

## Coyote Resource Document

### Background Information

In 2013, central Austin residents became aware that coyotes in their neighborhood were being trapped and killed unnecessarily through the use of inhumane methods. The City of Austin currently spends \$10,000 annually on coyote management services through agreements with Travis County and the Texas AgriLife Extension Service – Wildlife Services Unit. The services include, but are not limited to, the use of leg hold traps, neck snares, shooting, chemical control and hand removal of animals.<sup>1</sup> Concerned residents looked to wildlife experts for alternatives to the trapping and killing, and a coyote working group was formed by the Austin Animal Advisory Commission to study and recommend alternative methods of coyote conflict management. Drawing on the experiences of other communities as well as the advice of the Humane Society of the United States, the working group recommends that the City of Austin implement a public education program as the city's primary coyote control policy, rather than continued trapping and killing of coyotes. Public education will target human behaviors that attract coyotes, therefore causing them to become habituated to humans, and will lessen the likelihood of human/coyote conflicts.

### Killing Does Not Solve Conflicts with Coyotes

As coyotes have expanded their range across North America, encounters with people have increased. These encounters may alarm people. As a result, some communities feel a need to remove coyotes; however, killing programs are ineffective and inhumane.

- Traps are not selective. It is difficult to ensure that a problem coyote will be removed.
- Coyotes removed from an area will quickly be replaced by others.<sup>2</sup>
- If attractants remain (e.g., pet food, garbage, etc.), new coyotes in an area can become “nuisance” coyotes.
- Research suggests that when aggressively controlled, coyotes increase their reproductive rate by breeding at an earlier age, having larger litters, and having a higher juvenile survival rate.<sup>3</sup> This allows coyote populations to bounce back, even when as many as 70% of their numbers are removed.<sup>4</sup>
- It is nearly impossible to completely eradicate coyotes from an area. Despite bounties and large-scale efforts to kill coyotes over the last 100 years, coyotes have expanded their range throughout the U.S. and Canada. One study even found that killing 75% of a coyote population every year for 50 years would still not exterminate the population.<sup>5</sup>

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<sup>1</sup> Contract No. 13-WS-01, Attachment A, Work Plan, September 1, 2012

<sup>2</sup> Gehrt, S. D. 2004a. Chicago coyotes part II. *Wildlife Control Technologies*. 11(4): 20-21, 38-39, 42.

<sup>3</sup> Knowlton, F.F. 1972. Preliminary interpretations of coyote population mechanics with some management implications. *Journal of Wildlife Management* 36:369-382

<sup>4</sup> Connolly, G. E. 1978. Predator control and coyote populations: a review of simulation models. Pages 327-345 in M. Bekoff, editor. *Coyotes: biology, behavior, and management*. The Blackburn Press, Caldwell, New Jersey, USA.

<sup>5</sup> Connolly, G.E. and W.M. Longhurst. 1975. The effects of control on coyote populations: a simulation model. *University of California Division of Agricultural Science Bulletin* 1872.

- Trapping is inhumane, costly and ineffective. The most common devices used to capture coyotes, leg hold traps and neck snares, can cause severe injuries, pain, and suffering.<sup>6</sup>
- Pets and non-target wildlife may become unintended victims of traps set for coyotes.
- Killing coyotes can cause overpopulation of coyote prey, including rodents, deer, raccoons and rabbits.<sup>7</sup>
- A ten-year study of over 300 coyotes in the greater Chicago metropolitan area revealed only two coyotes that had attacked pets. Necropsies done on these coyotes showed that they had been eating pet food, but were otherwise healthy.<sup>8</sup>

<b>Table 1. Frequency of Food Items in the Diets of Coyotes in Cook County, Illinois.*<sup>9</sup></b>	
<b>Diet Item</b>	<b>Occurrence</b>
Small rodents	42%
White-tailed deer	22%
Fruit	23%
Eastern cottontail	18%
Bird species	13%
Raccoon	8%
Grass	6%
Invertebrates	4%
Human-associated	2%
Muskrat	1%
Domestic cat	1%
Unknown	1%
* Based on the contents of 1,429 scats collected during 2000-2002. Some scats contained multiple items; therefore, the percentages exceed 100%.	

### **Public Education Does Work to Manage Coyote Conflicts**

A program combining Public Education and Hazing offers the best method for handling and preventing conflicts with coyotes, and is working already in a number of communities.<sup>10</sup>

<sup>6</sup> Fox, C.H. and C.M. Papouchis, editors. 2004. *Cull of the Wild: A Contemporary Analysis of Wildlife Trapping in the United States*. Animal Protection Institute, Sacramento, California.

<sup>7</sup> Rodent populations increase 5-6 times in abundance following coyote removal. Henke, S.E. and F.C. Bryant. 1999. Effects of coyote removal on the faunal community in western Texas. *Journal of Wildlife Management* 63: 1,066-1,081.

<sup>8</sup> Gehrt, S.D. 2004. *Urban coyote ecology and management: The Cook County, Illinois, coyote project*. Ohio State University Extension Bulletin, 929.

<sup>9</sup> Ibid.

<sup>10</sup> White, L.A. and A.C. 2012. A New Technique in Coyote Conflict management: Changing Coyote Behavior through Hazing in Denver, Colorado. *Proceedings of the 14<sup>th</sup> WDM Conference* 133-137.

## Education:

### Food Attractants:

- Most situations in which coyotes have exhibited aggressive behavior toward humans have been directly associated with coyotes that have been habituated to deliberate or unintentional human food handouts.<sup>11</sup> Residents must be educated about feeding coyotes and how this is simply wrong, no matter how well-intentioned the feeder may be.
- Remove indirect sources of food that attract coyotes – outdoor pet food, accessible garbage and compost, fruit that has fallen from trees, rodent habitat (such as neglected garages or sheds), bird seed that has fallen to the ground

### Pets:

- Coyotes will prey on free-roaming cats and will occasionally prey on unattended small dogs. Such behavior is normal coyote behavior and is not a basis for coyote removal. Residents should be made aware of the importance of keeping cats indoors and not leaving dogs outside unattended.
- Cats should be kept indoors. Supervise dogs while they are outside. Leash laws must be followed and enforced.

### Public Awareness:

- Coyote attacks on people (defined as an incident between a coyote and a person that results in a bite to the person) are very rare and average fewer than ten per year<sup>12</sup> (compared to 4.5 million attacks by domestic dogs on people each year).<sup>13</sup>
- Most coyote “attacks” have occurred when people who have been deliberately feeding coyotes have been nipped or bitten. There has only been one documented fatal attack on a human in the U.S. In 1981, a three-year-old child was killed by a coyote in Glendale, California. The family had been feeding a coyote daily in their yard. The coyote killed the child when the child was left unattended in the area where the food was usually offered.<sup>14</sup>
- Children must be instructed in how to recognize a coyote and what to do if they encounter one. Children should never run from a coyote; instead, they should stand up straight, wave their arms up in the air, and be as loud as possible while moving slowly toward the nearest adults.
- Unfounded fears about coyotes need to be dispelled, and good information provided on coyote behavior. Coyote sightings during at night and during the day are normal coyote behavior. The presence of a coyote in a yard or residential neighborhood is not cause for concern unless the coyote is displaying aggressive behavior or approaching humans.

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<sup>11</sup> Grinder, M.I. and P.R. Krausman. 1998. Coyote conflicts in Urban Areas, USDA Forest Service Proceedings RMPRS-P-5.

<sup>12</sup> Gehrt, S.D. and L. A. White. 2009. Coyote Attacks on Humans in the United States and Canada, Human Dimensions of Wildlife, 14:419-432.

<sup>13</sup> Gilchrist J., J.J. Sacks, D. White and M.J. Kresnow. 2008. Dogbites: still a problem, Injury Prevention. 14: 296-301.

<sup>14</sup> Grinder, M.I. and P.R. Krausman. 1998. Coyote conflicts in Urban Areas, USDA Forest Service Proceedings RMPRS-P-5.

- A coyote staring in a window is not necessarily a sign of aggression but may be the coyote seeing its own reflection.

### **Hazing and Behavioral Change:**

Hazing, also known as “fear conditioning,” is an inexpensive, effective and humane method of retraining coyotes to avoid human contact.

- When coyotes do not run away when approached or charged by a human, they have probably become habituated to people or lost their fear of humans. They may even approach people, looking for food handouts and may appear threatening. To safely coexist, habituated coyote behavior needs to be reshaped to encourage coyotes to avoid contact with humans and pets.
- The more often an individual animal is hazed, the more effective hazing is in changing coyote behavior.
- Hazing is an activity or series of activities conducted to reinstill the natural fear of humans back into coyotes. It includes simple actions such as yelling and arm waving, water hose dousing, using noise makers like blow horns and whistles, and throwing objects such as sticks or toy balls.
- For many coyotes, making yourself *loud* (by yelling or using homemade noisemakers and *large* (by standing tall and waving your arms) is all that is needed to scare them away.
- More aggressive methods (including banging pots and pans, throwing objects, squirting a hose, or using noisemakers like air horns) may be necessary for some coyotes. Groups of volunteers can even be recruited and taught to haze in problem areas.
- It is important to continue hazing until the coyote completely leaves the area. Employing a variety of hazing techniques is also helpful to prevent habituation.