

Coyote Management Plan

Denver Parks & Recreation
Natural Areas Program
Natural Resources Division

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Acknowledgement

As Denver continues to develop, our urban wildlife adapts to living in closer proximity to people. Occasionally, misconceptions develop and conflicts between people and wildlife occur. In the City and County of Denver we strive to balance the needs of our citizens with an appreciation, respect and understanding of urban wildlife and our natural functioning ecosystems.

This Coyote Management Plan supports a reduction in conflicts and an increase in understanding of Denver's urban coyotes. We want to thank the many people who have participated in the development of this plan and for the support of our policies.

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Coyote Wildlife Management Plan

Goals of the Management Plan

The goal of this Management Plan is to support coexistence with urban coyotes using education, behavior modification and development of a tiered response to inappropriate coyote behavior. The tiered response requires participation of city personnel and citizens.

Inappropriate coyote behavior is defined when a coyote approaches a person and growls, bares teeth, lunges, injures or kills an escorted on-leash pet or injures that person.

This Management Plan is based on research and best known management practices and includes a full spectrum of management tools. Basic principles that guide this and all DPR Wildlife Management Plans are based on the following principles:

1. Urban wildlife is valued for biological diversity, as members of natural ecosystems, and reminders of larger global conservation issues.
2. Urban wildlife and wildlife habitats are important to Denver citizens. Although urban environments are more favorable to some species than others, coexistence is the foundation of our general wildlife management programs.
3. Human safety is a priority in managing wildlife/human conflicts that pose a danger to people.
4. Preventive practices such as, improving wildlife habitats, habitat manipulation, and responding appropriately during human and wildlife interactions when interacting with wildlife are key to minimizing potential human conflicts.
5. Denver management techniques and decisions are based on a thorough understanding of the biology and ecology of urban wildlife species.
6. Education and communication are essential in supporting human and animal needs and coexistence.

7. Emphasis of this management plan is placed on preventative measures and non lethal controls. Lethal measures are taken only as a last resort.

Difficulties managing wildlife

Although Denver places a high value on its wildlife, some species adapted to urban environments have the potential for problems or conflicts in specific situations.

In addressing problems, the city promotes policies supporting prevention and implementation of remedial measures that do not harm the wildlife or their habitats.

A wildlife problem is defined as any situation that causes a health or safety issue to its citizens or unacceptable damage to city property.

In cases where problems with wildlife are associated with human behavior (leaving garbage exposed or intentional wildlife feeding), ordinances and enforcement may be enacted to minimize conflict.

In some cases, particular or traditional management tools are ineffective. For examples, trapping coyotes and relocation of animals are neither ecologically sound nor approved by Colorado Division of Wildlife (CDOW). Generally, many relocated animals do not survive the transfer. If they do, they tend to disperse to other locations where they may cause problems, go to great lengths to return to known territory or adversely affect residents.

As a last resort, lethal control measures are controversial and physically challenging. If they are used, they must be humane and in compliance with federal and state laws and require prior approval by Denver Parks and Recreation Manager. CDOW manages all lethal controls.

The Coyote (*Canis latrans*)

Where are coyotes from?

Coyotes are originally native to Colorado and several other western states. Due to their intelligence, adaptability, and the decline of larger animals, coyotes have successfully expanded their range. They are now found in all states except Hawaii and have successfully established themselves in every urban ecosystem across North America.



Coyote dispersal range

What do coyotes look like?

On the upper parts of their body, coyote pelts vary from gray-brown to yellow-gray. Their backs have tawny-colored under fur and long overcoats with black-tipped guard-hairs. The latter forms a dorsal stripe and dark band over their shoulders. Throat and bellies tend to be buff or white. Forelegs, sides of the head, muzzle and feet are reddish brown. Coyotes have long legs, small paws, large pointed ears and a pointed snout.

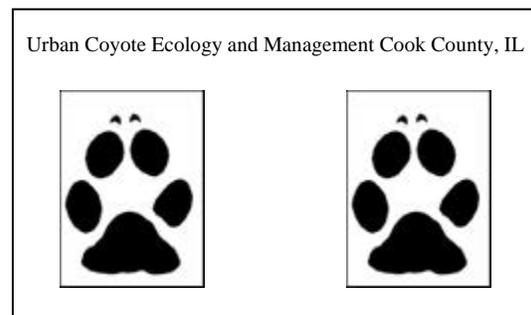
Weighing between 15 to 40 lbs, their long legs and thick fur make them appear larger.



Adult coyote

How do you know where coyotes are?

If you do not directly see a coyote, you may notice paw prints or scat (feces) left behind or even may hear them. Their prints are similar to dogs and difficult to tell apart. However, unlike dogs, their scat is rope-like and typically filled with hair, seeds and bones. Coyotes use scat to communicate and often deposit it in the middle of a trail or edge of their territory where it is easily seen. Coyotes howl, bark or whine – usually to communicate with each other.



Dog print round

Coyote print more oval



Dog scat



Coyote scat

How and where do coyotes live?

Coyotes live in family groups with one breeding pair, generally mating once a year, usually January through February. The rest of the group is comprised of multiple generations of offspring. Pups are born March through May. The entire group protects the pups and survival rate is typically high. Litter size depends on available resources and the number of coyotes in the area.

Although a litter varies from two to 12 pups, the average is six or seven. Pups remain in the den the first six weeks and then travel with the adults. By the end of summer; they are more independent, yet, may still travel with parents and siblings.

Because coyotes are socially organized, the group raises the young and defends their territory from other coyotes. Territories do not overlap. Although they live in groups, coyotes often travel alone or in pairs.



@Johnharrison

In the urban areas, most coyotes live in large parks, golf courses, greenways and natural open space where they find food and cover. Thus, their territory may follow the park or open space boundaries. Research indicates that where these open areas do not exist, coyotes establish territories in large city blocks. They are extremely adaptable in creating territories under a wide range of urban conditions.

What role do coyotes play in the city?

Urban coyotes play an important role in the urban ecosystem. They are predators of geese, eggs, squirrels, mice, rats, prairie dogs, and other small animals. Rodents make up a majority of their diet. Areas with coyote residents often report a decrease in rodents and geese populations.

How do humans perceive coyotes?

People respond to coyotes in various ways. Some observe them with enjoyment, others with indifference and some with fear or concern. Personal experiences with coyotes influence their perceptions. Experiences range from animal sightings without incident to stalking, killing of pets or, at the extreme, an attack on a person.

Because wild animals conjure up fear, actual sightings and perceptions may become exaggerated or misconstrued (see Appendix A for coyote description encounters). The wide range in perceptions of urban coyotes from Denver residents supports the need for strong educational messages to clarify management techniques.

Have coyote numbers increased in Denver?

Without tracking and updated inventories, it is difficult to know if the number of coyotes has increased in an area. However, evidence shows behavior is changing and some coyotes are becoming bolder and less afraid of humans primarily because humans have allowed coyotes to become comfortable in their presence.

How do humans affect coyote behavior?

Urban coyotes have developed a different lifestyle from coyotes in rural environments. Cities support larger populations of animals in close proximity to people for the following reasons:

1) Increased access to food. People provide easy access to large supplies of food by leaving pet food, bird seed, unsecured compost or trash and fallen fruits in yards. Unintentional and intentional feeding of coyotes encourages bold behavior and increases aggression towards people and pets. Intentional feeding makes people a target source of food.

2) Increased access to water. Year round water supplies in cities from man-made ponds, lakes, irrigation, pet water dishes, etc. increase water for prey animals and coyotes.

3) Increased potential shelter. Parks, golf course buildings, vehicles, sheds, decks, crawl spaces, among others increase the amount and variability of coyote shelters. They can safely and easily remain close to people, pets, homes and businesses without detection.

4) Increased exposure to people. Regular interaction between coyotes and people without negative consequences encourages habituation or increases comfort levels with human contact. People are or may be disregarded as a potential source of danger.

5) Increased exposure to pets. Pets are a normal part of an urban landscape and to urban coyotes they are considered other animals in their habitats. Pets can be considered potential prey or a potential competitor in coyote territory.

Can urban coyote behavior change?

While human attacks are rare (roughly one or two a year throughout Colorado) the number of sightings is increasing due to increased interaction, urban landscape development, and habituation of urban coyotes. Increased public sightings, pet related incidents and media attention have led some urban residents to fear coyotes.

Steps must be taken to address safety concerns and misconceptions and appropriate responses to potential threats to human safety.

Denver Parks and Recreation Management Strategies

Strategies for managing coyotes on Denver’s public lands are based on balancing respect and protection for wildlife and their habitats without compromising public human safety. The main strategies are:

- Monitor and collect data
- Education and outreach
- Haze for behavioral change in resident coyotes

Monitor and collect data

Currently there are no historical records tracking urban coyotes in the City and County of Denver. Collecting local data allows staff to estimate and monitor resident coyote population size, determine established family group territories, and track areas with increased coyote activity. Monitoring and collecting includes the following activities:

- a) Develop and use a tracking system to identify coyote locations and areas of increased activity, maintain a centralized database and record coyote sightings and incidents.
- b) Maintain a contact where residents and city staff can report coyote information. The city’s 311 will direct all inquiries to the wildlife ecologist who maintains the database.
- c) Train park staff, rangers, other field staff, and volunteers on how to report coyote information in their districts.
- d) Regularly update the Natural Areas GIS map with additional encounters, sightings, encounters and incidents.
- e) Communicate and coordinate tracking efforts with adjacent Front Range Communities.

Education and outreach

Education is the key to residents making appropriate decisions in managing property and pets. This involves decreasing attractants, increasing pet safety and creating reasonable expectations of normal coyote behavior.

Learning how to respond to a coyote encounter empowers residents and supports reshaping undesired coyote behavior. People need to understand normal behavior when living in close proximity with coyotes. For example, vocalization is normal acceptable behavior and does not indicate aggression.

Education and outreach include:

- a) understanding human safety, pet safety, deterrents to coyotes on private property, exclusion techniques, “what to do” tips, and appropriate hazing techniques.
- b) Developing a common language and awareness of normal versus abnormal behavior when discussing encounters with coyotes (see definitions in Appendix A)
- c) Interpretive signs, publications, media features, presentations, workshops and flyers.
- d) Dissemination of materials and information to residents, businesses and schools in areas identified by the data tracking system.
- e) Classes and training on living with coyotes.

Denver Natural Areas staff will provide a variety of classes throughout the year. Training classes on “coyote hazing” will be scheduled by request or as needed.

Field staff will be trained to understand coyote behavior and haze appropriately. Management staff will be updated on current best practices and coyote information for their areas.

Programs and public meetings will be scheduled in areas identified by the data tracking system.

In addition, staff will collaborate with Environmental Health and CDOW in educating, monitoring and enforcing regulations on commercial sites that may be contributing by providing food to wildlife, either intentionally or unintentionally.

Hazing and behavioral change

Some urban coyotes have become comfortable in the close proximity of people. To safely co-exist, it’s important to modify this behavior and attitude in resident coyote populations. Urban coyote behavior needs to be reshaped to encourage coyotes to avoid contact with humans and pets.

Hazing is the process that facilitates this change and is by necessity a community response to encounters with coyotes. The more often an individual animal is hazed, the more effective hazing is in changing coyote behavior (see Appendix C for coyote hazing overview).

Goals of hazing

The goals of hazing are to:

- Reshape coyote behavior to avoid human contact in an urban setting.
- Give residents tools to actively engage in reshaping coyote behavior and to support feeling safe in their parks and neighborhoods.
- Model hazing behavior and share accurate information about coyotes with other residents, friends and family.

The hazing process

Human behavior can shape animal behavior, in either a negative or positive manner. People living in close proximity to coyotes can remove coyote attractants, identify potentially dangerous situations for their pets and themselves, and respond in a manner designed to change coyote behavior.

Behavioral change and hazing includes the following:

- a) Pet owners need to protect pets. Off-leash and unattended dogs and unattended outside cats attract coyotes.
- b) Residents need to learn hazing effectiveness and techniques. A hazing program must be instituted and maintained on a regular basis. This will be initiated by city staff and involve community volunteers.
- c) Hazing needs to be active for a sustained period of time to achieve the desired change for the highest possible long-term success
- d) Hazing requires monitoring to assess its effectiveness and to determine if further action or more aggressive hazing is needed.

Overview of hazing

Hazing is a process whereby a number of individuals encountering a coyote respond in like manner to make a coyote uncomfortable and choose to leave a situation where their presence is unwanted.

Basic hazing consists of standing your ground, never ignoring or turning your back to a coyote(s), yelling and making unpleasant and frightening noises until the animal(s) choose to leave.

More aggressive hazing consists of approaching an animal quickly and aggressively, throwing projectiles, spraying with a hose or water gun, or creating fear of contact so the animal leaves the situation. For more options see Appendix C on hazing.

Note: Many projectiles are not legal in Denver including but not limited to slingshots, paintballs, guns and pepper balls.

Hazing must continue once it begins until the animal leaves, otherwise, the coyote will learn to “wait” until the person gives up. Not following through with hazing will create an animal more resistant to hazing instead of reinforcing the image that “people are scary.”

Hazing should never injure the animal. An injured animal becomes less predictable versus a normal, healthy one who responds in a consistent and predictable manner to hazing.

A common concern with hazing involves potential danger to the hazer. A coyote’s basic nature is very skittish and the nature of the species is what makes this technique successful. A normal, healthy coyote will not escalate a situation with an aggressive person. Hazing is NOT successful with every species of wild animal because different types of animals have different traits

Responding to an Incident

Incident defined

An incident is described as a conflict between a human and a coyote where the coyote exhibits the following behavior: coyote approaches a human and growls, bares teeth, or lunges; injures or kills an escorted/on-leash pet. This includes attended pet loss, but not human injury. When human injury occurs it is defined as an “attack” (see Appendix A-definitions).

The Colorado Division of Wildlife district manager and wildlife ecologist will investigate the incident if a human is physically injured. (See Appendix B on levels of coyote behavior).

Circumstances determine the response

Circumstances of the incident are critical in determining response. If an attack is unprovoked indicating a continued threat to human safety, the wildlife ecologist will coordinate with CDOW district manager to determine a course of action, potentially including a permit for trapping or shooting. Denver will not engage in any attempts of general culling. Only specific animals will be targeted.

The Natural Areas wildlife ecologist and CDOW district manager will target education to the region affected on how the incident occurred and how to avoid it in the future. The residents will be instructed on hazing techniques and coyote attractants.

In a provoked attack, the CDOW district manager and wildlife ecologist will determine if circumstances indicate a continued threat to human safety. CDOW determines initial response which may range from targeted education up to lethal removal of the involved animal. After the 24-hour initial response, CDOW and the wildlife ecologist will recommend follow-up actions to management and senior staff.

Continued response will depend on specific details of the attack. The level of threat to human safety will determine if continued action is needed. Continued activity may include increased educational materials such as flyers, mailers or press releases, public meetings, and/or potentially applying for a trapping permit.

If leg hold traps or snares are determined to be necessary, the Denver’s Natural Resource Manager and Parks and Recreation Deputy Manager will apply for a permit with Environmental Health Animal Care and Control. If a permit is granted, the wildlife ecologist and CDOW district manager will coordinate with professionals on location, duration and details of trapping attempts.

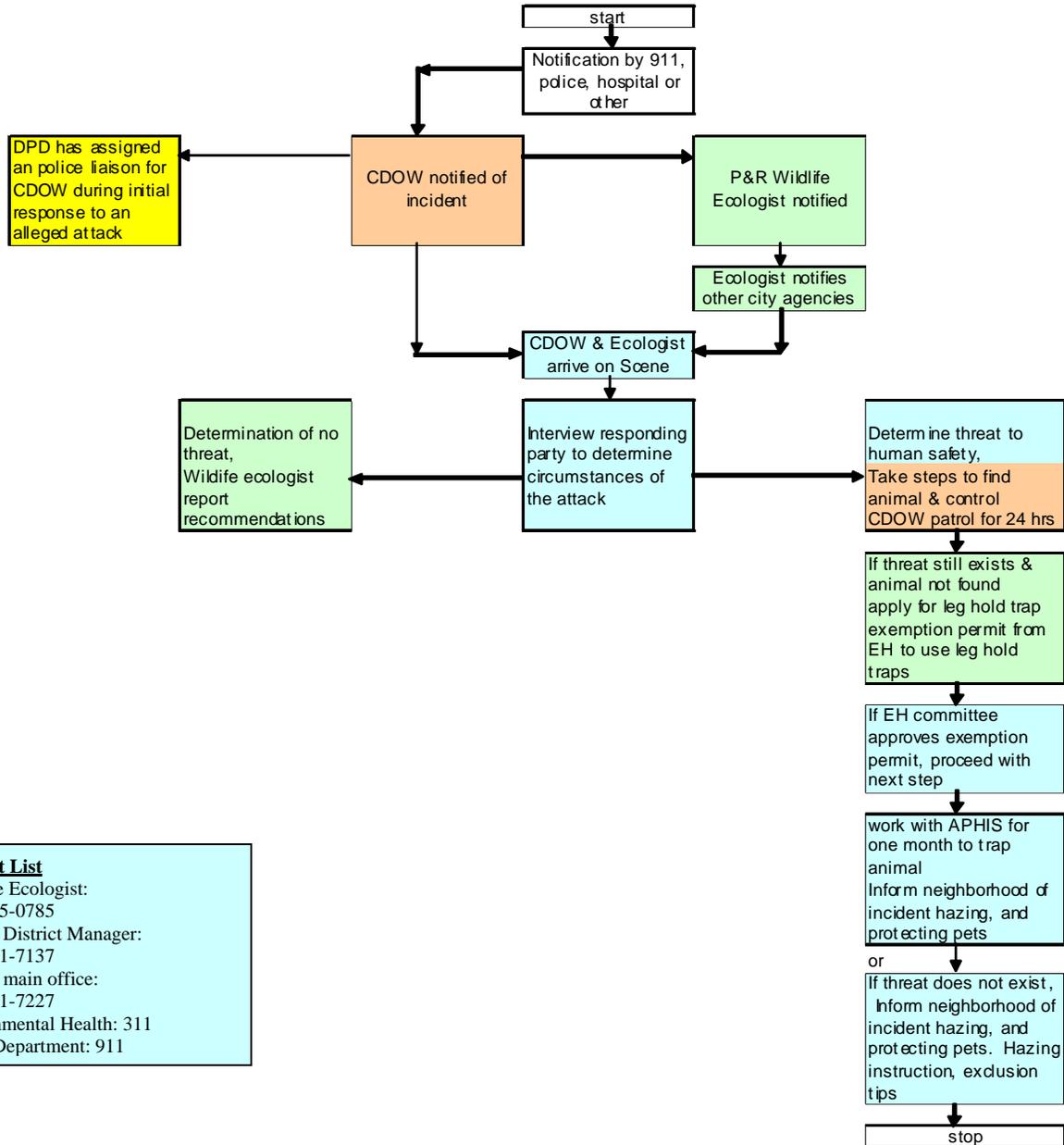
Trapping will not extend beyond one month. While the use of live traps are legal and do not require a permit exemption, they are proven to be ineffective at capturing a targeted coyote and generally will not be considered. Leg hold traps or snares will be used only as a last resort.

If trapping is necessary, Denver will use APHIS (US Animal and Plant Health Inspection Service)-as the professional management division. If there is immediate danger that requires shooting, Denver will support and coordinate with CDOW enforcement officers. APHIS may or may not be included. Denver Police are also potential first responders.

No private individual will be authorized to discharge a firearm within the City and County of Denver.

Steps for Lethal Removal and If a Person is Attacked

If a coyote is lethally removed from the City and County of Denver, the Natural Areas wildlife ecologist and other professionals (CDOW, City Naturalist, Animal Care and Control and peer review) will evaluate and determine what educational measures and hazing techniques need to be modified in order to decrease any reoccurrence



Contact List
 Wildlife Ecologist:
 303-455-0785
 CDOW District Manager:
 303-291-7137
 CDOW main office:
 303-291-7227
 Environmental Health: 311
 Police Department: 911

Appendix A

Definitions on encounters with coyotes

Active coexistence: Humans and coyotes exist together. Communities decide on community space, such as open spaces, where coyotes are appropriate and do not haze, feed, or interact with them in these areas. Humans take an active role in keeping coyotes in their community wild by removing attractants, taking responsibility for pet safety, hazing coyotes in neighborhood or community spaces (except for predetermined coyote appropriate areas); and learning about coyote ecology and behavior.

Attack - An aggressive action that involves physical contact with a human and/or a human is injured by a coyote.

Provoked - A human provoked attack or incident where the human involved encourages the coyote to engage. Examples include dog off-leash in an on-leash area; dog on leash longer than 6' in length, or a human intentionally approaches or feeds the coyote.

Unprovoked - An unprovoked attack or incident where the human involved does not encourage the coyote to engage.

Attended animal loss or injury - When a person is within 6' of the pet, this may or may not be an indication of a potential threat to human safety.

CDOW – Colorado Department of Wildlife (See Appendix B)

Domestic animal loss or injury - A coyote injures or kills a pet animal. Also includes “depredation” - predation on domestic pets or livestock. Unattended animal loss or injury is normal behavior for a coyote.

Encounter - An unexpected, direct meeting between a human and a coyote, without incident.

Feeding

Intentional feeding - A resident or business actively and intentionally feeds coyotes including intentionally providing food for animals in the coyote food chain.

Unintentional feeding - A resident or business is unintentionally providing access to food. Examples such as accessible compost, fallen fruit from trees, left open sheds and doors, pet food left outdoors, among others.

Unintentional feeding – bird feeders: A resident or business with bird feeders that may provide food for coyotes, e.g. birds, bird food, rodents, squirrels. Bird feeders must be kept high enough from the ground so a coyote is unable to reach the feeding animals. The area under the bird feeder must be kept clean and free of residual bird food.

Hazing: Training method that employs immediate use of deterrents to move an animal out of an area or discourage an undesirable behavior or activity. Hazing techniques include loud noises, spraying water, bright lights, throwing objects, shouting. Hazing can help maintain a coyote's fear of humans and deter them from neighborhood spaces such as backyards and play spaces. Hazing does not damage animals, humans or property.

Incident: A conflict between a human and a coyote where the coyote exhibits the following behavior: Coyote approaches a human and growls, bares teeth, or lunges; injures or kills an escorted/on-leash pet. This includes attended pet loss, but not human injury.

Levels of animal contact

Level 1: A coyote that has been involved in an investigated and documented unprovoked attack on a human. Targeted education and hazing needed public awareness of incident and circumstances discussed, lethal response may be appropriate.

Level 2: A coyote that has been involved in an investigated and documented provoked attack on a human with no pet involved. Evaluate circumstances and human safety, provide education and hazing training, enhance public awareness of incident and circumstances. Lethal response may be appropriate.

Level 3: A coyote is involved in an incident(s) and/or an attended domestic animal loss. Education and hazing needed, public awareness of incident and circumstances discussed.

Level 4: A coyote appears to frequently associate with humans or human related food sources, and exhibits little wariness of people presence, including unattended domestic animal loss. Education and hazing needed, public awareness of incident and circumstances discussed.

Observation - The act of noticing or taking note of tracks, scat or vocalizations.

Sighting - A visual observation of a coyote(s); may occur at any time - day or night.

Unsecured Trash - Trash that is accessible to wildlife, e.g. individual garbage cans, bags or uncovered or open dumpsters or trash cans over-flowing or where scattered trash is outside the receptacle.

WE – Wildlife Ecologist (See Appendix B)

Appendix B

Coyote behavior, behavior classification and recommended response

Coyote Action	Classification	Responder	Response
Coyote heard	Observation	WE, CDOW	Distribute educational materials and info on normal coyote behavior
Coyote seen moving in area	Sighting	WE, CDOW	Distribute education materials and info on normal coyote behavior
Coyote seen resting in area	Sighting	WE, Hazing team, CDOW	If area frequented, educate people on normal behavior, haze to encourage animal to leave
Coyote following or approaching a person & pet	Sighting Encounter	WE, Hazing team, CDOW	Educate on potential hazing techniques, what to do tips and pet management
Coyote following or approaching a person w/o pet	Encounter	WE, Hazing team, CDOW	Educate on potential hazing techniques, what to do tips and pet management
Coyote entering a yard without pets	Sighting	WE, CDOW	Educate on coyote attractants, yard audit, hazing info
Coyote entering a yard with pets	Encounter	WE, CDOW	Educate on coyote attractants, yard audit, hazing info, pet management
Coyote entering yard and injuring or killing pet	Incident	WE, CDOW	Develop hazing team in area, gather info on specific animals involved, report on circumstances, educate on coyote attractants, yard and neighborhood audits, pet management
Coyote entering yard with people & pets, no injury occurring	Encounter	WE, CDOW	Gather info on specific animals involved, report circumstances, educate on coyote attractants, yard/neighborhood audits, hazing, pet management
Coyote biting or injuring pet on leash	Incident	WE, CDOW	Gather info on specific animals involved, report circumstances, educate on coyote attractants, yard/ neighborhood audits, hazing, pet management
Coyote aggressive, showing teeth, back fur raised, lunging, nipping w/o contact	Incident	WE, CDOW	Gather info on specific animals involved, report circumstances, educate on coyote attractants, yard/ neighborhood audits, hazing, pet management.
Coyote biting or injuring person	Attack	WE, CDOW	ID & gather info on specific animal involved, report circumstances, educate on coyote attractants, yard/ neighborhood audits, hazing, pet management, determine if plan for lethal removal must be implemented. CDOW notify WE of intent to shoot. Inform other city officials; engage APHIS and CDOW to implement targeted trapping. Apply to EH Animal Care and Control for permit exemption on leg hold traps

Appendix C

Hazing Program and Training Plan

Denver Parks and Recreation, Natural Areas Program
City and County of Denver

*Coexistence is not a passive undertaking.
Denver's guiding principles are to coexist with
wildlife*

Hazing and behavioral change

Some urban coyotes have become comfortable in close proximity to people. To safely coexist, it's important to modify this behavior and attitude in resident coyote populations. Urban coyote behavior needs to be reshaped to encourage coyotes to avoid contact with humans and pets

Hazing is the process that facilitates this change and is by necessity a community response to encounters with coyotes. The more often an individual animal is hazed, the more effective hazing is in changing coyote behavior.

Hazing employs immediate use of deterrents to move an animal out of an area or discourage undesirable behavior or activity. Deterrents include loud noises, spraying water, bright lights, throwing objects, shouting. Hazing can help maintain a coyote's fear of humans and discourage them from neighborhoods such as backyards and play areas. Hazing does not harm or damage animals, humans or property.

Behavioral change also involves human activities such as how to identify and remove attractants and how to responsibly protect pets.

Foundation of hazing

1. It is not economically, ecologically or in other ways efficient to try and remove coyotes from the urban ecosystem.
2. Hazing is one piece of a long-term plan in creating safe and acceptable

living situations, increase understanding and reduce conflict between coyotes and people.

Goals of hazing

1. To reshape coyote behavior to avoid human contact in an urban setting. Human behavior can shape animal behavior, in either a negative or positive manner. People living in close proximity to coyotes can remove coyote attractants, identify potentially dangerous situations for their pets and themselves, and respond in a manner designed to change coyote behavior.
2. To provide residents tools to actively engage in reshaping coyote behavior and to support feeling safe in their parks and neighborhoods. This can be accomplished by teaching residents hazing techniques. The latter will be initiated with city staff and ultimately involve community volunteers.
3. To model hazing behavior and share accurate information about coyotes among other residents, friends and family.
4. Monitor hazing to assess its effectiveness and determine if further action or more aggressive hazing is needed.

-
5. Develop long-term community based hazing programs.

General Considerations

1. Levels of hazing need to be appropriately relevant to coyote activity.
 - a. Coyotes live in open spaces and the best practice is to leave them alone and educate the public on personal safety.
 - b. Coyotes are often out late at night when few people are present. This is normal acceptable behavior. Hazing may not be necessary.
 - c. Exceptions - in early stages of hazing, programs should still engage animal. Coyotes that associate danger in the presence of people under all circumstances will be reinforced to avoid contact.
2. Hazing must be more exaggerated, aggressive and consistent when first beginning a program of hazing. As coyotes “learn” appropriate responses to hazing, it will take less effort from hazers.
 - a. Early in the process, it is extremely common for coyotes not to respond to hazing techniques. Without a history of hazing, they do not have the relevant context to respond in the desired outcome (to leave).
3. Techniques and tools can be used in the same manner for one or multiple animals. Usually there is a dominant animal in a group who will respond - others will follow its lead. DO NOT ignore, turn your back or avoid hazing because there are multiple animals instead of a single individual.
4. The more often an individual coyote is hazed by a variety of tools and techniques and a variety of people, the more effective hazing will be in changing that animal’s future behavior.
5. Hazing must be directly associated with the person involved in the hazing actions. The coyote must be aware of where the potential threat is coming from and identify the person.
6. Coyotes can and do recognize individual people and animals in their territories. They can learn to avoid or harass specific individuals in response to behavior of the person and/or pet.
7. Coyotes can be routine in habit. Identifying their normal habits can help target which habits to change. For example, the coyote patrols the same bike path at the same time in the morning three to five days a week. Hazers should concentrate on that time and place to encourage the animal to adapt its routine to decrease contact with people.
8. Certain levels of hazing must always be maintained so that future generations of coyotes do not learn or return to unacceptable habits related to habituation to people.
9. Human behavior must change to support hazing and continued identification and, if necessary, remove possible attractants.
10. Education about exclusion techniques including how to identify and remove attractants, personal responsibility in pet safety and having reasonable expectations are critical parts of a coyote hazing plan.
11. Coyotes are skittish by nature. Habituated behavior is learned and reinforced by human behavior. Coyotes as a rule DO NOT act aggressively towards aggressive people. The one exception is a sick or injured animal. Engaging a sick

or injured animal can result in unpredictable behavior. If this is suspected, people should not engage and remove themselves from the situation, then inform Animal Care and Control or Colorado Division of Wildlife.

12. Individuals involved in hazing need to be trained in explaining hazing to residents who witness the process. They also need to explain the difference between hazing and harassment of wildlife and goals of appropriate behavior for coexistence.

The Training Program

First, because coexisting with wildlife involves the community, initiating the hazing training programs and hazing activities must be presented to management, administrators and policy makers. Without this support, the programs ultimately fail. Therefore, the first line of education and general hazing training techniques is with the officials including City Council/Mayors Office. Information should include basic training on background, coyote ecology information, and overview of hazing, examples of techniques. Materials should be provided such as handouts, contact information and resources when questions, comments and concerns come up relating to coyotes in Denver.

Second, there must be an established relationship with other city agencies such as Environmental Health, Neighborhood Inspection, Waste Water, among others. They need to learn about coyote behavior and be aware of realistic expectations, understanding normal versus abnormal coyote behavior, supporting staff in hazing actions and having a consistent response to residents' concerns and comments.

Relevant field staff, park rangers, recreation employees, golf staff, solid waste, and others need training in background and coyote behavior, appropriate hazing techniques, model responses, communicating with the public. At this level, training is more detailed since these are the persons implementing the hazing techniques and setting role models for the citizens.

Calls-to-Action

There are two types of hazing or "calls-to-action" - opportunistic and applied.

Opportunistic hazing involves staff who have been trained in how to respond to coyotes during an unexpected sighting or encounter while working in their normal job duties.

Applied hazing-includes personnel from different areas who have been temporarily assigned to hazing patrols in "hot spots." Hot spots are areas where a high numbers of sightings, encounters, and/or incidents have occurred. The team goes out and looks for the coyotes with the intent to haze. Applied hazing calls for a schedule.

- a. Initially, applied hazing must be aggressive and consistent. Patrols must have a clear understanding of when and where to haze, how to escalate and when to cease behavior during a specific encounter.
- b. Hot spot hazing is recommended seven days a week during a time of day when both coyotes and people are active. There is an increased chance of encounters in the early morning and late evening hours when coyotes hunt and people often walk pets before and after work.
- c. After a designated period of time, the number of sightings and encounters should be evaluated. If they have decreased, hazing can be decreased from seven days a week to two to five days, increasing the effect of random reinforcement.

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- d. Hazing must continue to be present to some extent in the area, or animals will return to learned and habituated behavior.
 - e. Community “regulars” should be encouraged to take over the hazing role in their own community.

Public Hazing Training

Hazing requires by necessity community involvement, understanding, and support. Residents are best equipped to respond consistently and at the most opportune times in their own neighborhoods, parks and open spaces.

1. Locations of trainings offered are based on data accumulated from public and staff reports on of coyote activity in specific neighborhoods, parks or parts of town.
2. Trainings are free to the public.
3. Topics covered
 - a. basic coyote information
 - b. discussion on why coyotes are in the city
 - c. normal and abnormal coyote behavior
 - d. seasonal behavior changes- breeding season, pups, denning behavior
 - e. reality of dangers towards people vs. danger towards pets
 - f. children and coyotes
 - g. how human behavior influences coyote behavior
 - h. attractants
 - i. tips on deterring animals from entering private property
 - j. appropriate response when encountering a coyote
 - k. what is hazing, goals, how to engage
 - l. appropriate hazing techniques and tools
 - m. pet safety tips
4. Participants are placed on a confidential email list. Updates, additional coyote information, electronic flyers and handouts sent out. All information can be and is encourage to be passed on to others
5. Participants are notified of “hot spots” and asked to haze in the area.
6. Asked for feedback on hazing training and use of hazing techniques
7. Participants email detailed accounts of encounters and hazing to wildlife ecologist for evaluation of program, progress, successful tools and techniques being used, techniques and tools needed.
 - a. Date, location, time of day, number of animals
 - b. Initial coyote behavior, hazing behavior, coyote response

Summary of Hazing

Hazing is a process whereby the community of individuals respond in like manner to make a coyote uncomfortable and choose to leave a situation where their presence is unwanted.

Basic hazing consists of standing your ground, never ignoring or turning your back to a coyote(s), yelling and making unpleasant and frightening noises until the animal(s) choose to leave.

More aggressive hazing consists of approaching an animal quickly and aggressively, throwing projectiles, spraying with a hose or water gun, or creating fear of contact so the animal leaves the situation.

Note: Many projectiles are not legal including but not limited to slingshots, paintballs, guns and pepper balls.

Hazing uses a variety of different hazing tools. This is critical as coyotes get use to individual items and sounds.

Noisemaker: Voice, whistles, air horns, bells, “shaker” cans, pots, pie pans

Projectiles: sticks, small rocks, cans, tennis balls, rubber balls. *Note: sling shots, pepper balls, paint balls are not legal projectiles in Denver*

Deterrents: hoses, spray bottles with vinegar, pepper spray, bear repellent, walking sticks

Hazing must continue once it begins until the animal leaves, otherwise, the coyote will learn to “wait” until the person gives up. The coyote will create an animal more resistance to hazing instead of reinforcing the image that “people are scary”.

Hazing should never injure the animal. An injured animal becomes less predictable versus a normal, healthy one who responds in a consistent and predictable manner to hazing.

**We the undersigned approve this Management Plan for Coexisting with Coyotes in
the City of Denver**

By the City and County of Denver

Kevin Patterson, Manager
Denver Parks and Recreation

Date

Scott Robson, Deputy Manager
Denver Parks and Recreation

Date