

**CITY OF LOUISVILLE**  
**PARKS & RECREATION**  
**COYOTE MANAGEMENT AND COEXISTENCE PLAN**



**North Open Space, Louisville, Colorado.**  
**Photo captured by a motion and heat sensitive wildlife camera.**

**City of Louisville, Department of Parks and Recreation**

**October 17th, 2014**

## Table of Contents

I. Introduction.....	3
II. Urban Coyote Ecology.....	3
A. Coyote Behavior.....	4
B. Social Organization.....	4
C. Disease Concerns.....	5
III. Coyote Management Strategies.....	6
A. Education and Outreach.....	6
B. Reporting.....	6
C. Encounter (Hazing) Techniques.....	7
IV. Coyote Attractants.....	7
A. Feeding.....	7
1. Unintentional Feeding.....	7
2. Intentional Feeding.....	8
V. Coyote Interactions and City Response.....	8
A. Human and Coyote Interactions.....	8
1. Observations.....	8
2. Sightings.....	8
3. Encounters.....	8
4. Incidents.....	9
5. Attacks.....	9
B. Pet and Coyote Interactions.....	10
1. Unattended Pet Attack.....	10
2. Attended Pet Attack.....	11
C. Coyotes on Private Property.....	11
1. Landowners and Private Property.....	11
VI. Conclusion.....	12
Contact Information.....	13
References.....	14
Appendix A: Pertinent Laws and Regulations.....	16
Appendix B: City of Louisville, Coyote Management Guidelines for Response.....	18
Appendix C: Coyote Report Form.....	21
Appendix D: Letters of Support.....	23

## **I. Introduction**

The City of Louisville is a relatively small suburban city, located approximately 15 miles from the foothills of the Rocky Mountains. Louisville is an active community with a population of roughly 19,000 people and many pet owners. The City of Louisville owns, or co-owns, over 1,800 acres of open space land, making Louisville an attractive recreation area for the community, and also great habitat for coyotes. Throughout the past 20 years Louisville's population has grown rapidly and, as with most of Colorado's growing suburbs, human-coyote sightings and conflicts are being reported more often. The purpose of this document is to present guidelines for responses to coyote interactions with particular interest in decreasing and resolving human-coyote conflicts.

Coyotes are members of the family Canidae which includes wolves, dogs, and foxes. Adult coyotes are medium-sized mammals and closely resemble medium-sized dogs in size with brownish-gray fur, long snouts and pointed ears. Coyotes usually weigh between 15-40 pounds and are 3 ½ to 4 ½ feet in length from nose to tail tip. Coyotes are native to Colorado. Wolves and coyotes once shared the same habitat, and the competition for food kept coyote populations lower than they are today (Riley, 2012). In the midst of urban sprawl, coyote populations have expanded throughout the Northern United States and have become more adapted to city life where there is an abundance of food, water, and shelter (Gehrt and Riley, 2010; Fox 2006).

As top predators in the urban ecosystem, coyotes help to balance prey populations. Coyotes' preferred diet includes small mammals, raccoons, bird eggs, amphibians, insects, fruits, and reptiles. However, coyotes are best described as opportunistic feeders and may prey on free-roaming and unattended domestic animals if presented with the opportunity (Gehrt 2004c). Additionally, these clever coyotes, which have adapted to the urban environment, may consume human scraps, garbage, compost, and dog food when readily available (Denver Parks and Recreation, 2009).

Coyotes are diurnal, meaning they can be active throughout the day or night. In urban areas coyotes prefer traveling at night to avoid people (Grinder and Krausman 2001; McClennen et al. 2001; Riley et al. 2003; Atwood et al. 2004); however, coyotes have been observed throughout all times of the day and have even been observed in downtown Louisville during the middle of the day. Seeing coyotes during the day should not be cause for alarm as this is normal behavior. Research suggests that coyotes are more nocturnal in heavily populated areas and more diurnal in areas where open spaces are more prevalent (McClennen et al. 2001; Riley et al. 2003; Gehrt et al. 2011).

## **II. Urban Coyote Ecology**

In rural areas coyote populations have been rising steadily and have expanded their home range showing the coyotes ability to adapt as human occupation has expanded (Gehrt, Anchor, and White, 2009; Fox 2006). As coyotes have adjusted to life in the city, reports of coyote encounters, incidents, and accidents have become more prevalent. Coyotes can live in any part of the urban landscape and are most abundant in suburban areas offering an abundance of "edge" habitat where open space is available along with plentiful sources of food, water, and shelter (Fox 2006). In the wild, the coyote's

territory can expand beyond five square miles, whereas, in the City, the coyote can meet all of its needs in a quarter of a square mile (AgriLife Services, 2009).

Coyotes are drawn to urban and suburban neighborhoods due to the availability of food and water. The presence of an easy meal attracts coyotes into neighborhoods, diminishing their need for a larger hunting range. The availability of food in suburban areas is created by both environmental and human conditions. Examples of human conditions can be, but are not limited to, patrons directly feeding coyotes and other wildlife, pet food and water bowls left outside, BBQ grills, compost piles, bird baths, and accessible trash bins and open dumpsters. Examples of environmental conditions can be, but are not limited to: fruit tree debris, carrion, and prairie dog colonies. In most cases, serious human-coyote conflicts have been the result of humans intentionally or unintentionally feeding coyotes, which is why education efforts are so important.

### **A. Coyote Behavior**

Coyotes generate a variety of howling sounds, typically during evening hours. Often referred to as “song dogs”, coyotes have distinctive whines, barks, and howls that some regard as a “symbol of the West” (City and County of Broomfield, 2010). These sounds are produced as a form of communication and may alert members of the pack to come back to the den or as a signal to warn off possible intruders.

Coyotes have a natural fear of humans and will usually retreat when humans are present. When a coyote feels threatened by an intruder or is afraid for the safety of their young, they may exhibit den-guarding behavior such as baring their teeth, barking or growling, and raising their fur.

There may be a higher prevalence of defensive den-guarding behavior exhibited by coyotes during pup-rearing times (Crabtree and Sheldon 1999). Coyotes typically mate once a year, usually between January and March with birth of pups in April or May. Litter size averages between five and six pups, plus or minus two, depending on the availability of resources. Pups usually stay in their dens for approximately six weeks. During this time, coyotes can become territorial and protective of their young. Coyotes may protect their territories by “shepherding” citizens and their pets out of the area during the mating and breeding seasons (Riley, 2012), which can frighten people. Aggressive behavior and attacks on humans has shown to be more prevalent between May and August when coyotes are rearing their pups (Riley, 2012).

### **B. Social Organization**

Coyotes often uphold their territories in packs (Bekoff and Wells 1980; Gese and Ruff 1997, 1998; Gese 2001). Coyote pack size typically contains between 2-10 adult members, plus 5-6 pups depending on the availability of resources, population numbers, and mortality rates (Andelt 1985; Bekoff and Gese 2003). When coyotes live together it increases the packs ability to defend and protect their territory (Bekoff and Wells 1980; Bowen 1982). Packs are usually dominated by an alpha pair with breeding occurring between only the alpha pair. Many pups stay with the pack throughout their adult life while some members will become nomads; choosing to explore a broader home range that may overlap with

other coyote territories (Riley, 2012). Not all coyotes observed alone are nomads as some may prefer to hunt individually.

### **C. Disease Concerns**

The creation of more hiking trails, greenbelts, and open space areas along the Front Range has increased the probability of human interactions with wildlife such as the coyote (Dunbar, 2007). This increase in coyote sightings may enhance fears of potential threats to pet and human safety. Despite the potential threat, less than 8% of coyote-attack cases were linked to coyote-carrying diseases (Riley, 2010). However, in rare cases, diseases can spread from coyotes to humans and pets. These diseases include mange, rabies, and canine distemper (Arizona Game and Fish Department). Records indicate that human and pet mortalities from these diseases are relatively low (Gehrt and Riley, 2010).

There are two different forms of mange that can be transmitted from infected coyotes. One type of mange is called Cheyletiella mange. This type of mange can cause the animal's skin to become very itchy with mites noticeable in the animal's fur (McCleod). Cheyletiella mange can be spread from direct contact with coyotes or from contact with areas where an infected coyote has been laying. This type of mange can easily be treated with insecticide applications (McLeod).

The second type of mange is called Sarcoptic mange which is the most noticeable form of mange and is recognizable by the appearance of sores on the animal's skin, loss of fur, excessive itchiness, and an emaciated appearance (Pence and Ueckermann, 2002). Sarcoptic mange is contagious through direct skin contact and can infect dogs that have been resting in areas where an infected coyote has been. Treatment for Sarcoptic mange requires a specialized product available at the veterinarian's office. Both types of mange are highly contagious to dogs and cats and are caused by mites that burrow into the skin.

Cheyletiella and Sarcoptic mange can occasionally spread from infected dogs and cats to humans. Scabies is the human form of mange. Symptoms of scabies include an itchy rash with small lumps or red burrows and blisters on the skin. Citizens who suspect scabies infection should visit a dermatologist for a skin screening. Medicinal treatment for scabies is only available with a doctor's prescription. Any person who has been in close contact with someone with a scabies infection should also seek treatment to avoid new outbreaks.

Rabies is a virus that is characterized by foaming at the mouth, sharp pain, aggressive or irregular behavior, and lethargic or paralyzed behavior. Rabies is generally transmitted to dogs and humans from a bite of an infected animal. Rabies vaccinations have greatly reduced cases of rabies in pets and humans and cases of rabies are extremely rare (Humane Society, 2013). It is recommended that all dogs be currently vaccinated for rabies to prevent possible infection. Anyone who has been bitten by a coyote should immediately go to the hospital for treatment to prevent the disease from spreading to the central nervous system. Boulder County Public Health should also be notified of the incident (303-413-7426). Outbreaks of rabies in coyotes are rare and are not commonly implicated in the transmission of rabies to humans or domestic animals.

Canine Distemper Virus (CDV) can affect wild and domestic carnivores (Colorado Parks and Wildlife). CDV can be transmitted through air molecules or by contact with body secretions or food and water that has been tainted by an infected animal. Symptoms of distemper may include coughing, wheezing, fever, muscle spasms, runny nose, eye discharge, and aggression (Colorado Parks and Wildlife). Veterinary drugs can significantly reduce the chance for infection of CVD however there is no specific treatment for this virus (Pet MD).

### **III. Coyote Management Strategies**

The City of Louisville manages coyotes in several ways: education and outreach, reporting, performing hazing techniques, and in rare cases removal. The primary tools that the City uses in reducing interactions and conflicts with coyotes is through informational signage and public educational programs which emphasize preventive practices including reduction and removal of wildlife attractants and appropriate human responses to coyote interactions.

#### **A. Education and Outreach**

Education and communication are essential in supporting human and animal needs and in promoting coexistence. The City provides coyote focused environmental educational programs for children, family groups, and adults, and provides citizens with educational materials when requested. Educational materials include information on coyote behavior and ecology, human behavioral influences on coyote behavior, identifying coyote attractants, and hazing techniques. The emphasis of coexistence with coyotes in urban environments is the most important educational tool. An understanding of how coyotes respond to heavily populated areas is imperative to management practices and coexistence.

Other educational resources include temporary signage, flyers and informative sandwich boards placed strategically on Open Space properties to alert the public that encounters have been reported and provide general safety information. If the City receives a report of intentional/unintentional feeding, the City will provide citizens with educational materials regarding the negative impacts of feeding wildlife and will follow up with the reporting citizen. The City Police Department will be contacted for next steps if the issue is not resolved.

#### **B. Reporting**

The City of Louisville requests that citizens complete a Coyote Report Form to report coyote interactions within the City. This form can be found on the City's website and is also provided in coyote sandwich boards that are often temporarily placed in areas of suspected high coyote activity and citizen reports. This form is located in Appendix C and can also be found at the "Open Space" page on the City of Louisville's website. The City website also provides helpful links to common questions such as how to avoid coyote conflicts, and signs of normal/abnormal coyote behavior. Patrons can complete the Coyote Report Form and email it to [Coyotes@LouisvilleCO.gov](mailto:Coyotes@LouisvilleCO.gov). Staff will review all reports submitted and follow-up on all reported incidents and attacks. The Parks and Recreation Department will provide information on received coyote reports every year which will be posted on the City website.

### C. Encounter (Hazing) Techniques

Through educational programming, signs, and flyers the City educates the public on hazing techniques used to scare off coyotes and negate potentially dangerous encounters. The City of Louisville encourages citizens who encounter coyotes to use low intensity hazing techniques and look the coyote in the eye, back away slowly, and never turn their back or run from a potentially aggressive coyote.

**Hazing** is defined as a method that employs immediate use of deterrents to move an animal out of an area and/or discourage an undesirable behavior or activity. Hazing helps to maintain the coyotes natural fear of humans and helps to deter coyotes from neighborhood spaces such as backyards and playgrounds. Hazing is not meant to harm the coyote but rather to alter coyote behavior around humans. Examples of **low-intensity hazing** include the use of tennis balls, air horns, and throwing rocks in the direction of (not at) the coyote without making contact or harming the animal when a person feels threatened. Making yourself look larger and yelling at a coyote have also been proven to be good deterrents of negative coyote behavior. Citizens should never chase a coyote or haze a non-threatening coyote, one that appears injured, or a coyote with pups.

If low-intensity hazing does not prove effective, high intensity hazing may be used. **High-intensity hazing** entails the use of weapons intended to scare the coyote. High-intensity hazing is not meant to injure or kill the coyote. Colorado Parks and Wildlife, City Staff, and hired personnel are the only people that are allowed to use this method on City property.

## IV. Coyote Attractants

### A. Feeding

Research indicates that approximately 1/3 of all coyote attacks are the result of intentional or unintentional feeding (White and Gehrt 2009). Feeding wildlife can increase boldness and begging behaviors as coyotes become more accustomed to being around humans and may associate humans with food. Coyotes are opportunistic feeders and will return to an area over and over again if presented with an easy meal. Because of the close proximity of open space to neighborhoods in Louisville, coyotes often do not have to travel far to find food left outside. Feeding wildlife is against local, State, and Federal law (see Appendix A).

**1. Unintentional Feeding-** A citizen or business is unintentionally leaving coyote attractants outside. Some examples of unintentional feeding are: compost piles, uncovered trash cans or dumpsters, BBQ grills, pet food left outside, water dishes, ponds, unsecured vegetable gardens, fallen fruit from trees, and bird feeders . All of these items also increase the coyote prey population which in turn leads to additional coyote attractants. In addition, dogs that are left unattended or off-leash can be considered a source of unintentional feeding.

City Response to Unintentional Feeding: The City will provide citizens with educational materials if desired. The Parks and Recreation Department may perform a site investigation for signs of unintentional feeding. Staff may also send a registered letter to the resident.

**2. Intentional Feeding-** A citizen or business intentionally leaving food out or hand feeding wildlife. With repeated feeding, coyotes may become habituated which means coyotes lose their natural fear of humans and becomes more comfortable coming into neighborhoods and exploring back yards. Direct feedings of coyotes can result in aggressive and demanding behaviors and create unsafe situations for humans and pets. The key to reducing or eliminating most coyote incidents is by removing the availability of food resources in areas where people reside.

City Response to Intentional Feeding: The City will follow up with the reporting citizen, provide citizens with educational materials, and perform a site investigation of the area for potential Municipal Code violations. The Parks and Recreation Department will also send a registered letter to the resident. The purpose of this letter is to inform the citizen that wildlife feeding is strictly prohibited by Colorado state regulations and by the City Municipal Code and must stop immediately (see Appendix A). If the offense is occurring in an open area City staff will contact the HOA and request to post informational signage in the area of reported feeding.

Consequences for non-compliance with wildlife feeding regulations include fines issued by the City or State and/or points charged to hunting or fishing privileges.

## **V. Coyote Interactions and City Response**

### **A. Human and Coyote Interactions**

Human and coyote interactions are classified as: observations, sightings, encounters, incidents, or attacks. Louisville residents are strongly encouraged to report any coyote interactions to the City via the City's webpage or by contacting City staff. Human safety concerns should be immediately reported to the Police Department. Reports received from the public are recorded and managed as the City deems necessary with public safety as the City's main concern.

**1. Observations-** An observation is the act of noticing or taking note of tracks found, den locations, scat findings, and vocalizations (howls).

City Response to Observations: The City will provide educational materials to reporting citizens and/or Home Owners Association, if requested.

**2. Sightings-** A sighting is the visual observation of a coyote from a distance greater than 100 feet.

City Response to Sightings: The City will provide education materials to reporting citizens and/or Home Owners Association, if requested.

**3. Encounters-** An encounter is an unexpected direct meeting with coyote, within 100 feet, that is without incident; coming within close proximity of a coyote on a trail, sidewalk, street, or yard. An example of an encounter may include a situation where a coyote charges humans or pets in reaction to an infringement on the coyote's den or pups. A coyote entering onto private property, without incident, is also considered an encounter.



City Response to Encounters: If multiple encounters occur within the same residential area, the City will contact Colorado Parks and Wildlife, inspect the area for possible intentional or unintentional feeding, and post educational signage. In addition, the City will provide educational material to reporting citizens or HOA, if desired. The City may also begin a low-intensity hazing program and mow trail corridors and/or habitat, if appropriate. Educational brochures may also be distributed by placing Coyote Sandwich boards, within ¼ mile of reported encounters.

**4. Incidents-** An incident is a conflict between a human and coyote where a coyote exhibits behavior that creates an unsafe situation. An example of an incident includes, but is not limited to: a coyote advancing on an adult or child and growling, baring teeth, raising its fur, and/or running towards an adult or child. A coyote that does not respond to low-intensity hazing may also be considered an incident.

**5. Attacks-** An attack is an aggressive interaction where a human is grabbed, bitten, scratched, or otherwise injured by a coyote.

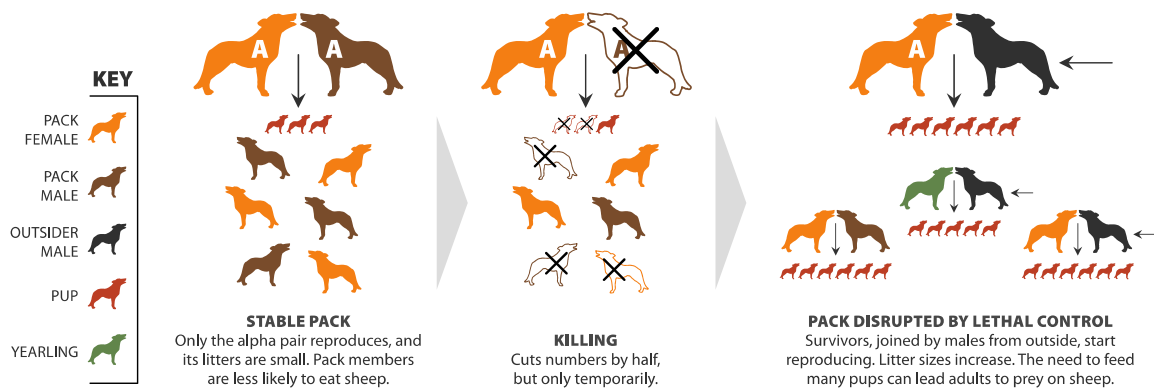
City Response to Incidents and Attacks: Reports of incidents and attacks are of great concern to the City of Louisville and are immediately reported to Colorado Parks and Wildlife, the City Police Department, and the City Parks and Recreation Department. Coyote attacks will also be reported to the Boulder County Public Health Department. In the case of an attack, the victim will also be advised to visit their physician immediately and informed that they will be contacted by the Boulder County Public Health Department for more information. City Staff will identify the area of concern and contact the person filing the report (and/or the person involved in the incident or attack) to review the details of the report and try to gain additional information. The Parks and Recreation Department will post educational signs at all entrance points to the area or street where the incident/attack occurred. The Parks and Recreation Department may also temporarily close open space properties and/or trails and mow trail corridors and/or habitat where appropriate. The Police Department will increase patrols within the area of concern and enforce local leash laws. A low intensity hazing program will be initiated, if appropriate. If low-intensity hazing is ineffective, the City may initiate a **high-intensity hazing** program. If high-intensity hazing is ineffective, the City will contact Colorado Parks and Wildlife regarding possible lethal control of the animal. Colorado Parks and Wildlife will work with the City to determine the appropriate course of action.

The City recognizes that sometimes lethal removal of a coyote is necessary and can be an effective method for dealing with dangerous coyotes. **Lethal removal will only be considered when a coyote poses a threat to safety and human health.** Public safety will be the main concern when considering actions with lethal removal of any animal. Colorado Statute 33-1-106 and 33-1-105 (1)(h) empower Colorado Parks and Wildlife to remove any animal which poses a threat to human safety. Determining the offending coyote can be difficult, however the City and CPW will obtain all information on the coyote and a concentrated effort will be made to lethally control the reported animal. The Colorado Parks and Wildlife Commission Regulation 302(A)(3) and 303 (F) prohibits the relocation of coyotes without a permit (see Appendix A). Sometimes, the removal of existing family

groups opens up space for transients, and coyote numbers can be replaced rapidly when territories are no longer defended. Furthermore, in a stable pack, only the alpha pair reproduces and its litters are small, subsequently the pack itself is small. Once the pack is disrupted however, other pack members (not only the alpha pair) will start to reproduce, consequently increasing the pack size. For this and other reasons, lethal removal will only be considered when a coyote poses a threat to safety and human health.

## 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.



Reprinted with permission from All Animals, the membership magazine of The Humane Society of the United States, [humanesociety.org](http://humanesociety.org).

### B. Pet and Coyote Interactions

One of the more common reports the City receives is that of pet/coyote interactions. A pet/coyote interaction includes an unattended or attended pet attack. Small domestic dogs and cats are appropriate size prey animals for coyotes and predatory aggression can be natural behaviors for coyotes. Pet attacks are often avoidable. The City recommends that pet owners keep pets on a short leash (less than six feet long) and maintain a watchful eye on smaller pets while outside. Pets that are on longer leashes, or none at all, are seen as more of a threat. Cats and/or small dogs frequently left outside may become attractants for coyotes and can fall victim to attack.

**1. Unattended Pet Attack-** An unattended pet attack is when a pet is physically contacted, bitten or killed by a coyote while unattended. This includes pets that are off-leash, on an extended leash, or pets not under direct control and within arms reach of the pet owner.

City Response to Unattended Pet Attacks: The City will provide reporting citizens with educational materials if desired and follow up with the citizen on reports of a dog attack. The City may also encourage a **low-intensity hazing** program if necessary.

**2. Attended Pet Attack-** Attended pet attacks are when the pet is on a leash within six feet of its owner and is physically contacted, bitten or killed by a coyote. This may include a pet being walked by owner on a six foot leash or owners within reach of pets when the attack begins.

City Response to Attended Pet Attacks: The City will inform Colorado Parks and Wildlife and the Boulder County Health Department. The Police Department will increase patrols within the area of concern and enforce local leash laws. The City will also recommend pet owners contact their veterinarian concerning rabies and other disease concerns, provide reporting citizens with educational materials if desired, follow up with citizen regarding the report, post informational signs in the area, and initiate low-intensity hazing if appropriate. If low-intensity hazing is ineffective, the City may initiate a **high-intensity hazing** program. If high-intensity hazing is ineffective, the City will contact Colorado Parks and Wildlife regarding possible lethal control of the animal. Colorado Parks and Wildlife will work with the City to determine the appropriate course of action.

### **C. Coyotes on Private Property**

Reports of coyote incidents and attacks on private property should be immediately reported to the Police Department. The Police Department will contact Colorado Parks and Wildlife and the City will follow the procedure as identified above for “City Response to Incidents and attacks”. Lethal force will only be used if there is an immediate threat to human safety.

**1. Landowners and Private Property:** Property owners can help to reduce coyote encounters on their property by removing rubbish piles and cover for coyotes and small mammals by trimming vegetation and mowing tall grass, installing a six-foot fence or a “coyote roller” to existing fencing, installing motion sensor lights, and keeping domestic animals protected at night. Landowners, or citizens with written consent from the landowner, are permitted to take coyotes causing damage to crops or property, and/or pose a safety risk to humans or animals on private property. It is illegal for any citizen, except law enforcement officers, to discharge any firearm within Louisville City limits (Municipal Code Section 4.04.010(Y) and Section 9.82.010(A)). The City recommends that property owners consult with the Colorado Parks and Wildlife and the City before action is taken.

Residential Properties: Citizens with coyote concerns on residential properties may only utilize live traps as stated in Wildlife Commission Regulations 302(B) and (E), and 301(B)(1) and (2) . Live traps must be inspected no less than once per day. Coyotes “must be killed or released on site” (Wildlife Commission Regulation 302(A)(3)(a) and may not be relocated (Wildlife Commission Regulation 302(A)(3) and 303(F)). The City recommends that citizens contact a pest removal contractor to euthanize a trapped coyote by lethal injection. The use of snares, body-gripping or instant killing traps, and poisons are not permitted without securing a permit from the Boulder County Health Department. This permit is only granted when wildlife is affecting public health and safety.

Agricultural Properties: Agricultural property owners may utilize live traps as stated in Wildlife Commission Regulations 302(B) and (E), and 301(B)(1) and (2) to control bothersome coyotes on their property. Live traps must be inspected no less than once per day. Coyotes “must be killed or

released on site” (Wildlife Commission Regulation 302(A)(3)(a) and may not be relocated (Wildlife Commission Regulation 302(A)(3) and 303(F). The Colorado Statute 33-6-107(9)“permits any landowner, any member of such landowner’s family, or any employee of the landowner to hunt, trap, or take coyotes on land owned or leased by the landowner without securing licenses to do so, but only when such wildlife is causing damage to crops, real or personal property, or livestock.” Domestic pets are not considered “real or personal property”. “Livestock” is defined as animals which are raised for profit. Coyotes may be taken by the use of snares, body-gripping or instant killing traps, and poisons only after securing a permit from Colorado Parks and Wildlife. To obtain a permit, the landowner must provide proof of “ongoing damage” such as livestock carcasses, physical injuries, or photographic evidence of occurrences. The landowner must also provide evidence that the damage was not improved by utilizing other methods.

## **VI. Conclusion**

Coyotes are part of the natural and historical landscape of Louisville. The City recognizes that coexisting with wildlife requires a multifaceted approach. Understanding that each situation may bring a new set of circumstances and considerations, the City continues to research what other cities are doing to coexist with coyotes. The City will respond to reports of coyote interactions with public safety as the main concern and assist residents in recognizing normal and abnormal coyote behavior and how to reduce and eliminate coyote attractants. The key to successful coyote conservation and coexistence with humans is through continuing education and outreach.

## **Contact Information:**

### **Emergencies:**

Call 911

### **To Report Human-Coyote Conflicts or for General Information:**

Parks and Recreation Department: 303-335-4735

City of Louisville Police Dispatch: 303-441-4444

Colorado Parks and Wildlife: 303-239-4501 (Colorado State Patrol; emergency wildlife issues, CSP will dispatch on-call Wildlife Officer), 303-291-7227 (CPW North East Region Service Center)

### **For Disease Concerns:**

Boulder County Public Health: 303-413-7426

## References:

- Atwood, T.C., H.P. Weeks, and T.M. Gehring. 2004. Spatial ecology of coyotes along a suburban-to-rural gradient. *Journal of Wildlife Management* 68: 1000-1009.
- Bekoff, M., and M.C. Wells. 1980. Social ecology and behavior of coyotes. *Scientific American* 242: 130-148.
- Bowen, W.D. 1982. Home range and spatial organization of coyotes in Jasper National Park, Alberta. *Journal of Wildlife Management* 46:201-215.
- City and County of Broomfield. 2010. Coexistence with Wildlife Policy. Broomfield, Colorado, USA
- Crabtree RL, Sheldon JW 1999. Coyotes and Canid Coexistence in Yellowstone National Park. Chapter 6 In *Carnivores in Ecosystems; The Yellowstone Experience*, T. Clark, P. Curlee, P. Kareiva, and S. Minta, eds., Yale University Press, New Haven, CT.
- Denver Parks and Recreation. 2009. Coyote Management Plan. Natural Areas Program, Natural Resources Division. Denver, Colorado, USA
- Dunbar, Mike R., Ray T. Sterner, and Shylo R. Johnson. "Impacts of Wildlife Diseases in Urban Environments." (2007): 253-61. Print.
- Fox, C. H. 2006. Coyotes and humans: can we coexist? Pp. 287-293 in: R.M. Timm and J. H. O'Brien (eds.), *Proceedings, 22nd Vertebrate Pest Conference*. Publ. Univ. Calif.-Davis.
- Gehrt, S.D., C. Anchor, and L.A. White. 2009. Home range and landscape use of coyotes in a metropolitan landscape: conflict or coexistence? *Journal of Mammalogy* 90: 1045-1057.
- Gehrt, S.D., and S.P.D. and Riley. 2010. Coyotes, pp. 79-95 In: Gehrt, S.D., S.P.D. Riley, and B.L. Cypher (eds). *Urban carnivores: Ecology, Conflict, and Conservation*. The Johns Hopkins University Press, Baltimore, MD
- Gehrt, S.D., J.L. Brown and C Anchor. 2011. Is the urban coyote a misanthropic synanthrope? The case from Chicago. *Cities and the Environment* 4: Iss. 1, Article 3.
- Gehrt, S.D. 2004c. Urban coyote ecology and management: The Cook County, Illinois, coyote project. *Ohio State University Extension Bulletin 929*, Columbus, Ohio, USA
- Gese, E.M., and R.L. Ruff. 1997. Scent-marking by coyotes, *Canis latrans*: The influence of social and ecological factors. *Animal Behaviour* 54:1155-1166.
- Gese, E.M., and R.L. Ruff. 1998. Howling by coyotes (*Canis latrans*): Variation among social classes, +seasons, and pack sizes. *Canadian Journal of Zoology* 76:1037-1043.
- Grinder, M., and P.R. Krausman. 2001. Home range, habitat use, and nocturnal activity of coyotes in an urban environment. *Journal of Wildlife Management*. National Park Service, unpublished data

McClennen, N., R.R. Wigglesworth, S.H. Anderson, and D.G. Wachob. 2001. The effect of suburban and agricultural development on the activity patterns of coyote (*Canis latrans*). *American Midland Naturalist* 158:147-161.

McLeod, Lianne. Cheyletiella: Signs, Diagnosis and Treatment of Cheyletiella in Cats and Dogs. *Veterinary Medicine*. Web.

Pence, Danny B., and E. Ueckermann. Sarcoptic Mange in Wildlife. *Review of Scientific Technical Office of Epizootics* 21 (2002): 385-95. Web.

Riley, S.P.D., R.M. Sauvajot, T.K. Fuller, E.C. York, D.E. Kamradt, C. Bromley, and R.K. Wayne. 2003. Effects of urbanization and habitat fragmentation on bobcats and coyotes in southern California. *Conservation Biology* 17:566-576.

Riley, S.P.D., J. Young, S., and S. Gehrt. Assessment of Human-Coyote Conflicts: City and County of Broomfield, Colorado. 2012. Open Space and Trails. Broomfield, Colorado

White, Lynsey A., and Ashley C. Delaup. "A New Technique in Coyote Management: Changing Coyote Behavior through Hazing in Denver, Colorado." *Urban Coyotes* (2012): 133-36. Print.

#### **Web Resources:**

The Humane Society of the United States. Understanding rabies: Facts and safety guidelines clear up misperceptions. (2013): <http://www.humanesociety.org/animals/resources/facts/rabies.html>

Texas Agrilife Extension –Wildlife Services. Managing Suburban Coyotes. (2009): <http://agriflivedn.tamu.edu/txwildlifeservices/files/2011/07/SuburbanCoyotes.pdf>

Arizona Game and Fish Department: [http://www.azgfd.gov/w\\_c/urban\\_coyotes.html](http://www.azgfd.gov/w_c/urban_coyotes.html)

Pet MD: <http://www.petmd.com/dog/conditions/respiratory/c dg canine distemper>

Colorado Parks and Wildlife: <http://wildlife.state.co.us>

Project Coyote ~ Coyote Hazing Field Guide

<http://www.projectcoyote.org/CoyoteHazingBrochureFieldGuide.pdf>

## **Appendix A: Pertinent Laws and Regulations:**

**Colorado Statute 33-1-106:** gives the Wildlife Commission the authority to regulate the circumstances under which wildlife may be taken, and to determine the disposition of usable portions of wildlife.

**Colorado Statute 33-1-105(1)(h):** gives the Wildlife Commission the authority to provide for destruction of any wildlife that poses a threat to public health, safety, or welfare.

**Colorado Statute 33-6-107(9):** permits any landowner, any member of such landowner's family, or any employee of the landowner to hunt, trap, or take coyotes on land owned or leased by the landowner without securing licenses to do so, but only when such wildlife is causing damage to crops, real or personal property, or livestock.

**Wildlife Commission Regulation 302(B) and (E):** The only types of traps that may be used by a landowner to trap wildlife that is causing damage to crops, real or personal property, or livestock are live cage or box traps.

**Wildlife Commission Regulation 301(B)(1) and (2):** landowners may trap day or night and traps must be visually checked at least once every day.

**Colorado Statute 33-6-205:** gives federal, state, county or municipal departments of health the ability to grant an exemption to Amendment 14 to take (by use of leg hold traps, snares, instant kill body-gripping design traps or poisons) wildlife in situations directly affecting public health and safety.

**Wildlife Commission Regulation 302(A)(3)(a):** small game and furbearers captured in live traps cannot be moved from the capture site and must be killed or released on site when the trap is checked.

**Wildlife Commission Regulation 302(A)(3) and 303 (F):** prohibits the relocation of coyotes without a permit. Studies have shown that relocation is not an effective solution to coyote conflicts. The Colorado Division of Wildlife (CDOW) generally will not authorize the relocation of coyotes.

**Colorado Statute 33-6-130(1):** Unless permitted by law or by the division, it is unlawful for any person to use toxicants, poisons, drugs, dynamite, explosives, or any stupefying substances for the purpose of hunting, taking, or harassing any wildlife.

**Wildlife Commission Regulation 021(C):** No person shall place, deposit, distribute or scatter any food or other substance so as to intentionally constitute a lure, attraction or enticement for coyotes or fox in an area where the discharge of firearms is precluded by law. This regulation shall not apply to any person using any bait or other attractants for the purpose of luring coyotes and fox for take as otherwise authorized by law.

**Wildlife Commission Regulation 021(D):** No person shall fail to take remedial action to avoid contact or conflict with black bears, coyotes or fox, which may include the securing or removal of outdoor trash, cooking grills, pet food, bird feeders or any other similar food source or attractant, after being notified by the Colorado Parks and Wildlife that black bears, coyotes or fox are in the area and advised to



undertake such remedial action. Further, after an initial contact or conflict with a black bear, coyotes or fox, no person shall continue to provide, or otherwise fail to secure or remove, any likely food sources or attractants, including, but not limited to, outdoor trash, grills, pet food or bird feeders.

**Municipal Code Sec. 4.04.010(T):** It is unlawful to take, seize, feed, pursue, trap, disturb, molest, injure or hunt any bird, reptile, or animal except fish on any Open Space. State wildlife officers and city employees acting in the performance of their official duties are exempt from this subsection T.

**Municipal Code Sec. 4.04.010(Y):** It is unlawful to discharge or carry any firearms (concealed or otherwise), projectile weapons, or explosives of any kind including but not limited to fireworks, BB guns, pellet guns, rockets, hobby rockets, air guns, paint ball guns, blow guns, crossbows, longbows and slingshots on Open Space; provided, however, that this subsection Y shall not be construed to prohibit the carrying of a concealed handgun if, at the time of carrying the concealed handgun, the person holds a valid written permit to carry a concealed handgun issued pursuant to C.R.S. 18-12-201 et seq., and is otherwise carrying the concealed weapon in accordance with any applicable state or local law. Further, peace officers on official duty are exempt from this subsection Y. Exceptions to this subsection Y may be permitted only with prior written permission from the director.

**Municipal Code Sec. 9.82.010(A):** It shall be unlawful for any person, except a law enforcement officer in the performance of his duties, to fire or discharge within the city a revolver or pistol of any description, or a shotgun or rifle which may be used for the explosion of cartridges or shells, or any air gun, gas-operated gun, or spring gun.

**Municipal Code Sec. 9.38.010:** It shall be unlawful for any person to throw a stone, snowball, or any other object upon or at any person, animal, vehicle, building, tree, or other public or private property in a manner that causes or has substantial risk of causing injury or damage. As used herein, the word throw includes but is not limited to slinging, dropping, shooting or launching.

**Municipal Code Sec. 4.04.010 (M):** Bring or maintain any dog or other animal on any open space, unless such dog or other animal is kept at all times on a leash not to exceed 15 feet in length and is under the physical control of its owner or custodian. The only exception to leash control on city open space is designated and signed "dog off-leash" areas, where dogs may be off leash only in accordance with the rules and regulations application to such dog off-leash area.

## Appendix B:

### CITY OF LOUISVILLE

#### PARKS AND RECREATION

#### COYOTE MANAGEMENT GUIDELINES FOR RESPONSE

##### **Purpose**

The purpose of this document is to provide a quick reference guide for responses to conflicts with coyotes, particularly to resolve and reduce human-coyote conflicts in a consistent and expedient manner. Public safety is the number one concern of the City, and coyotes will be managed with human safety as a priority. While the City employs educational outreach tools as the primary tool in managing human-coyote conflicts, the City recognizes that there are situations where immediate lethal control is necessary. Please reference the City of Louisville Coyote Management and Coexistence Plan for more detailed information.

##### **Responsibility**

**City of Louisville Parks & Recreation Department:** The Parks and Recreation Department will record all Coyote Reports, map all coyote incidents and attacks, post educational signage and provide guidance and educational materials to landowners in regards to reducing human-coyote conflicts, as requested.

**City of Louisville Police Department:** The Police Department will contact the Louisville Parks & Recreation Department and Colorado Parks and Wildlife when reports of coyote incidents or attacks are received, patrol and monitor the reported area, assist with high-intensity hazing, and contact citizens when necessary.

**Colorado Parks and Wildlife (CPW):** CPW will provide guidance to the City of Louisville in regards to mitigating and minimizing issues and lethal control of coyotes. The City of Louisville and the CPW personnel will respond to reports of incidents, attacks and make a management decision based on the interest of public safety.

**Citizens of Louisville:** Citizens will be responsible for reporting human-coyote conflicts in a timely manner to the Parks & Recreation Department. Citizens will also be expected to take the necessary steps to mitigate human-coyote conflicts such as not leaving pets unattended outdoors, short leashing pets, removing and/or maintaining brush and tall grass that may provide cover for coyotes and their prey, and removing pet food, water and other attractants from their property. When advised by the City citizens will also be responsible for low intensity hazing of coyotes.

##### **Definitions of Coyote Interactions**

**Unintentional Feeding:** Citizens or businesses unintentionally leaving coyote attractants outside. Examples include: compost piles, uncovered trash cans or dumpsters, BBQ grills, pet food left outside, and fallen fruit.

**Intentional Feeding:** Citizens or businesses intentionally leaving food out for any type of wildlife.

**Observation:** The act of noticing or taking note of tracks found, den locations, scat or vocalizations (howls).

**Sighting:** Visual observation of a coyote from a distance greater than 100 feet.

**Encounter:** An unexpected direct meeting with coyote, within 100 feet, that is without incident. Coming within close proximity of a coyote on a trail, sidewalk, street or yard.

**Incident:** A conflict between a human and a coyote where a coyote exhibits behavior that creates an unsafe situation (stalking, baring teeth, lunging).

**Attack:** An aggressive interaction where a human is grabbed, bitten, scratched, or otherwise injured by a coyote.

**Unattended Pet Attack:** A pet is physically contacted, bitten, or killed by a coyote while unattended. This includes pets that are off-leash, on an extended leash, or pets not under direct control and within arm’s reach of the pet owner.

**Attended Pet Attack:** A pet is on a leash within six feet of owner and is physically contacted, bitten, or killed by a coyote. This may include a pet being walked by owner on a six foot leash or pets under direct and immediate control of the pet owner.

## Coyote Interaction & Guidelines for Response

Increasing  
Severity



	Feeding		Human Interactions				Pet Interactions		
	Unintentional Feeding	Intentional Feeding	Observation	Sighting	Encounter	Incident	Attack	Unattended Pet Attack	Attended Pet Attack
Educational materials provided to citizen or HOA by Parks & Recreation staff	IR	X	IR	IR	IR	X	X	IR	X
Site investigation by Parks & Recreation staff to identify possible attractants	X	X			X*	X	X		X
Alert other staff members of report including: Parks & Recreation, Police and CPW		X			X*	X	X		X
Parks & Recreation staff send letter to homeowner	X	X							
Alert Police Department of possible Municipal Code violation		X							
Parks & Recreation staff post coyote signage in area					X*	X	X		X
Police patrol area immediately to identify offending coyote & enforce leash laws					X*	X	X		X
Parks & Recreation staff Initiate low-intensity hazing program & enlist citizen help if applicable					X*	X*	X	X*	X
Parks & Recreation, Police and CPW initiate high-intensity hazing						X*	X		X
Parks & Recreation, Police and CPW close trail or open space						X*	X		X
Parks & Recreation, Police and CPW recommend pet visit to veterinarian immediately								X	X
Parks & Recreation, Police and CPW recommend citizen visit physician immediately							X		
Parks & Recreation, Police and CPW alert Boulder County Health Department							X		X
Possible lethal control by CPW							X		X

**Symbol Key:**

X Action needed

IR If Requested

\* If multiple reports are received

CPW: Colorado Parks & Wildlife

## **Education**

The most effective means of limiting human-coyote conflicts is by educating the public. For public education to be successful there are three main topics that must be conveyed. First, coyote ecology and behavior. Second, how human behavior influences coyote behavior. Third, training citizens to identify coyote attractants and teach citizens acceptable low intensity hazing practices. The City uses the following methods for providing education to the public: hosting presentations that are open to the public, distributing educational materials such pamphlets, posters, and fliers; posting signs in areas and surrounding neighborhoods where coyotes are known to live, submitting articles in the Community Newsletter and local newspapers, providing information on the City website, and providing information to citizens that call or email the City with reports of coyotes.

## Appendix C:



# COYOTE REPORT FORM

Please complete this form and email it to [Coyotes@LouisvilleCO.gov](mailto:Coyotes@LouisvilleCO.gov). Forms can also be mailed or dropped off at: 739 S. 104<sup>th</sup> Street, Louisville, CO 80027, attention Open Space.

Name: \_\_\_\_\_ Witness: \_\_\_\_\_

Phone: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Phone: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Address: \_\_\_\_\_

Email: \_\_\_\_\_

Date of Occurrence: \_\_\_\_\_ Time of Occurrence: \_\_\_\_\_ am/pm

Property Name/Street Address: \_\_\_\_\_

Describe Location: \_\_\_\_\_

### Select all that apply:

#### I. Feeding Wildlife

\_\_\_\_\_ **Unintentional Feeding:** Citizens or businesses unintentionally leaving coyote attractants outside. Examples include: compost piles, uncovered trash cans or dumpsters, pet food bowls, BBQ grills, and fallen fruit.

\_\_\_\_\_ **Intentional Feeding:** Human intentionally leaving food out for any type of wildlife.

#### II. Human and Coyote Interactions

\_\_\_\_\_ **Observation:** The act of noticing or taking note of tracks, den, scat or vocalizations (howls).

\_\_\_\_\_ **Sighting:** Visual observation of coyote from a distance greater than 100 feet.

\_\_\_\_\_ **Encounter:** An unexpected direct meeting with coyote, within 100 feet, that is without incident. Coming within close proximity of a coyote on a trail, sidewalk, street or yard.

\_\_\_\_\_ **Incident (please complete section IIA):** A conflict between a human and a coyote where a coyote exhibits behavior that creates an unsafe situation (stalking, baring teeth, lunging).

\_\_\_\_\_ **Attack (please complete section IIA):** An aggressive interaction where a human is grabbed, bitten, scratched, or otherwise injured by a coyote.

#### III. Pet and Coyote Interactions (please complete section IIIA)

\_\_\_\_\_ **Unattended Pet Attack:** An unattended pet that is contacted, bitten, or killed by a coyote. This includes pets that are on leashes that are extended longer than six feet from owner.

\_\_\_\_\_ **Attended Pet Attack:** Attended pets that are leashed or unleashed within six feet of owners and are contacted, bitten, or killed by a coyote.

*\*All information on this form is public record and may be subject to the Colorado Open Records Act.*

**IIA: Coyote Incidents or Attacks:**

Number of victims: \_\_\_\_\_ Age of victim(s): \_\_\_\_\_

What were you doing? Check all that apply:

- Sleeping
- Walking
- Jogging
- Bicycling
- Driving
- Eating
- Sitting
- Attempting to lure coyote
- Carrying food
- Running from coyote
- Walking or running with pet (on-leash)
- Other, explain: \_\_\_\_\_
- Walking or running with pet (off-leash)

Please describe incident in detail:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Condition of coyote:  Healthy  Sick  Emaciated  Injured  
 Distressed  Unknown  
 Other, please describe: \_\_\_\_\_

**IIIA: Pet and Coyote Interactions:**

Type of Pet:

Dog, breed: \_\_\_\_\_ Weight: \_\_\_\_\_  Cat  
 Other, Describe: \_\_\_\_\_

Location of pet:

On-leash  In kennel/run  In fenced yard  Invisible fence  
 Close to human, distance \_\_\_\_\_  Pet Unattended  
 Other, please describe: \_\_\_\_\_

Was there a food source (pet food, compost, garbage, squirrel feeder) close by?

No  Yes, please describe: \_\_\_\_\_

Please describe interaction in detail:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Condition of coyote:  Healthy  Sick  Emaciated  Injured  
 Distressed  Unknown  
 Other, please describe: \_\_\_\_\_

Action Taken (STAFF ONLY): Name: \_\_\_\_\_ Phone: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Called  Onsite visit  Emailed  Report confirmed  Report not confirmed

Summary of Action Taken:

Advice given  Referred to CPW  Referred to Police  
 Referred to P & R  Coyote Hazing  Distribute education materials  
 Signs posted, locations: \_\_\_\_\_

## Appendix D:



**COLORADO**

**Parks and Wildlife**

Department of Natural Resources

Area 2 - Lon Hagler  
4207 W CR 16E  
Loveland, CO 80537  
P 970.472.4460 | F 970.472-4468

September 3, 2014

Catherine Jepson  
Open Space Specialist  
City of Louisville  
749 Main St.  
Louisville, CO 80027

Re: Letter of Support for Louisville Coyote Management Plan

Dear Ms. Jepson,

Thank you for the opportunity to review and provide comments on the Louisville Coyote Management Plan (LCMP). Urban conflicts with coyotes have increased dramatically over the past ten years in Colorado Front Range communities requiring cities, towns, and government organizations to take proactive steps to identify how humans and wildlife can coexist. Balancing coexistence with human health and safety can be a cumbersome task but must be addressed when managing human-coyote conflicts.

The components to a successful coyote management plan include; community education, identifying conflicts, record keeping, interagency communication/cooperation, and steps to be taken to resolve conflicts. All of these components are covered in detail within the LCMP. The LCMP also allows for flexibility in management options, there is rarely a specific tool that will always work to resolve human-coyote conflicts. Lethal control of coyotes may be necessary at times to resolve conflicts and this may be scrutinized by the public. The LCMP identifies lethal control as a management option and it may be necessary if circumstances warrant removal.

Colorado Parks and Wildlife (CPW) supports the City of Louisville in passing and enacting the LCMP. We would like to continue our strong working relationship with the City of Louisville and if at any time city officials have questions or need assistance please contact the local CPW District Wildlife Manager.

Sincerely,



Kris Middendorf  
District Wildlife Manager- Boulder S.

Cc: AWM Larry Rogstad

# PROJECT COYOTE

F O S T E R I N G   C O E X I S T E N C E



September 11, 2014

City Of Louisville  
Department of Parks & Recreation

**Re: City of Louisville Parks & Recreation Coyote Management and Coexistence Plan**

To Whom It May Concern:

Project Coyote supports the *City of Louisville Parks & Recreation Coyote Management and Coexistence Plan* and we were pleased to provide input into this Plan. With its emphasis on proactive and ongoing community education, preventive practices and behavior modification of both people and coyotes, we believe the Plan will aid in the city's efforts to coexist peacefully with coyotes.

We look forward to continuing to work with the city – in whatever capacity – to help further coexistence and appreciation and respect for the important ecological role of coyotes in our urban and suburban communities.

Sincerely,

A handwritten signature in black ink, appearing to read "Camilla H. Fox".

Camilla H. Fox  
Founder & Executive Director





September 2, 2014

Dear Catherine,

The Town of Superior strongly supports the City of Louisville in their efforts to create a comprehensive Coyote Management and Coexistence Plan. The Town of Superior completed a similar plan in 2013, and has found the document to be an extremely beneficial resource when dealing with citizen/coyote interactions.

Should you have questions about this endorsement please feel free to contact me at 303-499-3675.

Thank You,

A handwritten signature in blue ink, appearing to read "Patrick Hammer", is written over a horizontal line.

Patrick Hammer  
Director of Parks, Recreation and Open Space