

URBAN COYOTE SAFETY AND AWARENESS PROGRAM
City of Aurora, Colorado

PROBLEM ASSESSMENT

This program originated from an emotionally charged event in 2006, when a citizen who had lost a pet to coyotes sought assistance from City Council to help find answers to the problems created by coyotes living in our urban environment. This incident prompted the city to begin looking at solutions and make coyote safety and awareness education a priority.

Coyotes are flexible and opportunistic habitat generalists that benefit from the presence of humans in their environment. Through natural predator reduction (specifically the removal of wolves) and habitat enhancements such as linked parks and open space systems and artificially high populations of prey species such as rabbits, squirrels and mice, coyotes will always be a part of the urban ecosystem. While coyotes benefit from the presence of humans, their default behavior is to avoid them. Human behaviors such as ignoring, intentional feeding and unintentional feeding can bring coyotes to a state of tolerance, where conflict behavior toward pets and humans begins to affect the quality of life for citizens experiencing the conflict.

Coyote conflict has emotional, economic, political and scientific impacts. Urban coyote management is as much a question of human behavior as it is of coyote behavior. For this reason, a balanced approach to coyote management that considers scientific research, social attitudes and beliefs, political realities and environmental impacts is essential to reducing conflict overall.

PROGRAM IMPLEMENTATION AND COSTS

City staff searched for peer-reviewed, published articles on urban coyote management and conflict and collected best practice information from state and federal wildlife officials through interviews and research.

With input from wildlife professionals, published resources and the Denver Urban Wildlife Working Group, definitions for coyote-human interactions were created and a coyote activity monitoring program was established. In 2006, the city's Animal Care and GIS staff provided additional resources to encourage citizens to report coyotes and implemented a unique coyote sighting map using GIS to track coyote activity reports.

Staff secured a \$3,500 (\$1500 city match) predator coexistence education grant to support creating research-based coyote education and outreach materials, including improved "coyote country" signage, a coyote country flier, school-age program curriculum, a traveling event booth, a permanent nature center exhibit and an outreach program designed for use at community meetings such as town halls, civic clubs, HOAs, and Neighborhood Watch meetings. In 2008, staff made over 4,700 educational contacts regarding coyote safety and awareness.

Staff provided training on urban coyote behavior and biology for Animal Care and Neighborhood Services staff, Park Rangers, and department staff and volunteers to form a solid team of informed employees.

The city partnered with federal and academic researchers to work on a project that would improve our monitoring and public education materials and review options for reducing conflicts in Aurora and the Denver Metro Area through non-lethal control of coyotes. Aurora staff secured a \$57,000 (\$10,000 city match) grant to support the main components of the project:

- Collect and analyze coyote conflict data from 22 different entities (cities, counties, metro districts, towns, etc.) in the Aurora/Denver area, using the GIS coyote report map created by Aurora as the template for mapping conflict throughout the project area.
- Conduct a human dimensions (human attitudes and beliefs) and coyotes survey. Human dimensions information is an excellent tool for use in education and outreach materials.

- Create and administer a coyote management inventory tool. This tool (due out in the next month) will survey current management practices throughout the Aurora/Denver metro area as well as measure time, energy and relative concern over coyote conflict in the region.
- Design and implement a remote camera study of conflict “hot spot” areas.
- Initiate a coyote hazing education program and conduct coyote hazing clinics in communities.
- Create and administer a citizen science Coyote Watch program designed to engage citizens in coyote observation and activity reporting. We already have over 25 coyote watch volunteers reporting from their Aurora communities. The city of Broomfield, Colorado and Jefferson County, Colorado are interested in launching similar programs.

Other than the grant matching amounts noted, project costs have been staff time (in kind). One staff dedicates about 10% FTE to this project with an annual salary of about \$53,000. Park Ranger and Naturalist staff offer support for this project on an as needed basis.

TANGIBLE RESULTS OR MEASURABLE OUTCOMES OF THE PROGRAM

This program has allowed Aurora to create and distribute coyote safety and awareness school curriculum, community curriculum and web resources, provide improved temporary and permanent signage in high risk areas related to coyote safety and awareness, make more than 8,000 personal educational contacts related to coyote safety and awareness and over 300 coyote activity reports and a linked GIS map were created, allowing individual reports to tell a larger, visual story of coyote conflict “hot spots”.

Remote camera photos indicate human behavior changes after a hot spot is “treated” with education and outreach materials. More trail users had their dogs on leash and were prepared to haze a coyote if approached. Photos captured walkers carrying walking sticks and being more

aware of their surroundings. The remote camera photos have also allowed us to collect actionable data on trail use and trail users, which was an unexpected outcome.

The percentage of activity reports that involve conflict rather than just observations of normal coyote behavior have trended downward since this program was initiated.

Conflict analysis has provided us with tremendous tools for honing, timing and streamlining our educational messages. For example, we now know that coyote sightings start to increase in November, so we proactively increase educational messages related to coyote activity in the Fall. We also know from conflict data analysis that coyote attacks on pets increase from December to April, so we highlight coyote and pet safety through the winter.

Aurora's urban coyote education and outreach program is considered to be an exemplary program. City staff was invited to speak on our outreach program at the 2008 Colorado Parks and Wildlife Coyote Symposium, the 2011 International Urban Wildlife Management and Planning conference in Austin, Texas, and the Wildlife Society's Colorado Chapter 2012 meeting in Grand Junction, Colorado.

Our innovative approach to coyote education and outreach has been featured in articles in High Country Magazine, the Denver Post, the Aurora Sentinel and will be featured in the June issue of the United States Humane Society's *All Animals Magazine*.

LESSONS LEARNED

When it comes to community education and outreach, one size does not fit all. It is essential to have a variety of resources designed for a variety of modes of dissemination. Having a tool box of flexible and adaptable outreach options to choose from rather than one tool improves success. Activity reporting and mapping is essential to managing behavior; both

coyote and human. Partnering with the academic community is a win-win situation. We have benefitted greatly from the application of academic rigor to our data collection and reporting analysis. The academic community has benefitted greatly from our front line experience and real-world examples.

Addressing important management issues has regional and national appeal. We have been asked to do programs and outreach on coyotes and coyote management all over the Denver Metro Area and beyond. We have been asked to share our materials with other cities in the state and across the country. We provided talks on urban coyote management at all of the Front Range REI stores two years in a row. People are very interested in this topic and there is a demand for good information.

Partnering with other agencies and municipalities and within our own organization increased success. This program relies on support from Aurora police (mainly through the neighborhood watch program), public schools, our Animal Care and Code Enforcement Divisions, our state wildlife officials, Aurora Park Ranger staff and with local community organizers. Without this support group, we can't effectively share information and respond effectively to reports.