

A COYOTE MANAGEMENT & COEXISTENCE PLAN



THE
CANID
PROJECT



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Prepared by Amy Shutt of The Canid Project using
The Humane Society of the United States
“A COYOTE MANAGEMENT & COEXISTENCE PLAN” as a template.

Additional text and photography contributions by Karin and Robert Saucedo.
Illustrations contributed by Jordan Taylor.



INTRODUCTION AND GOALS

The intent of this plan is to provide guidance for dealing with coyotes. Guidelines and provisions of this plan do not supersede federal, state and county regulations and policies.

Furthermore, the provisions of this plan do not apply to city residents, businesses or homeowner associations in pursuit of their legal rights in dealing with coyotes.

The goal of this template Coyote Management and Coexistence Plan is to provide a program for reducing human-coyote conflicts while prioritizing human safety while educating on how coyotes behave and making clear how such behavior can be managed to reduce or eliminate conflicts with coyotes.

This Coyote Management and Coexistence Plan is based on scientific research, a thorough understanding of coyote ecology and biology in urban settings, and the best known management practices and management tools.

This plan is guided by the following basic principles:
1. Human safety is a priority in managing human-coyote interactions.

2. Coyotes serve an important role in ecosystems by helping to control the population of rodents, Canada geese, rabbits and other urban mammals.

3. Preventive practices such as reduction and removal of food attractants, habitat modification and responding appropriately when interacting with wildlife are key to minimizing potential interactions with coyotes.

4. Solutions for coyote conflicts must address both problematic coyote behaviors (such as aggression towards people and attacks on pets) and the problematic human behaviors (intentionally or unintentionally feeding coyotes and letting pets outside unattended) that contribute to conflicts.

5. Non-selective coyote removal programs are ineffective for reducing coyote population sizes or preventing human-coyote conflicts.

6. A community-wide program that involves residents is necessary for achieving coexistence among people, coyotes and pets.



THE COYOTE

Due to their intelligence and adaptability, in addition to extensive urbanization, early clear-cutting of forests for human settlement and the subsequent decline of larger predators, coyotes have successfully expanded their range across North America.

Coyotes are now found in all states in the U.S. except Hawaii and have become well established in nearly every ecosystem. They live in deserts, swamps, tundra and grasslands, brush, dense forests, cities and suburbs. People can live among coyotes yet never see them.

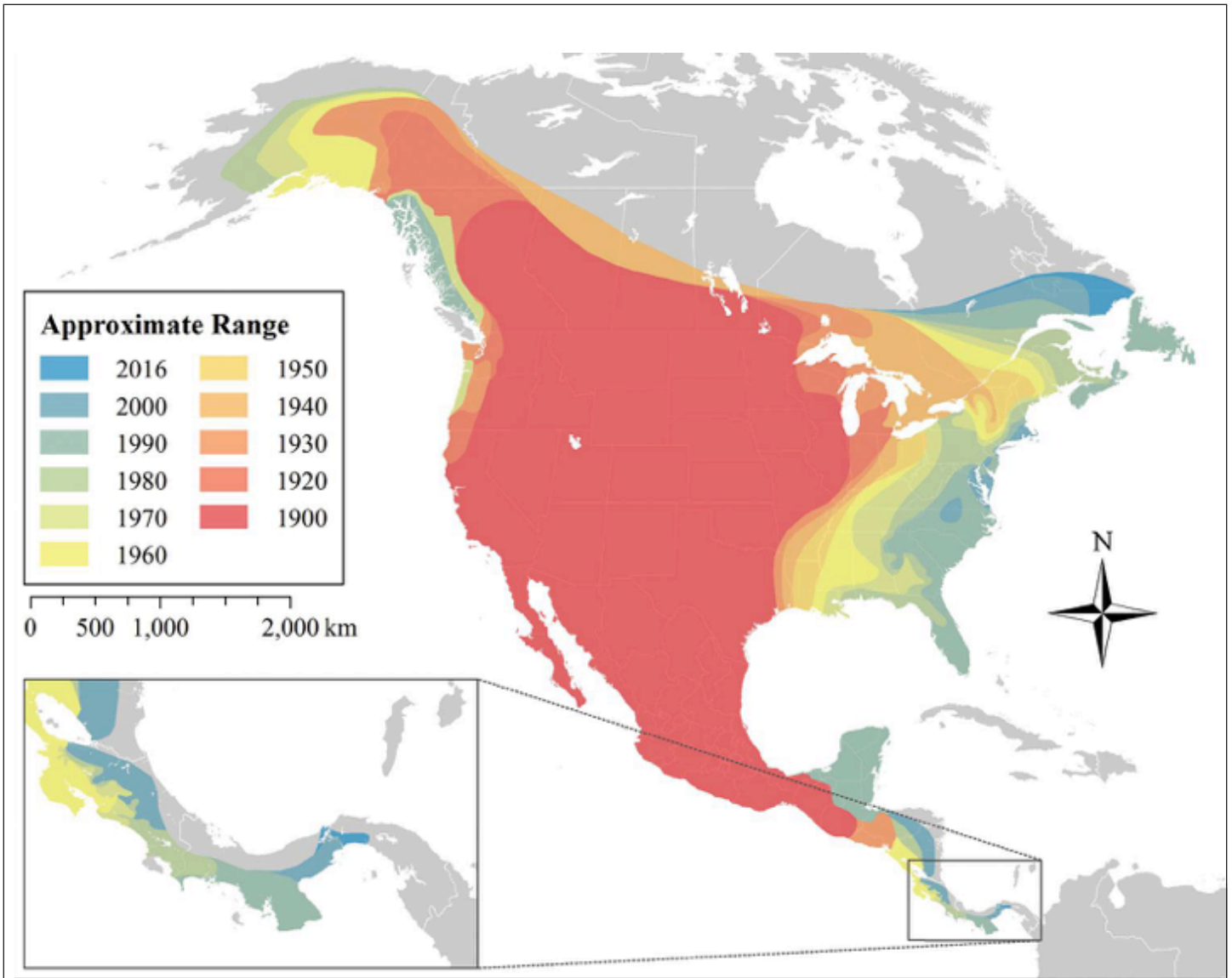
Often it's only an evening chorus or group howling and yipping that alerts us to the presence of this wild canid in our neighborhoods. It is important to keep in mind that coyotes have been interacting with and adapting to people for at least the last 100 years.

ECOLOGICAL IMPORTANCE

Coyotes are curious, smart and adaptable creatures and our urban areas provide the perfect balance of food, shelter and water for them. What you may not know is that where they are prevalent the coyote is a keystone species and their presence or absence plays a significant role in our ecosystems. Even in fragmented and urbanized landscapes, coyotes can play an integral role in their environment by providing ecosystem services and

helping to maintain species diversity. As an opportunistic omnivore, coyotes also play an important role as part of the natural "clean up crew" as they scavenge on carrion.

Coyotes in urban areas not only provide free rodent control by feeding on mice and rats, but also help to regulate the population size of other species that may cause conflicts with people in urban areas (such as voles, white-tailed deer and Canada geese).



By James W. Hody, Roland Kays - Mapping the expansion of coyotes (*Canis latrans*) across North and Central America, *ZooKeys* 759: 81–97 (2018) doi: 10.3897/zookeys.759.15149, CC BY 4.0, <https://commons.wikimedia.org/w/index.php?curid=69437619>

GENERAL BIOLOGY, REPRODUCTION AND BEHAVIOR

Coyotes are intelligent animals and, like domestic dogs, are naturally curious. It is important to keep in mind that just because they look at you it does not mean they are stalking or plotting to kill you or your dog. They're simply curious animals that are hyper-aware of their environment as they need to be to survive. Here is more information below about coyotes that will help you to understand them and their way of life.

APPEARANCE AND SIGNS

- Most coyotes weigh approximately 25-40 pounds,

although their long legs and thick fur make them appear larger.

- Coyote fur varies in color from gray-brown to yellow-gray. They have a black-tipped tail which helps to distinguish them from other canids such as foxes. Coyotes also have yellow/amber eyes (which help to distinguish them from domestic dogs), large ears and narrow, pointed muzzles (which help to distinguish them from wolves).
- Coyotes can appear larger in winter months because the thickness of their fur changes with the seasons. In summer months they shed their fur and appear much skinnier.



SARCOPTIC MANGE

- Coyotes living in close proximity to humans are often affected by sarcoptic mange, as it can spread quickly through a high density of wild animals living on the edge of urban and suburban areas. The unnaturally high wildlife density is due to the plentiful food and prey sources available in these human-dominated areas.
- Mange can become life-threatening as a result of secondary poisoning when a coyote eats dead or dying poisoned rats or mice. Once ingested, the rodenticide poison used to kill the rodent continues its damaging effect on the coyote, causing a weakened immune system that then unleashes internal and external ailments.
- Mange is a condition caused by an infestation of a parasitic mite that lays its eggs and burrows into the outer layer of the coyote's skin. It causes intense itchiness, scabbing and hair loss. The hair loss is most pronounced around the face, ears, legs and tail. Coyotes often develop secondary bacterial infections of the skin, caused by the lesions created as they scratch to relieve the itching, which exacerbates the clinical signs of mange. The mite causing mange cannot live and thrive on humans and therefore humans cannot "get mange."
- Some coyotes may be able to fight off the mites, but without treatment, coyotes that have weakened immune systems will succumb to the secondary diseases and effects of mange. Death from complications due to mange is slow and the animals will suffer quite a bit. It becomes increasingly difficult for them to hunt with this disease and they are particularly vulnerable in winter when exposed to cold weather.

- Studies have shown that coyotes with extensive mange infections are listless, not aggressive and lack the appropriate fear of humans. They may become more active during the day, especially in winter, and often look for food or cover near residential areas, thereby increasing public observations. These sick suffering animals are often flippantly referred to as chupacabras on social media.

OTHER CHARACTERISTICS

- Since coyotes are naturally very skittish and afraid of humans, they are rarely seen. Thus, their signs (including prints, scat and vocalizations) may be a better indicator of their presence.
- Coyote prints are similar to those of a domestic dog's, but are usually observed in a straight line (as opposed to the meandering path of domestic dog tracks) and the pads are tightly arranged, rather than splayed as seen in domestic dog tracks.
- Coyote front foot prints are larger than the rear ones. The front paw prints are about 2 1/4" to 2 3/4" long, and about 1 3/4" to 2 3/8" wide.
- Check for claw marks. Coyote tracks have claws, but they don't show if the ground is too hard.
- Overall the footprint is oval-shaped.
- More commonly, coyote howling or other vocalizations may be heard. Coyotes produce a variety of sounds (including howls, barks, whines and yips) to communicate with one another and defend their territory.
- Small groups of coyotes (2-3) can distort their voices and sound like a group of 20.
- They use their howls and yipping to create a kind of census of coyote populations. If their howls are not answered by other packs, it triggers an autogenic response that produces large litters. This is the number one reason to avoid lethal removal of coyotes in an area.





DIET

- Coyotes are opportunistic omnivores. They generally hunt small mammals such as mice, rats, voles, rabbits, squirrels and prairie dogs, but will also eat insects, berries, nuts and fruit, such as persimmons, figs, plums and pears. Coyotes will even scavenge road-killed animals. In urban areas, coyotes are also known to eat pet food, unsecured garbage and compost.

- They may also prey on unattended domestic pets such as cats and small dogs if given the opportunity. This does not indicate a danger to humans, but is rather a natural coyote behavior. *This behavior can be prevented by reducing human-associated food attractants in urban areas and not letting pets outside unattended (unless protected by a coyote-proof enclosure or fence)*

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

SOCIAL STRUCTURE

- Most coyotes (called resident coyotes) live in family groups with one breeding pair and up to 4 other related individuals. Coyotes do not usually hunt in packs, but in the east they may do so during the winter to bring down larger prey, like the occasional deer. They do work together to defend their territory from other coyote family groups. Other coyotes (called transient coyotes) live alone or as an isolated mated pair.

- The coyote developed an adaptive, evolutionary derived strategy for surviving under persecution. This “fission-fusion adaptation”, which human beings also have, allows them to either function as pack predators, where they cooperate to take down larger prey like deer, but can survive perfectly okay eating small prey as singles or pairs. Jackals, coyotes and humans are the only animals who do this.

- When they’re persecuted, they tend to abandon the pack strategy and scatter across the landscape in singles and pairs; the poison campaign of the early 1900s was one of the things that highly contributed to their scattering across North America.

COYOTE MATING

- Coyotes mate once per year, during their breeding season.

- BREEDING SEASON: January - March

- PUP SEASON: April - August

- DISPERSAL SEASON: September - December

- The breeding pair will give birth to pups (typically in April or May).

- Litter size depends on available resources and the number of coyotes in the area. The average litter size is four to seven pups.

- Coyotes will place their pups in a den for the first six weeks, after which the pups will learn to hunt with their parents. During all of the pup season and dispersal season COYOTES WILL BE SEEN DURING DAYTIME HOURS. This does not mean they are sick. It just means they are trying to feed a lot of mouths.

- Coyote dens are found in steep banks, rock crevices and underbrush, as well as in open areas.

- During dispersal season (September - December), the pups from the previous year (yearlings) will leave the family group and become transient coyotes in search of a new home range. This is the other time of the year you may see a lot of coyotes. Many people panic and wrongfully think there’s all of a sudden an “infestation” or “over-population” of coyotes, but in reality it’s just young ones on the move.

HABITAT

- Coyotes are most active at dawn and dusk.

- Coyotes prefer the edge of open space and natural preserve areas over human-dominated landscapes, and do well with areas that border human habitation. Coyotes thrive in these areas because food, water, and shelter are abundant.

- Home range sizes vary for each individual coyote. Research has shown that home range sizes for resident coyotes average 2-5 square miles, while transient coyotes have larger home ranges (averaging 10 square miles).



COYOTE ATTRACTANTS IN URBAN AREAS

Coyotes are drawn to urban areas for the following reasons:

1. FOOD

Urban areas provide a bounty of natural food choices for coyotes, who primarily eat rodents such as mice and rats. However, coyotes can be further attracted into suburban neighborhoods by human-associated food such as pet food, unsecured compost or trash, and fallen fruit in yards.

Intentional and unintentional feeding can lead coyotes to associate humans with sources of food, which can result in negative interactions among coyotes, people and pets.

To reduce food attractants in urban and suburban areas:

- Never hand-feed or otherwise deliberately feed a coyote.
- Avoid feeding pets outside. Remove sources of pet food and water. If feeding pets outside is necessary, remove the bowl and any leftover food promptly.
- Never compost any meat or dairy (unless the compost is fully secured).
- Maintain good housekeeping, such as regularly raking areas around bird feeders, to help discourage coyote activity near residences.
- Remove fallen fruit from the ground.
- Limit the amount of birdseed you put out each day to only one day's worth. A feeder that's overflowing



will attract unwanted animals like mice, rats and raccoons which will be just as attractive to coyotes as is the leftover bird seed.

- Keep trash in high-quality containers with tight-fitting lids. Only place the cans curbside the morning of collection. If you leave out overnight, trash cans are more likely to be tipped over and broken into
- Bag especially attractive food wastes such as meat scraps or leftover pet food. If it is several days before garbage will be picked up, freeze temporarily or take to a dumpster or other secure storage container.

2. WATER

Urban areas provide a year-round supply of water in the form of storm water impoundments and channels, artificial lakes, irrigation, pet water dishes, etc., which support both coyotes and their prey. In dry conditions, water can be as alluring as food, so remove water bowls set outside for pets and make watering cans unavailable.

3. ACCESS TO SHELTER

Parks, greenbelts, open spaces, golf courses, buildings, sheds, decks and crawl spaces, etc., increase the amount and variability of cover for coyotes. They allow coyotes to safely and easily remain close to people, pets, homes and businesses without detection. In the spring, when coyotes give birth and begin to raise young, they concentrate their activities around dens or burrows in which their young are sheltered. Coyotes may take advantage of available spaces under sheds or decks for use as a den, bringing them into close contact with people and pets.

4. UNATTENDED PETS

Pets are a normal part of an urban landscape. Within their territory, coyotes may consider pets as potential prey or potential competitors. Free-roaming pets, especially cats and sometimes small dogs, may attract coyotes into neighborhoods. The best way to minimize risk to pets is to not leave them outside unattended.

- **CATS:** Coyotes primarily eat small mammals such as mice and rats, but will also prey on slightly larger mammals such as rabbits and groundhogs. Approximately the same size as a groundhog or rabbit, free-roaming outdoor cats may also be seen as eligible prey items by coyotes. It is important to note that attacks on cats are normal coyote behavior and do not indicate a danger for people. The only way



to protect cats from coyotes (and the other dangers of outdoor life such as cars, disease, dogs and other wildlife) is to keep cats indoors (or only let them outside in a secure enclosure or when accompanied by a person and under the control of a leash and harness). See <http://www.purrfectfence.com> for more info.

• **FERAL CATS:** People who feed feral cats are often concerned that coyotes might prey on the cats. These concerns are well founded, as coyotes will be attracted to both the outdoor pet food and the cats themselves as prey. Although there is no sure way to protect feral cats from coyotes, the following tips can be helpful:

- Feed cats only during the day and at a set time—and pick up any leftovers immediately.
- Provide escape routes for cats.
- Haze coyotes seen on the property (see Appendix B).

• **DOGS:** Dogs are also vulnerable to coyote confrontations. These incidents generally involve coyotes who are accustomed or habituated to people (usually due to wildlife feeding), or coyotes who are protecting their territory and pups (usually during breeding season).

• Small, unattended dogs may be seen as potential prey for coyotes. It is important to either keep dogs on a leash six feet long or shorter when outdoors or to stay within six feet of them when outside. (Coyotes may view a dog on a leash longer than six feet as an unattended pet.) Attacks on unattended, small dogs are normal coyote behavior and do not indicate a danger for people.

• Although attacks on larger dogs are rarer, coyotes will sometimes go after a large dog when they feel that their territory is threatened. This generally occurs during the coyote breeding season, which takes place from January through March. During this time, it is especially important not to let dogs outside unattended and to keep them on leashes (six feet long or less) when in public areas.

• Fences can be used to keep coyotes out of residential yards, but they must be “coyote-proof.” Coyote-proof fences are at least eight feet tall and made of a material that coyotes cannot climb or at least six feet tall with a protective device on top such as a “coyote roller (coyoteroller.com) that rolls off any coyotes (and dogs) that try to scramble over the fence or lean-in extensions. To prevent coyotes from digging under a fence, it should extend underground at least twelve inches or include an L-shaped mesh apron that extends outward at least 18 inches and is secured with landscape staples.

• Other domestic animals kept outside, such as chickens and rabbits, may also be viewed as prey by coyotes. Protect poultry or other outdoor animals from coyotes (and other predators) with protective fencing (both structural and electric), by ensuring that they are confined in sturdy cages or pens each evening and by using livestock-guarding animals where possible.

Contact Amy Shutt of <http://www.thecanidproject.com> for free advice on predator proofing your yard: thecanidproject@gmail.com



COYOTE COEXISTENCE STRATEGIES & TECHNIQUES

Monitoring & Collecting Data

Monitoring and data collection are critical components of an effective coyote management plan. This is best accomplished with input from both residents and city officials using a coyote hotline and/or an online reporting form.

The purpose of monitoring human-coyote interactions is to document where coyotes are frequently seen, to count how many coyotes are within an area and to identify human-coyote conflict hotspots. Gathering specific data on incidents will allow for targeting of educational campaigns and conflict mitigation efforts, as well as the ability to measure success in reducing conflicts over time.

A standard Coyote Incident Form (Appendix A) should be made available to residents and employees to allow for consistent reporting of coyote incidents. Contact information—including the date, time, name, address and phone number of the individuals submitting the report—should be included, as well as specific information about the incident.

Human-Coyote Conflict Definitions

The following definitions will be used for the process of categorizing human-coyote conflicts:

COEXISTENCE: Humans and coyotes exist together. Humans take an active role in helping coyotes in their community stay wild by removing attractants, taking responsibility for pet safety, hazing coyotes in their neighborhood and learning about coyote ecology and behavior.

OBSERVATION: The act of noticing signs of a coyote(s), such as tracks, scat, or vocalizations, but without visual observation of the coyote(s).

SIGHTING: A visual observation of a coyote(s). A sighting may occur at any time of the day or night.

ENCOUNTER: A direct meeting that is between human and coyote(s) with no physical contact and that is without incident.

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

HUMAN ATTACK: A human is bitten by a coyote(s).

1. Provoked: An attack where the involved human encourages the coyote to engage. Examples include a

human hand-feeding a coyote, approaching a coyote with pups or intervening in a coyote attack on a pet.

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

The following definitions will also be used for the process of categorizing conflicts among coyotes, pets and livestock:

PET ATTACK: Coyote(s) kills or injures a domestic pet.

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

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

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

Education & Outreach

The great thing about coyote co-existence education and outreach is that once people are aware, it is easy to see that if we work as a community and take the time together to change a few of our normal everyday activities and habits, by modifying our behavior, we can modify their behavior. This is THE goal that will actually make a long-term sustainable difference. Coyotes are here to stay and it is time for the paradigm shift needed to look beyond the short-sighted and temporary fixes like lethal control.

Hazing: An Intervention Technique

Coyotes are naturally reclusive animals who avoid human contact. Coyotes in urban and suburban environments, however, may learn that neighborhoods provide easy sources of food while presenting few real threats. These coyotes may visit yards and public areas even when people are present and may cause conflicts with people and pets. Humans have contributed to this habituation of coyotes by not reacting when they see a coyote who is too close (and probably looking for a hand out). We have a tendency to either ignore them due to fear or to be enamored by them because they are wild and it is “cool” to see one. To coexist safely, it’s important to modify this behavior and attitude in resident coyote populations.



The best solution for addressing problematic coyote behavior is by being consistent and instituting a Community-Based Hazing program (See Appendix B) per neighborhood.

Hazing is an activity or series of activities that is conducted in an attempt to change behaviors of habituated coyotes and/or to reinstall a healthy fear of people in the local coyote population. Hazing techniques include humane tactics like generating loud noises, spraying water, shining bright lights, throwing objects, shouting, etc. Hazing can help maintain a coyote's fear of humans and deter them from neighborhood spaces such as backyards, greenbelts and play spaces.

The goals of hazing are to:

- Reverse the habituation of coyotes to people, teaching them to once again fear and avoid humans.
- Discourage coyotes from entering public areas such as parks, playgrounds and yards when people are present .
- Discourage coyotes from approaching people and pets.
- Empower residents by giving them tools to use when they encounter a coyote, thereby reducing their fear of coyotes.
- Increase awareness about coyote behavior among residents and involve the community in coyote management efforts

WHEN TO HAZE AND NOT TO HAZE

Before we discuss how to haze it's important to note when it is and is not appropriate. If coyotes are a comfortable distance away and minding their own business it's not necessary, especially at dawn & dusk, which is the time they are most active and are on the go hunting and making their territorial rounds. If they're protecting pups, an active den, sick, injured, etc. hazing should also be avoided. Please see APPENDIX B for more information on this.

BASIC HAZING

Consists of directly facing the coyote and being "big and loud" by waving your arms over your head, making loud noises until the coyote(s) chooses to leave. Using a variety of different hazing tools is critical because coyotes can become desensitized to the



continued use of just one technique, sound or action (see Appendix B). Basic hazing can be performed by anyone and includes the following techniques:

- Yelling and waving your arms while approaching the coyote. You can also shake a jacket, rake or broom over your head at the same time.
- Making loud noises with whistles, air horns, megaphones, soda cans filled with pennies, pots and pans.
- Throwing projectiles such as sticks, small rocks, cans, tennis balls or rubber balls in the DIRECTION of the coyote, but AVOID HITTING the coyote.
- Squirting water from a hose, water gun or spray bottle (with vinegar water) in the DIRECTION of the coyote.

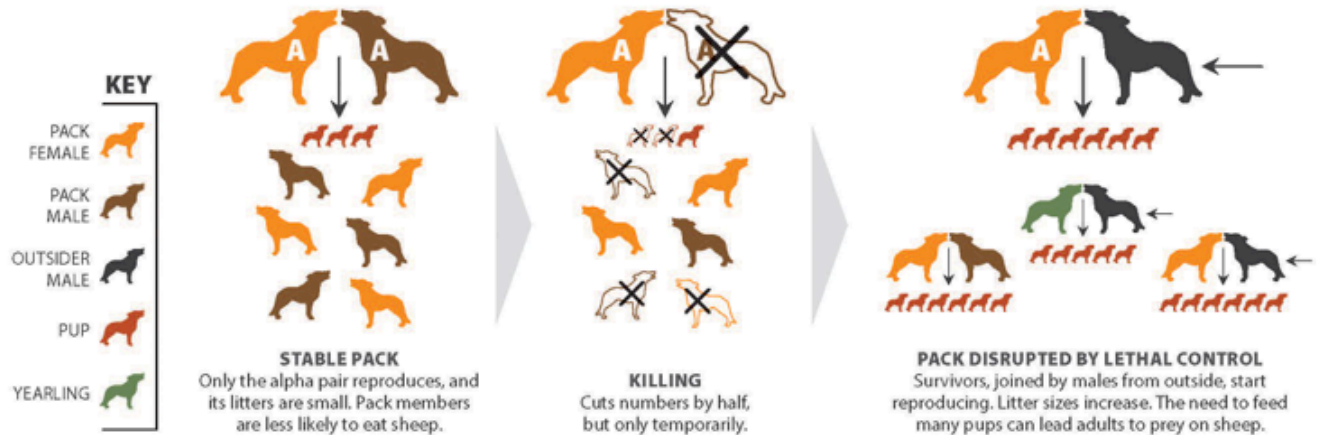
HIGH-INTENSITY HAZING

Consists of approaching the animal quickly and aggressively, throwing projectiles, paint balls, pepper balls, sling shots, clay pellets or pepper spray at the coyote. High-intensity hazing should only be carried out by trained professionals such as animal control and police officers. High-intensity hazing should be used in specific areas and only in response to more egregious incidents.



Why **KILLING** Doesn't Work

Shoot or poison coyotes and you will have just as many again within a year or two. Kill one or both members of the alpha pair (A)—the only one that normally reproduces—and other pairs will form and reproduce. At the same time, lone coyotes will move in to mate, young coyotes will start having offspring sooner, and litter sizes will grow.



THE HUMANE SOCIETY
OF THE UNITED STATES

humanesociety.org/coyotes

Lethal Control: A Last Resort

Lethal control programs may seem a like a quick fix to problems among coyotes, people and pets. However, removal programs are not effective in reducing coyote populations or addressing the root causes of conflicts. Coyote removal programs are costly (due to the difficulty of catching coyotes) and controversial among the public.

When implementing lethal control, it is extremely difficult to ensure that problem-causing coyote(s) will be the ones located and killed. Since firearms are usually unsafe to use in urban and suburban areas, traps (which are by design non-selective for particular coyotes) are generally the method used. Because coyotes are so intelligent and wary of human scent, it is very difficult to catch any coyote in a trap, never mind the problem-causing coyote.

Research has shown that when lethally controlled,

coyotes exhibit a “rebound effect” (a surge in their reproductive rates), allowing for quick regeneration of their population numbers. The disruption of their family group structure leads to an increase in the number of females breeding in the population, and the increase in available resources leads to larger litter sizes, earlier breeding ages among females and higher survival rates among pups. This allows coyote populations to bounce back quickly, even when as much as 70% of their numbers are removed through lethal control efforts.

For these reasons, lethal programs are not effective at reducing coyote populations, and non-selective coyote trapping programs are not effective at solving conflicts.

In addition, coyotes removed from an area will quickly be replaced by transient coyotes looking for a vacant home range. If the root causes of human-coyote conflicts have not been addressed, incoming coyotes may quickly become nuisance coyotes as well.



It is far better to have well-behaved resident coyotes who will hold territories and keep transients at bay than to risk having to deal with newcomers who do not know the “rules.”

Lethal responses (coyote removal) should be considered only in the event of an unprovoked, confirmed attack on a human. If implemented, lethal control efforts should focus on the offending coyote(s) only, rather than the coyote population at large.

This requires significant surveillance efforts to make sure that the correct animal(s) is targeted and removed. Lethal control should be considered as only one of a suite of management interventions (e.g. removal of attractants, hazing, etc.) that involve an array of humane and non-lethal measures.

It is worth remarking that if non-lethal control techniques are effective enough to reduce human-coyote interactions and conflicts to acceptable levels, then the lethal control limited option may remain in the toolbox without being used.

Local Ordinances

In addition to the suggested responses below, the following community-wide ordinances may be helpful:

LEASH LAW

Implementing a leash law and monetary fine for off-leash dogs can help address problematic behavior that could lead to coyote-pet conflicts. Residents should be instructed to keep pets on a leash six feet long or less.

ANTI-FEEDING ORDINANCE

Banning the feeding of wildlife (exceptions may be made for bird feeders) and establishing a monetary fine may be helpful in addressing problematic feeding behavior that can lead to the habituation of coyotes.



HUMAN-COYOTE CONFLICT CLASSIFICATION & RECOMMENDED RESPONSES

Coyote behavior	Classification	Response
Coyote heard; scat or prints seen	Observation	Distribute educational materials and information on normal coyote behavior.
Coyote seen moving through area (day or night)	Sighting	Distribute educational material and information on normal coyote behavior.
Coyote seen resting in area (day or night)	Sighting	If area frequented by people, educate on normal coyote behavior and how to haze to encourage animal to leave. Look for and eliminate attractants.
Coyote entering a yard (no person present outside)	Sighting	Educate on coyote attractants; provide hazing information and yard audit.*
Coyote following or approaching a person with no incident	Encounter	Educate on hazing techniques. Look for and eliminate attractants.
Coyote following or approaching a person and pet with no incident	Encounter	Educate on hazing techniques and pet management. If in open area, post educational signs to alert other residents to keep dogs on leash and to haze coyotes. If it is pup season and there is a known den nearby, consider blocking off the path or area until pup season is over.
Coyote entering a yard with pets, no incident	Encounter	Educate on coyote attractants and pet management, provide hazing information and yard audit.*
Coyote entering yard with people and pets, no pet attack occurring	Encounter	Gather information on specific animals involved and report circumstances. Educate on coyote attractants and pet management, provide hazing information and yard audit.*
Coyote injures or kills unattended pet in back yard	Unattended Pet Attack	Gather information on specific animals involved and report circumstances. Educate on coyote attractants and pet management, provide hazing information and yard audit.*
Coyote injures or kills pet off-leash in open space area	Unattended Pet Attack	Gather information on specific animals involved and report circumstances. Educate on pet management and hazing. Look for and eliminate food attractants. Post educational signs in open area to alert other residents to keep dogs on leash and to haze coyotes. If it is pup season and there is a known den nearby, consider blocking off the path or area until pup season is over. Develop hazing team in area. Levy fines (for leash law violations) when appropriate.
Coyote injures or kills livestock	Livestock Loss/Depredation	Gather information on specific animals involved and report circumstances. Educate on proper livestock husbandry (including the use of secure enclosures, livestock guarding animals, and/or proper fencing).
Coyote injures or kills pet off-leash with human nearby (within six feet)	Attended Pet Attack	Gather information on specific animals involved and report circumstances. Educate on pet management, coyote attractants and hazing. Perform yard/neighborhood/public area audit.* Post educational signs and/or send educational materials to residents in the area. Implement high intensity hazing techniques (by ACOs, police, etc. –using rubber bullets, paintball guns, etc.



Coyote behavior	Classification	Response
Coyote injures or kills pet on-leash (within six feet)	Attended Pet Attack	Gather information on specific animals involved and report circumstances. Educate on pet management, coyote attractants and hazing. Perform yard/ neighborhood/public area audit.* Post educational signs and/or send educational materials to residents in the area. Implement high-intensity hazing techniques (by ACOs, police, etc.)—using rubber bullets, paintball guns, etc.
Coyote aggressive toward person, showing teeth, back fur raised, lunging, nipping without contact	Incident	Gather information about incident and report circumstances. Educate on pet management, coyote attractants and hazing. Perform yard/ neighborhood/public area audit.* Post educational signs and/or send educational materials to residents in the area. Implement high-intensity hazing techniques (by ACOs, police, etc.)—using rubber bullets, paintball guns, etc.
Coyote has bitten human (Human encouraged coyote to engage by hand feeding, approaching coyote with pups, intervening during pet attack, etc.)	Provoked Human Attack	Identify and gather information on all details of attack (including action of victim before and after attack, whether feeding or pets were involved, action of victim towards coyote and how incident was resolved). Any human bitten by a coyote(s) will need to seek the advice of their physician concerning the administration of a post-exposure rabies vaccination. If the offending coyote is killed, he/she should not only be tested for rabies, but should be also given a full necropsy (to determine general health and whether feeding was involved). Educate residents on coyote attractants, yard/ neighborhood audits, hazing and pet management. Levy fines (for wildlife feeding or leash law violations) when appropriate. Implement high-intensity hazing techniques (by ACOs, police, etc.) —using rubber bullets, paintball guns, etc. for any other habituated or bold coyotes in area.
Coyote has bitten human (Human did not encourage coyote to engage)	Unprovoked Human Attack	Identify and gather information on all details of attack (including action of victim before and after attack, whether feeding or pets were involved, action of victim towards coyote and how incident was resolved). Any human bitten by a coyote(s) will need to seek the advice of their physician concerning the administration of a post-exposure rabies vaccination. If the offending coyote is killed, he/she should not only be tested for rabies, but should be also given a full necropsy (to determine general health and whether feeding was involved). Lethal control efforts, if implemented, should focus on the offending coyote(s), rather than the coyote population at large. Educate residents on coyote attractants, yard/ neighborhood audits, hazing and pet management. Implement high-intensity hazing techniques (by ACOs, police, etc.)—using rubber bullets, paintball guns, etc. for any other habituated or bold coyotes in area.

*(See Appendix C)



APPENDIX A: COYOTE INCIDENT REPORT FORM

Date: _____ Time of interaction: _____ Duration of Interaction: _____

Name of reporting party: _____

Address of reporting party: _____

Phone number of reporting party: _____

Address of interaction: _____

Location type (park, commercial property, residential property, natural preserve, vacant land, other): _____

Type of interaction: *Observation, Sighting, Encounter, Incident, Pet Attack: Attended/Unattended, or Human Attack: Provoked/Unprovoked?* (See Reverse for Definitions) _____

Activity of reporting party prior to interaction (e.g. walking, running, riding bike): _____

Was the coyote being intentionally fed?..... Yes No

Was there pet food present?..... Yes No

Was unsecured garbage present? Yes No

Were other food attractants present?..... Yes No

(e.g. bird seed, compost, fruit, etc.) If yes, describe: _____

Was a pet involved?..... Yes No

Type of pet:..... Cat Dog Other _____

Breed/weight of pet: _____

Was pet on leash? Yes No

(If yes, was leash longer than 6 ft.?)..... Yes No

Description of interaction/what happened: _____

Actions taken by reporting party (e.g. ran away, hazed coyote, none, etc.): _____

How did coyote respond? (e.g. ran away, approached, etc.) _____



OFFICE USE ONLY:

Outcome of incident: _____

Human injuries: _____ Post Exposure Rabies Vaccination Recommended: Yes No

Pet injuries: _____ Pet killed: Yes No

Coyote injuries: _____ Coyote euthanized: Yes No

Coyote necropsy results: _____

Stomach contents: human food: Yes No

Sign of disease: Yes No

If Yes, describe _____

DEFINITIONS:

OBSERVATION:

The act of noticing signs of a coyote(s), such as tracks, scat, or vocalizations, but without visual observation of the coyote(s).

SIGHTING:

A visual observation of a coyote(s). A sighting may occur at any time of the day or night.

ENCOUNTER:

A direct meeting that is between human and coyote(s) with no physical contact and that is without incident.

INCIDENT:

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

HUMAN ATTACK:

A human is bitten by a coyote(s).

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

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

PET ATTACK:

Coyote(s) kills or injures a domestic pet.

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

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

LIVESTOCK LOSS/DEPREDATION:

Coyote(s) kills or injures livestock.



APPENDIX B: IMPLEMENTING A COMMUNITY-BASED HAZING PROGRAM

Because coexisting with wildlife involves the community, the most successful coyote hazing programs involve residents and volunteers. Residents are best equipped to respond consistently and at the most opportune times in their own neighborhoods, greenbelts, parks and open spaces. Coyotes will also learn to fear the general public faster if they are hazed by the residents that they already encounter in their home ranges.

Involving the community in coyote hazing efforts has the additional benefit of empowering residents and reducing their fear of coyotes by giving them tools to address coyote conflicts themselves.

Before attempting to haze coyotes on their own, residents should first be properly trained on the following topics:

- a) Basic coyote ecology and behavior
- b) Seasonal behavior changes—breeding season, pups, denning behavior
- c) Influences of human behavior on coyotes
- d) How to identify and remove food attractants
- e) Safety tips for pets
- f) Hazing techniques, tools and tips for success

When possible, in-person trainings and meetings are the best way to relay this information to residents and to train them in coyote hazing techniques. Supplemental materials, such as handouts, brochures and websites, can also provide this information when necessary.

Creating a Volunteer Hazing Team

A group of volunteers trained in coyote hazing techniques can be quite useful to respond to coyote conflicts in public areas (such as parks, playgrounds, etc.). The following guidelines are suggested for managing a volunteer hazing team:

1. Volunteers should be trained in proper coyote hazing techniques (as discussed above).
2. Volunteers should be added to a Community Citizen Volunteer email list, from which they will be notified of “hot spots” and asked to haze in the area.
3. Updates, additional coyote information, electronic flyers and handouts should be sent to members of the Community Citizen Volunteer group to disseminate to the general public.
4. Volunteers should fill out a Hazing Interaction Report after each hazing activity.
5. Hazing Interaction Reports will include the following details:
 - a) Date, location, time of day, number of coyotes
 - b) Initial coyote behavior, hazing behavior, coyote response
 - c) Effectiveness ratings
 - d) Tools and techniques used
 - e) Additional details/comments



COYOTE HAZING TIPS FOR SUCCESS

1. Hazing is most effective when an individual coyote is hazed by a variety of people using a variety of tools and techniques.
2. The coyote being hazed must be able to recognize that the potential threat is coming from a person. Therefore, hiding behind a bush and throwing rocks or hazing from inside a car or house (for example) isn't effective.
3. When hazed for the first time, a coyote may not respond at first or may run a short distance away. If this happens, it is important to continue hazing (and intensify the hazing if possible) until the coyote leaves the area. Otherwise, the coyote will learn to wait until the person gives up. Inconsistent hazing will create an animal more resistant to hazing instead of reinforcing the notion that "people are scary."
4. Make sure to provide an escape route for the coyote. Do not corner the coyote or chase the animal in the direction of traffic or other people.
5. A group of coyotes should be hazed in the same manner as a single coyote. In a group, there will always be a dominant coyote who will respond first, and once he runs away, the others will follow.
6. Hazing efforts should be exaggerated at the beginning of a hazing program, but less effort will be needed as coyotes learn to avoid people and neighborhoods. Coyotes learn quickly, and their family members and pups will emulate their behavior, leading to a ripple effect throughout the local coyote population.
7. Certain levels of hazing must always be maintained so that coyotes do not learn or return to unacceptable habits.
8. Obviously sick or injured coyotes should not be hazed by the general public. In these cases, police or animal control officers should be contacted.
9. People should never run from or ignore a coyote. Running from a coyote can initiate a chasing instinct, while ignoring a coyote creates habituation and negates the positive effects of hazing.
10. It is important to identify and remove possible coyote attractants in conjunction with hazing. Hazing will be less effective if food attractants are plentiful in a neighborhood.



APPENDIX C: COYOTE YARD AUDIT CHECKLIST (For municipal or homeowner use)

	OK	FIX	Ways to Mitigate
FOOD			NEVER hand-feed or intentionally feed a coyote!
Pet Food			Never feed pets outdoors; store all pet food securely indoors.
Water Sources			Remove water attractants (such as pet water bowls) in dry climates.
Bird Feeders			Remove bird feeders or clean fallen seed to reduce the presence of small mammals that coyotes prefer to eat.
Fallen Fruit			Clean up fallen fruit around trees.
Compost			Do not include meat or dairy among compost contents unless fully enclosed.
BBQ Grills			Clean up food around barbeque grills after each use.
Trash			Secure all trash containers with locking lids and place curbside the morning of trash pickup. Periodically clean cans to reduce residual odors.
LANDSCAPING			Trim vegetation to reduce hiding places and potential denning sites.
Structures/Outbuildings			Restrict access under decks and sheds, around woodpiles, or any other structure that can provide cover or denning sites for coyotes or their prey.
FENCING			Enclose property with an 8-foot fence (or a 6-foot fence with an additional extension or roller-top) to deter coyotes. Ensure that there are no gaps and that the bottom of the fence extends underground 6 inches or is fitted with a mesh apron to deter coyotes from digging underneath.
PETS			Never leave pets unattended outside.
			Never allow pets to “play” with coyotes.
			Fully enclose outdoor pet kennels.
			Walk pets on a leash no longer than 6 feet in length.

We encourage you to take steps to eliminate attractants on your property in order to minimize conflicts with coyotes. We also urge you to share this information with friends and neighbors because minimizing conflicts is most effective when the entire neighborhood works together.



RESOLUTION NO. _____

A RESOLUTION APPROVING A COYOTE MANAGEMENT PLAN

WHEREAS, the City of _____ has a duty and responsibility to its residents to protect the public health, safety, and welfare of its residents; and

WHEREAS, the city of _____ desires to identify and achieve a balance between the importance of human safety and the ecology of the region; and

WHEREAS, due to the varied interests of persons and organizations regarding actions that can be taken in the management of coyotes, a written management plan is desirable to ensure that the varied interests are evaluated and considered when seeking to address conflicts with coyotes, and;

WHEREAS, the City of _____ has developed a Coyote Management Plan to provide recommendations for educating the community regarding living and interacting with wildlife and addressing perceived or actual conflicts with coyotes including sightings, attacks on pets, aggressive behavior of coyotes, and a general fear of harm to life and property caused by coyotes, and;

WHEREAS, the purpose of the Coyote Management Plan is to provide effective solutions to coyote conflicts, including a behavior classification and recommended response chart, to resolve and reduce human-coyote conflicts within the City in a humane and effective manner; and

WHEREAS, a combination of education and hazing have been found to be the most effective methods to alleviate the potential dangers that may result from coyote-human interactions, and

WHEREAS, the _____ is directed to utilize non-lethal methods, including education and hazing methods, as primary methods in coyote management, considering lethal responses (coyote removal) only in the event of an unprovoked attack on a human,

NOW, THEREFORE, BE IT RESOLVED by _____, that: The Coyote Management Plan attached hereto and incorporated herein by reference, is hereby approved. The resolution shall be effective immediately.

APPROVED AND ADOPTED THIS _____ DAY OF _____

ATTEST: _____



NOTES