youth organizations to teach children about wildlife safety and ecological stewardship.

4. Field Response & Conflict Mitigation

- **On-the-Ground Support:** CWC assists municipalities with direct response efforts, including investigating concerns, assessing risk levels, and implementing aversion conditioning techniques.
- **Hotline & Reporting Systems:** In partnership with local governments, CWC may provide reporting mechanisms for residents to log canid sightings or interactions, helping municipalities track patterns and respond proactively.

5. Research & Data Collection

- **Wildlife Monitoring Programs:** CWC collaborates with government agencies to collect data on urban and rural canid family dynamics, movement patterns, and human-wildlife interactions.
- **Attractant Assessments:** CWC assists municipalities to identify and mitigate attractants (such as unsecured garbage, pet food, or intentional feeding) that contribute to increased canid presence in human-dominated areas.

6. Enforcement & Bylaw Recommendations

- **Strengthening Wildlife Protection Laws:** CWC works with governments to enhance enforcement against illegal feeding, poaching, or harmful control practices.
- **Supporting Responsible Pet Guardianship Laws:** CWC advocates for leash laws, appropriate pet feeding practices, and policies that reduce potential conflicts between domestic animals and wild canids.

Many Ontario municipalities have integrated CWC's coexistence framework into their wildlife management policies and outreach. Through partnerships with government agencies, Coyote Watch Canada helps build sustainable, humane, and effective coexistence programs that

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balance public safety with wildlife conservation. By focusing on education, training, and science-based policies, municipalities are empowered to manage canid interactions proactively while fostering a culture of respect for urban and rural wildlife.

Why Lethal Removal of Coyotes Fails to Address Human-Coyote Conflict

Lethal removal, such as trapping or killing coyotes, is often proposed as a solution to human-coyote conflicts. However, decades of research and real-world case studies show that this method is ineffective, short-term, and can even worsen conflicts due to the complex social and ecological nature of coyote populations. Here's why:

1. Coyotes Have a Strong Reproductive Response to Population Loss

Coyotes have evolved to survive intense persecution. When individuals are removed, their populations rebound quickly through a biological response called compensatory reproduction:

- **Increased Litter Sizes:** When a coyote family member is killed, remaining coyotes may produce larger litters.
- **Higher Pup Survival Rates:** With fewer coyotes competing for resources, more pups survive to adulthood.
- **Earlier Breeding Age:** Young coyotes that typically wait 2-3 years before breeding start reproducing sooner when population numbers decline.
- **Increased Dispersal:** When the mated pair is removed, juveniles may disperse prematurely due to the disruption, and expand into new areas, increasing overall coyote presence rather than reducing it.

2. Removing Coyotes Disrupts Family Structure, Leading to More Conflicts:

Coyotes live in related family units that regulate their own populations and behaviours. When lethal control disrupts the family, transient coyotes may move into the vacant landscape. Local canid families naturally regulate their territory and deter outside coyotes. When they are removed, new, often inexperienced coyotes move in, potentially leading to increased sightings and conflicts. Established resident coyotes that avoid humans and pets help maintain habitat stability. Killing coyotes creates a vacuum, allowing less-experienced coyotes to utilize the vacant landscape. Without experienced adults to teach juveniles how to avoid humans, young coyotes may engage in riskier behaviours, increasing encounters with people and pets.

Instead of reducing coyote populations, lethal control often results in a cycle of increased dispersal, breeding, increased proximity tolerance to humans and negative encounters.

3. Lethal Control Does Not Address the Root Causes of Conflict

Human-coyote conflicts are typically caused by human-provided food sources, habitat modification, or changes in human behaviour. If food sources remain available (e.g., pet food left outside, overflowing garbage, birdseed attracting rodents), new coyotes will continue to

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move in, regardless of lethal control. Urban development often creates ideal conditions for coyotes by increasing shelter and food availability. If people do not know how to properly use AC on coyotes, secure their yards, and keep pets safe, conflicts will persist regardless of how many coyotes are removed. Addressing these root causes through education, attractant removal, and coexistence strategies is the only effective long-term solution.

4. Ineffective and Costly for Municipalities

- **Short-Term Fix:** Municipalities that rely on lethal removal must continue killing coyotes indefinitely as new ones take the place of those removed.
- **Expensive and Labour-Intensive:** Trapping and killing require significant financial resources, equipment, and licensed personnel.
- **Public Backlash & Ethical Concerns:** Many residents oppose lethal control due to its cruelty and ineffectiveness, leading to social and political conflicts.

In contrast, education-based coexistence programs are more cost-effective and sustainable.

5. Ethical and Environmental Consequences

- **Risk to Non-Target Animals:** Traps used for coyote control can harm pets and other wildlife, including endangered species.
- **Disrupts Ecosystems:** Coyotes play a crucial role in controlling rodent and small mammal populations. Removing them can lead to rodent booms and imbalanced ecosystems.
- **Cruel and Inhumane:** Methods like trapping, and shooting often cause prolonged suffering and do not solve the root problem. Poisoning wildlife is illegal in Ontario.

The Proven Alternative: Non-Lethal, Science-Based Coexistence Strategies

Communities that invest in education, prevention, and coexistence programs have far greater success in reducing human-coyote conflicts. These include:

- ✓ Public education campaigns on responsible pet guardianship, food storage, and AC techniques along with community awareness about habitat loss and impacts to wildlife populations and how this can effect residents.
- ✓ Securing food sources (proper trash disposal, removing outdoor pet food, rodent control).
- ✓ Aversion conditioning to reinforce natural avoidance of humans.
- ✓ Leash laws and pet safety measures to prevent dog-coyote encounters and conflicts.
- ✓ Coyote deterrents such as motion-activated lights, fencing, or sprinkler system.

These strategies create long-term stability, prevent unnecessary killing, and foster peaceful human-wildlife coexistence.



Recommendations:

1. The City of Toronto's Coyote Response Strategy should be focused on canids (which includes foxes) and not just coyotes.
2. Create a city-wide nature literacy program that highlights the benefits of biodiversity through community events, website and print materials.
3. When challenging situations with canids emerge in an area, establish and deploy a trained Canid Response Team through Coyote Watch Canada, in consultation and collaboration with Toronto Animal Services.
4. Increase human resources to Toronto Animal Services to meet the ever-growing demands for a dedicated, city-operated Wildlife Response Team.
5. Implement immediate repair of access breaches in infrastructure. For example, the fencing between Garrison Commons and Metrolinx rail line.
6. To meet immediate needs in the Garrison Commons area, establish a community-based team of residents willing to learn and assist with neighbourhood assessment using CWC's Canid-Safe Neighbourhood Checklist.
7. Increase educational awareness signage in the Garrison Commons area.
8. Implement the use of trail cameras in the Garrison Commons area to provide important insight into the current challenges.
9. Conduct an environmental inventory to identify current antecedents and potential future sites for assessment and mitigation. For example, the picnic area under the Gardiner Expressway overpass and Strachan.
10. Include Indigenous knowledge and guidance when revising policies and resolutions for human-wildlife coexistence.
11. Promote outreach campaigns for responsible pet guardianship and reinstate enforcement of existing leash bylaws.

Municipal Canid Response Strategy



The goal of the provided information is to encourage appreciation for wild canids and inform people on how to act or behave upon sighting a wild canid. Fear is a common response to situations that people are not accustomed to or don't have knowledge about. Educational information can help to prevent a fearful reaction to a canid sighting and equip people with the knowledge they need to respond appropriately.



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Ann Brokelman
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Response Strategy

Coyote Watch Canada Municipal Canid Response Strategy

Document Purpose:

This document is intended to provide information that can be used when creating a Canid Response Strategy and accompanying organizational Standard Operating Procedure (SOP).

Document Format:

The document is a written response strategy that includes 3 appendices as follows:

Appendix A – Canid Management Response Guideline

This is a table that includes common situations involving humans and wild canids with suggested response to each situation.

Appendix B – Aversion Conditioning

This appendix contains detailed information on how to apply *aversion conditioning*, a term that is referenced in the strategy.

Appendix C – Canid-Safe Neighbourhood Checklist

This is a checklist that can be used by organizational staff and residents when investigating situations involving humans and wild canids. The purpose of the checklist is to determine causes or reasons for canid behaviour.

A field response team should receive formal training and have an action plan in place so they can take immediate action, without a lot of planning at the onset of an emergent situation. Fee-based training is available from Coyote Watch Canada.

Strategy

Coyote Watch Canada Canid Response Strategy adopts best practices and focuses on a multi-pronged approach:

1. General education

Information about wild canids to be made available to the public on social media in regular intervals, press releases, website and signage. The information will include the benefits of wild canids in communities and how they fit into the landscape with an emphasis on how humans should respond to a sighting of a wild canid.

The goal of the provided information is to encourage appreciation for wild canids and inform people on how to act or behave upon sighting a wild canid. Fear is a common response to situations that people are not accustomed to or don't have knowledge about. Educational information can help to prevent a fearful reaction to a canid sighting and equip people with the knowledge they need to respond appropriately.

Conversely, some people find reward in feeding wild canids and if this occurs on a regular basis, can cause the animals to behave unnaturally and, in rare cases, cause people or pets to be bitten.

Educational information on wild canids will help people to understand that canids are wild animals who should be respected as such and appreciated from

afar. Canids are considered a keystone species for the benefits and positive impact they have on the ecosystem they inhabit. Human interference with a canid's typical routine or behaviour is likely to cause harm to the animal and to the community at large. When humans understand how to live among canids, negative interactions are prevented. Nature provides opportunities for humans to connect with the natural world and experience physical, spiritual and mental wellbeing.

2. Field response

Field response should be considered for specific situations that indicate an escalation in negative encounters. Some or all of the following actions may be necessary:

- Accurate and complete record-keeping – important to determine the extent of the potential human-wild-life challenge. If there are numerous concerns from different residents in the same geographical area, an on-site investigation may be necessary.
- Early intervention – key to preventing escalation of specific situations.
- Investigation – detailed discussion should take place with those who have expressed concerns. Discussion should include gathering facts and information as well as one-on-one education on aversion conditioning, specific to the situation.

- Physical investigation of the neighbourhood for potential community hotspots, listed in the Canid-Safe Neighbourhood Checklist (Appendix C).
- Door-to-door information campaigns to distribute print materials about canids in general, how to deter canids, pet safety and Canid-Safe Neighbourhood Checklist.
- During the distribution of materials, discussions with neighbours can occur to determine if there are known food sources in the area.
- If it can be determined that a person in the area is feeding canids, actions must be taken to stop this activity. These actions include active enforcement of legislation, if available. If active enforcement is not possible, a discussion with the feeder is necessary and a written request from the municipality or organization to stop the feeding in the interest of public safety can also be issued.
- It is strongly recommended that legislation be enacted to prohibit the feeding of wild canids.
- Organize and advertise a community meeting – experts should be invited to speak and educate attendees.
- Refer to:
 - Appendix A – Canid Management Response Guideline.
 - Appendix B – Aversion Conditioning.

- Appendix C – Canid-Safe Neighbourhood Checklist for detailed information on neighbourhood field response to concerns about wild canids.

3. Lethal Measures

The strategy allows for euthanasia of a wild canid for humane reasons. Otherwise, removal of a wild canid should only be considered if a bona fide health and safety risk to the public has been determined through rigorous processes such as field investigation, evidence gathering and forensics. Removal of a coyote cannot be done using a humane method and they cannot be legally relocated. It is not generally possible to capture a coyote in a catch-and-release style trap. Removal methods include capture using a leg-hold trap or dispatch by firearm. For these reasons, a decision to remove a coyote must be considered very carefully and in consultation with an appropriate agency, police services, or wildlife expert. Lethal response should be considered only as a last resort.

4. Partnerships

Partnerships such as Coyote Watch Canada, relevant provincial ministries and local licensed wildlife rehabilitators are crucial to provide opportunity for non-lethal, problem solving and solution-focused action planning.

Canid Management Response Guideline

* This is a guideline and does not account for variables that can occur in specific situations.

Description of Situation	Response
Canid heard or seen moving through an area OR Canid seen resting or lingering in parkland or ravine	<ul style="list-style-type: none"> • Conversation on telephone or in person to educate on typical canid behaviour and habitat
Canid following/ approaching a person (this behaviour is commonly referred to as “shadowing” or “escorting” and is often seen when the person is accompanied by a dog, but may happen without a dog’s presence) OR canid biting unleashed dog	<ul style="list-style-type: none"> • If a dog is accompanying the person and is unleashed, educate dog caregiver about the importance of leashing dog and controlling dog’s behaviour • Recommend aversion conditioning if appropriate (see appendix B) • Ask investigative questions and use observations to determine if feeding or food attractants may be in the area • If occurring in residential area, recommend use of Canid-Safe Neighbourhood Checklist
Canid biting leashed dog	<ul style="list-style-type: none"> • Recommend aversion conditioning if appropriate (see appendix B) • Ask investigative questions and use observations to determine if feeding or food attractants may be in the area • If occurring in residential area, refer to and recommend use of Canid-Safe Neighbourhood Checklist for on-site or in-field investigation purposes • Educate dog caregiver on walking dog in areas where there are other people and dogs • Assess area for possible canid den or young pups • If young canids are in the area, assess need for taping off the area, if practical

Description of Situation	Response
Canid seen resting or lingering in residential neighbourhood	<ul style="list-style-type: none"> • Conversation in-person to educate on typical canid behaviour and habitat • Ask investigative questions and use observations to determine if feeding or food attractants may be in the area • Recommend use of Canid-Safe Neighbourhood Checklist • Recommend aversion conditioning if/when canid is resting or lingering on or near residential property • Track further concerns from same area for future reference
Multiple sightings of canid resting or lingering in residential neighbourhood, including canid entering yards with or without pets	<ul style="list-style-type: none"> • Door-to-door distribution of education materials and Canid-Safe Neighbourhood Checklist • Recommend aversion conditioning • Discussion and investigative questions with residents to determine why the canid is entering yards and if there are potential feeding or food sources • Observe/educate neighbourhood businesses with improperly stored garbage • Check nearby parks, golf courses, cemeteries etc. for evidence of feeding • Organize community meeting for educational purposes • Continue to track concerns and complaints from area
Canid biting	<ul style="list-style-type: none"> • Confirm bite visually or by photograph • Identify and gather information on specific canid involved and circumstances around the bite • Determine whether or not a bona fide health and safety risk to the public has occurred by using rigorous processes such as field investigation, evidence gathering and forensics • Provide all information resources, including Canid-Safe Neighbourhood Checklist and aversion conditioning techniques • Report to local police authorities, public health and consult with wildlife partners • Consider necessity and options for removal of canid • Contact 911 in case of immediate threat or danger to humans

Keeping Canids Away: Aversion Conditioning

Aversion Conditioning is an effective tool for building healthy boundaries between humans and wild canids. It is important to note that using aversion conditioning close to a den site or with young pups is not appropriate. Canid seasonal milestones must be accommodated so the parents are able to raise their pups in a way that helps them disperse when they are old enough. **If situations arise where there is a den or a rendezvous site, it may become necessary to temporarily restrict dogs and/or humans from that area.**

- Aversion conditioning (commonly called *humane hazing*) is a method of negative association that **safely compels wildlife such as coyotes, foxes or wolves to move away from humans**, sometimes through the use of deterrents.
- **Aversion conditioning has been used with great success around the world** with many species, including bears and tigers.
- Aversion conditioning can restore a coyote's natural avoidance of humans and minimize interactions. **Communities that employ these techniques experience measurable results** while educating and empowering citizens.
- For communities experiencing regular canid sightings in identified hot spots, patience is required. **Intensive and consistent action may be required to encourage the canid to move on entirely.** Teams can be trained to respond to calls, communicate with residents, and utilize more intensive techniques if needed.
- The history of each canid is not always known. Remember that **each canid has a different “food education”**: some canids have been taught that people (and their properties) will provide food (e.g., direct feeding, compost bins, bird feeders, or cat and dog food left outside).
- Human conditioning is also a consideration when **people use novel items such as balls, toys, or clothing to encourage a canid to approach, diminishing healthy human/canid boundaries.**
- When included in a fulsome co-existence program, aversion conditioning can effectively change **canid behaviour and can help to ensure that future canids do not develop these behaviours. Community engagement is essential in order for aversion conditioning to be successful.**

Always Put Safety First

- Never run from any canid, including dogs, foxes, coyotes and wolves.
- Never corner a wild animal; always provide an escape route.
- Never approach a sick or injured canid.
- Never approach a den area or rendezvous site when doing aversion conditioning.
- Never apply aversion conditioning or approach a canid who has a food source.
- Never allow your dog to approach, chase or harass a canid or a canid family whether or not there is a den site. Keep dogs leashed.

Basic Aversion Conditioning Techniques

- **Stand tall, make yourself big, wave your arms and shout** (don't scream) while stepping in the direction of the canid until he or she runs away.
- **Clap your hands** in front of you and above your head.
- **Alternate gestures and be firm.**
- **Use a noisemaker**, such as:
 - your voice
 - an air horn or whistle
 - pots and pans banged together
 - a shake can (such as a pop can filled with coins or pebbles)

- snapping open a large plastic garbage bag
- jingling keys
- an umbrella popping open and closed
- **Use a projectile (toward, not AT the canid),** such as:
 - sticks
 - clumps of dirt
 - small rocks
 - a tennis ball
- **During warm months, use water,** such as:
 - a garden hose
 - a water spray bottle
 - water balloons (*note – it's very important not to leave remnants of a balloon where wild animals have access to it. This can be harmful to animals if eaten.)

Note: a canid who has been exposed to aversion conditioning techniques before may not leave immediately. You may need to use more than one of the above-mentioned deterrents. If the canid runs a short distance, stops, and turns to look at you, continue your aversion conditioning actions until the canid has left the area.

Canid-Safe Neighbourhood Checklist

Review and share information resources:

- ☐ Coyote Watch Canada [website](#):
 - Watch [e-Learning module](#) (created in partnership with City of Toronto) and include your family.
 - Review all content on the [Resources tab](#).
- ☐ Discuss canids and canid safety with your children.
- ☐ Share/circulate information with your neighbours, property manager or landlord.
- ☐ Learn aversion techniques and be ready to use them:
 - Keep a large garbage bag in your pocket (see appendix B).

Property:

- ☐ Storage of garbage, green bin and blue bin materials:
 - To the curb on the morning of scheduled pick-up day.
 - Store indoors or in locked containers – ensure lids are secure.
 - Call your municipality if bins are damaged and need to be replaced.
- ☐ Compost:
 - Don't compost meat, bones or dairy (these are green bin items).
 - Secure compost bin into the ground and enclose top with metal mesh.
 - If rodents visit your compost, use green bin instead (rodents are prey for and attract canids).
- ☐ Barbeques:
 - Clean and cover barbeques after use.
 - Ensure drip-tray is cleaned.

- Feeding animals:
 - Any/all food outside can attract canids.
 - Never feed wild mammals and don't feed pets outside.
 - Clean up daily under bird feeders – seed on the ground attracts rodents who attract canids.
 - If canids visit your yard or are seen daily in your neighbourhood, consider removing bird feeders and bird baths until there are less canid sightings.
- Shelter and hiding spots:
 - Keep grass mowed – long grass provides cover for canids.
 - Clean up brush piles and debris on property.
 - Keep fencing, decks and sheds in good repair. Remove or replace structures that can't be repaired.
 - Trim bushes and lower branches from evergreen trees to reduce hiding places.
 - Check in and behind structures and bushes before letting pets outside.
- Pets:
 - Closely supervise pets while they are outside in your yard, ground-floor balcony or patio. Keep cats inside or in enclosed areas. Do not leave pets unattended.
 - Canids can jump over or dig under fences. Check fences for holes dug under them and if found, fill them in and repair them.
 - Remove pet feces from your yard immediately.
 - Consider installing “coyote rollers” on the top of your fence. Information on coyote rollers can be found on the internet.
 - Ensure property is well lit at night and check darkened areas prior to letting pets outside.
 - Ensure chicken coops are clean and predator-proof.
 - Keep dogs on leash in parks and other public property.
- Garden and Fruit Trees:
 - Canids eat fruit – ensure fallen fruit from trees is picked up from the ground daily.
 - Vegetable gardens attract rabbits and squirrels who are prey for canids. Ensure vegetable gardens are wildlife-proofed as much as possible.

Neighbourhood and Public Spaces:

- ☐ Feeding of Canids:
 - Contact your municipality to make a confidential report of deliberate or indirect feeding of canids and other mammals.
 - If you find food being left for wildlife in a park or other private property, consider disposing of the food in the garbage. If feeding seems significant, contact your municipality to report.
 - If food appears to contain a possibly toxic substance, call police immediately.
- ☐ Improperly stored garbage – Commercial or Residential:
 - If you notice that canids are being attracted to improperly stored garbage at residential communal garbage areas or commercial buildings, contact your municipality to report.
- ☐ Potential community hotspots – contact your municipality if you identify activity that could align with direct or indirect human feeding of wildlife:
 - Cemetery
 - Parklands – especially picnic areas and benches
 - Construction sites
 - Hydro corridors
 - Conservation areas
 - Bike paths and trails
 - School yards
 - Parking lots – can be in parks, industrial properties or shopping malls
 - Golf courses
 - Ravines
 - Industrial sites – active and inactive
 - Derelict or abandoned properties
 - Waterfront or beaches
 - Camping, picnic, or encampment sites
 - Rural pastures with deadstock/animals

This checklist was modified from the City of Toronto Animal Services’ “Coyote-Safe Neighbourhood Checklist”.

Semi-rural, Rural and Agricultural Communities

Coyotes are recognized for filling an important ecological niche that contributes to healthy and balanced landscapes. Ecologically, this intelligent, socially complex and highly adaptive canid brings many benefits to farmers and ranchers. Successful farm/ranching with coyotes, as with other carnivores, bring similar challenges for producers.

Many of the strategies and methodologies outlined in the [Wolf Awareness Ranchers' Guide](#) can also be applied and practiced to minimize and prevent coyote predation on livestock. It is important to avoid food conditioning coyotes to deadstock left in the pasture.

Discussing What Works and Sharing These Practices with A Larger Audience

Interviews with ten producers were conducted from various locations across Canada and the United States by Coyote Watch Canada to identify the presence or absence of common attitudes and perceptions about predation by coyotes. Day-to-day living experiences and characteristics describing landscape, flora and fauna and type of live stock (cattle, organic dairy cows, sheep, horses, poultry and geese) were generously shared by each family. All ten producers identified and acknowledged the importance of coexisting with coyotes and stated that,

in regard to their resident coyote family, they were 'happy, thrilled, welcomed, and respected'. Most of these family-run farms were multi-generational, the longest being over forty years. Coexistence through farming practices were passed down from one generation to the next.

After summarizing and identifying similar opinions provided by each of the farmers as to why they had no issues with coyote predation, this is what we discovered:

1. There was an abundance of natural prey species in the pastures and fields. None of the farms practiced any form of lethal removal (including trapping and poisoning) of small mammals and/or rodents.
2. The hunting of coyotes was prohibited.
3. Each farm was aware of the benefits coyotes provide by preying on rodents, rabbits and other small mammals.
4. Each farm was part of a larger territory where stable coyote families lived and raised their pups.
5. Recognition that allowing coyote families to remain stable was an important part of a conflict free environment.
6. A variety of livestock were grazing in pastures; cattle, sheep and horses.

7. Dead livestock was addressed in a timely manner.
8. A human presence was paramount to maintain effective husbandry, care and to monitor the wildlife in the landscape.
9. All of the farmers acknowledged the importance of diligent husbandry and presented a deep reverence for working with the land and wildlife, not against it. Understanding the connectedness of nature and their role as stewards of the land provided predation-free results that are measurable.
10. Domestic dogs harassing, attacking, and killing livestock was noted as a significant issue at each property.

There is great potential and importance to sharing other successful farming testimonials that have yet to be fully utilized. Incentive programs that celebrate wildlife and predator-friendly farming and ranching can shift the focus from what is not working to what is working. Fostering coexistence is a strong platform when the information comes directly from the farming and ranching community.

Visit the links below for more information on co-existing with coyotes in semi-rural, rural and agricultural communities:

- www.grazerie.com/
- www.topsyfarms.com/pages/animal-welfare-policy-1
- [Maintaining ethical standards during conservation crises. Canadian Wildlife Biology and Management 4\(1\): 72-79.](#)
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- [Protection from harvesting restores the natural social structure of eastern wolf packs. Biological Conservation 143 \(2010\): 332–339.](#)
Linda Y. Rutledge, Brent R. Patterson, Kenneth J. Mills, Karen M. Loveless, Dennis L. Murray, Bradley N. White (2009).
- [Large predators and trophic cascades in terrestrial ecosystems of the western United States. Biological Conservation 142 \(11\): 2401 - 2414.](#)
Robert L. Beschta and William J. Ripple (2009).
- [Wolves and the Ecology of Fear: Can Predation Risk Structure Ecosystems? BioScience 54 \(8\): 755-766.](#)
Robert L. Beschta and William J. Ripple (2004).
- [Killing wolves to prevent predation on livestock may protect one farm but harm neighbors.](#)
PloS ONE 13(1), p.e0189729, Santiago-Avila, F.J., A.M. Cornman, and A. Treves. (2018).

- [Predator control should not be a shot in the dark.](#)
Frontiers in Ecology and the Environment 14(7):380-388. Treves, A., M. Krofel, and J. McManus. (2016).
- [Carnivore conservation: shifting the paradigm from control to coexistence.](#)
Bradley J. Bergstrom; (2017). Journal of Mammalogy, Volume 98, Issue 1, Pages 1–6.
- [Effects of Wolf Mortality on Livestock Depredations.](#)
PLOS ONE 9(12). Wielgus RB, Peebles KA. 2014
- [Seasonality and reoccurrence of depredation and wolf control in western North America.](#)
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- [Carnivore conservation needs evidence-based livestock protection.](#)
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- [Risk Map for Wolf Threats to Livestock Still Predictive 5 Years after Construction.](#)
Treves, Adrian, and Mark F. Rabenhorst. (2017), Ed. Joseph K. Bump. PLOS ONE 12.6 : e0180043.
- [Utility of livestock-protection dogs for deterring wildlife from cattle farms.](#)
Gehring, Thomas M.; Vercauteren, Kurt C.; Provost, Megan L.; and Cellar, Anna C. (2010). USDA National Wildlife Research Center - Staff Publications. Paper 1344.
- [Adaptive use of nonlethal strategies for minimizing wolf–sheep conflict in Idaho,](#) Journal of Mammalogy, Volume 98, Issue 1, Pages 33–44. Suzanne A. Stone, Stewart W. Breck, Jesse Timberlake, Peter M. Haswell, Fernando Najera, Brian S. Bean, Daniel J. Thornhill. (2017).
- [Low-stress Herding Improves Herd Instinct, Facilitates Strategic Grazing Management.](#)
Barnes, M. (2015). Stockmanship Journal. 4 (1): 34-43.
- [Livestock Management for Co-existence with Large Carnivores, Healthy Land and Productive Ranches.](#) 2015. A white paper By Matt Barnes People and Carnivores.

Notes on Field Rescue and Outreach

Wild canids may require assistance due to illness or injury, anytime throughout the year. The ability to intervene can be greatly impacted during the spring and summer months. In late winter, wild canids are preparing to have families. In January/February, females may be pregnant, by March/April, babies are arriving. (Refer to infographic on Seasonal Milestones)

For example, coyotes mate for life when left to thrive, and they co-parent their young. Pups depend on both parents for food, protection, and important life lessons about how to survive and thrive in a very dangerous world and survival readiness is a months-long process. We need to ensure that removing canids from their environment to receive intervention is absolutely necessary during the spring and summer months, thus collaborating with experts is a key factor.

There may very well be an entire family depending on the canid in question. There may be babies waiting for their mother to return so they can nurse, or a tired nursing mother waiting for her partner to bring food to nourish her while she nourishes their young. While it is difficult to see animals in trouble, it's important that we step back and ask how we can best serve each animal. Every case requires

careful assessment and sometimes a challenging amount of patience.

It's important to work with a reputable wildlife rehabilitator and/or organizations, such as Coyote Watch Canada, to evaluate the urgency of each animal's condition. Some animals require urgent, life-saving medical care, but others may be best helped when humans step back, allow families to remain intact, and monitor from a distance. This is referred to as "mindful monitoring" and these cases should still be considered active. It's possible to rely on engaged members of the public to provide regular sighting reports so the animal's condition can be monitored, and the outreach approach modified if needed.

Wildlife rescue requires front line responders to consider and respect the needs and wildness of the animals who potentially need help. This is not always an easy process. It is vital to have a "big picture" assessment to determine when to intervene versus when to provide mindful monitoring (e.g. using trail cameras to gain better insight). This process requires a great deal of patience, knowledge, and experience.

Emerging Concepts and Challenges

In today's rapidly changing world, there are many factors to consider when thinking about the effect of human activity on wild animals. Both humans and animals will benefit from considering and implementing policies that reshape community understanding about the intersection of values, culture and science, as well as the One Health intersection of environment, people and animals.

Some of the issues to consider are:

- Land use and habitat loss is not a new issue, but it is becoming more challenging to find a balance while protecting green space and biodiversity. Social issues such as temporary living shelters in parks and other green spaces can affect urban wildlife habitat and behaviour.
- Climate change risks destabilizing the balance between wildlife and their ecosystems.
- Lyme disease continues to become more prevalent in Canada and is carried by animals who are common prey (i.e. white-footed mouse) for foxes and coyotes. Scientists hypothesize that wild canids could potentially decrease the spread of Lyme disease.

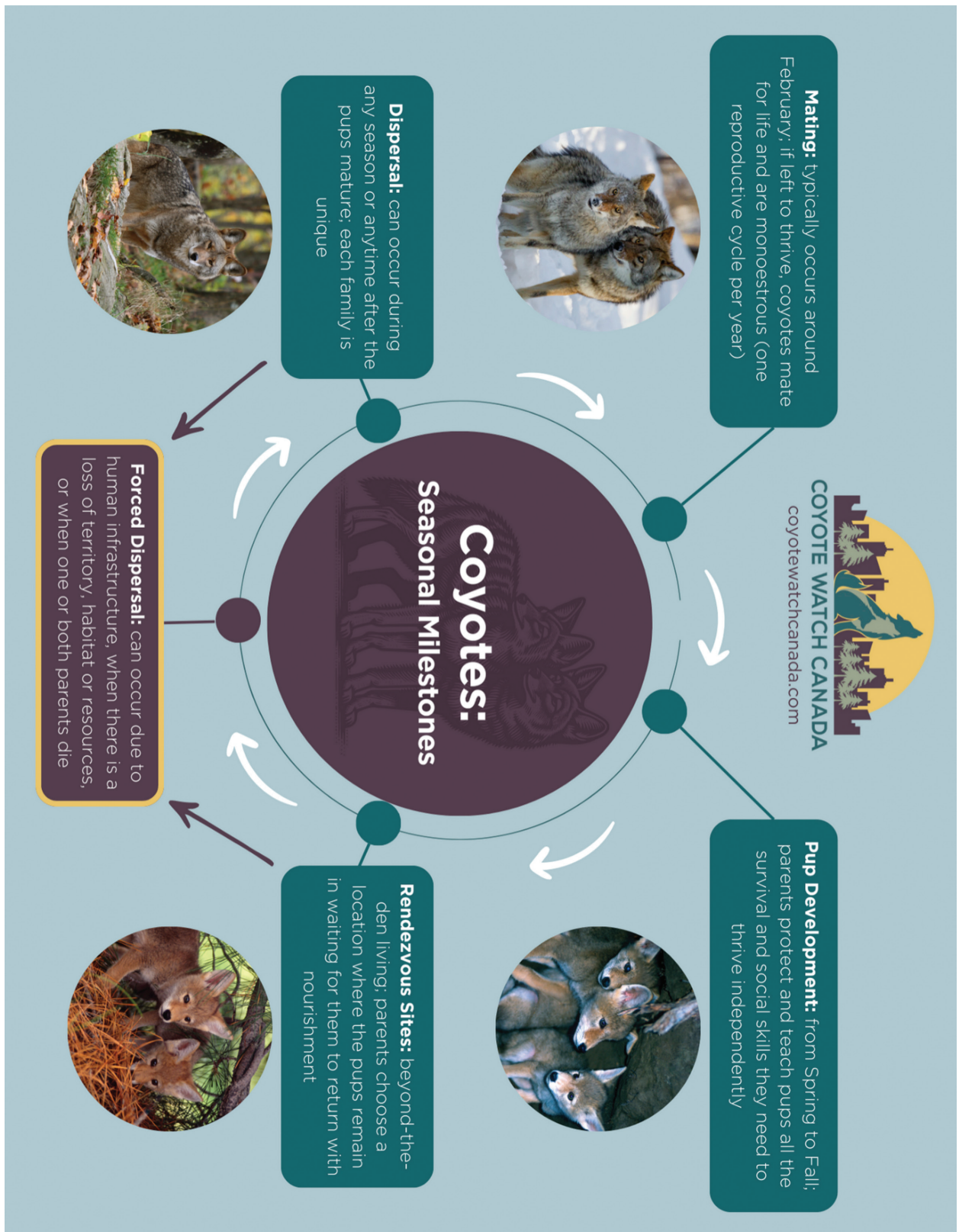
- Highly pathogenic avian influenza (HPAI) and COVID-19 virus are zoonotic diseases and recent research has shown that Chronic Wasting Disease may be more transmissible to humans than originally thought.
- Domestic dogs imported from other countries to Canada are bringing new parasites and diseases which may affect humans and wildlife.

Field Investigation training on some of the above issues may need to include reviewing scientific data and critical thinking techniques when encountering situations that involve wildlife. Climate change could affect wildlife by changing patterns in disease spread, habitat loss and loss of natural food sources. The resulting animal behaviour changes can create unexpected situations and critical thinking skills will be necessary when responding.

Infographics

These infographics are provided in PDF format for incorporation into your Canid Response Strategy as reference guides.





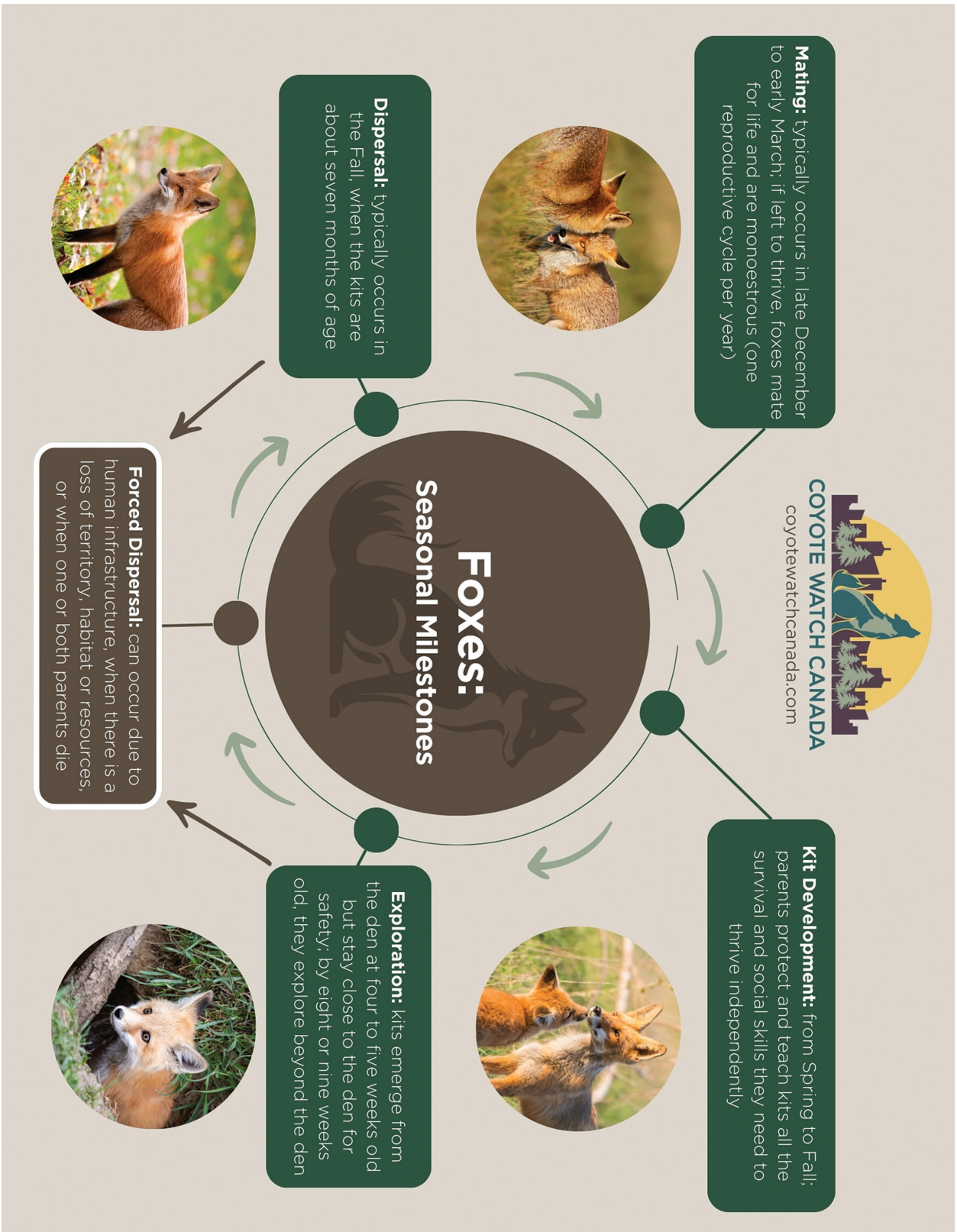




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Doris Potter
Photography

In today's rapidly changing world, there are many factors to consider when thinking about the effect of human activity on wild animals. Both humans and animals will benefit from considering and implementing policies that reshape community understanding about the intersection of values, culture and science, as well as the One Health intersection of environment, people and animals.

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