



Living with Wild Neighbors in Urban and Suburban Communities

A Guide for Local Leaders



THE HUMANE SOCIETY
OF THE UNITED STATES

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FOREWORD

Few issues facing local leaders are potentially more fractious than those involving wild animals. These issues can often dominate months and sometimes years of a political career.

Wildlife questions can make up half the incoming calls to local animal care and control agencies. Issues with Canada geese, beavers, coyotes, and deer are growing; yet as we suburbanize, the traditional reactions to conflict (poisoning, trapping, or killing) have become unpalatable to a wide cross section of constituents—and increasingly expensive.

This guide examines how typical conflicts over wildlife develop in local communities. It provides background on the issues, options for resolving conflict, and resources for more in-depth information and assistance. The how-to information here focuses on four species. But the information about the players—from resource managers to members of the public—and the processes to resolve conflicts applies to all four and to conflicts with any wild species in any community.

Working with committed political leaders for over fifty years, The HSUS has developed alliances with animal protectionists, farmers, hunters, and other stakeholders to build successful programs in communities throughout the United States and abroad. We hope this step-by-step guide will assist community leaders in evaluating problems, resolving conflicts and building better communities.



Holly Hazard
Senior Vice President, Programs & Innovations



WHY IT'S ON YOUR DESK

Calls about wildlife are common for local officials. Residents are concerned about Canada goose droppings or deer nibbling shrubbery in the park. Roads departments deal with beaver dams clogging up culverts. Reporters ask about a recent sighting of coyotes near a popular nature trail.

Many issues involving wild animals occur on or impact public property and resources. Citizens also look to local government to assist with wildlife questions and concerns in their own yards or homes. As wild animals don't recognize property boundaries, issues with wildlife are usually not limited to one yard. Therefore, these issues can best be managed at the community level.

Local agencies have varying levels of expertise in wildlife. Knowing a lot about the specific animal at issue is helpful but rarely sufficient to reach a solution. In nearly all situations in which people say they have a wildlife problem, part of the conflict is not between animals and people but between people who want many, often inconsistent, outcomes.

People expect public agencies to deal with wildlife issues. Federal and state government agencies have specific, but limited, roles in handling wildlife issues. They rarely intervene locally unless there's a significant immediate risk of harm to people—such as a cougar or bear in a schoolyard—or to a highly valued, protected animal—such as an endangered species. So, most wildlife issues fall on local agencies and local leaders.

WHY WILDLIFE ISSUES ARISE IN CITIES AND SUBURBS

In recent decades, our cities and suburbs have grown and taken over rural areas. Many wild species take advantage of conditions they find—the conditions we created.

We unwittingly created ideal habitat in our cities and suburbs for many wild species. If you could ask a Canada goose what the perfect place to live looked like, she would describe a golf course. While we think of white-tailed deer as forest dwellers, they actually prefer edge habitat—places where woods meets open areas, common in modern suburbs and along our highways.

City dwellers and suburbanites usually have limited experience with wildlife before an issue comes up. They often don't understand why a problem occurs and rarely have experience with similar conflicts. They look for an easy "silver bullet" solution which almost never exists.

A common misconception is that getting rid of the animals will get rid of the problem. The reality is that nature abhors a vacuum: Removing animals simply allows the remaining animals to reproduce more successfully and invites more in to fill the empty space. Effective solutions need to address the conditions that attract animals into conflict with us.



CANADA GOOSE CONFLICTS

Decimated by hunting and habitat loss, the giant Canada goose rebounded after wildlife managers found wild and captive flocks in the 1960s. They bred birds in captivity and relocated them throughout the United States. With clipped wings preventing flight, birds could not fly to traditional breeding grounds to nest and rear their young.

Giant geese aren't strong migrants to begin with, and captive-bred birds didn't have migrating parents to teach them. So they settled year-round in cities and suburbs where expansive lawns, parks, golf courses, and artificial ponds made perfect goose habitats.

These resident flocks expanded, and by the mid-1980s, some communities thought they had too many geese. The same state and federal agencies that had propagated Canada geese called for killing them.

Agencies' Roles in Canada Goose Management

- U.S. Fish and Wildlife Services sets a broad framework for hunting, while state wildlife agencies set specific rules.
- Hunting is the main tool agencies use to try to change the numbers of geese.
- USFWS allows some management activities for resident Canada geese, including egg addling, without the usual individual permit.



MEET THE ANIMALS

Canada Geese

“Not so long ago, the presence of Canada geese on a neighborhood pond was an unusual enough sight to draw a crowd. Today the crowds are composed of geese, not people.”

Wild Neighbors: the humane approach to living with wildlife

- Resident flocks can be traced back to wing-clipped and relocated geese, placed here by wildlife managers. They now thrive in habitat we create.
- Two factors can tie geese to their favorite spots in mid-summer: raising flightless young and molting (when worn flight feathers are replaced).



MEET THE MANAGERS

U.S. Fish and Wildlife Services (USFWS)

“As a former director of the Fish and Wildlife Service and a career biologist, I know the personal and professional commitment government scientists have to our nation’s irreplaceable wildlife.”

Jamie Rappaport Clark

- USFWS is charged with protecting nearly all bird species.
- Officials aren’t usually involved in issues and situations with common urban mammals and reptiles.



MEET THE PUBLIC

Local Public Facilities Users—park visitors, sports teams, golfers, drivers

“Every park has its beauty and its prospects ...”

Jane Austen

- Many visit local parks to enjoy nature and see wild animals.
- Others can be unwilling to share public areas with wild animals.



MEET THE PUBLIC

Animal Lovers—wildlife watchers, pet owners, non-governmental humane organizations

“Animals suffer as much as we do. True humanity does not allow us to impose such sufferings on them.”

Albert Schweitzer

- They value animals for themselves, as well as for their benefits to people.
- They reject lethal control as cruel, excessive human interference in nature, and unnecessary to resolve conflicts.



Problem

Geese graze on lawns. They also defecate where they graze, raising the ire of people who use these areas. Though research has not found any significant health threats from goose feces, people understandably want to avoid contact with any animal feces, and abundant deposits on playing fields and in high traffic areas make that difficult. Geese may also create potential traffic hazards in some areas by crossing roads and foraging near roadsides.

Solution

Communities' conflicts with geese focus not just on numbers of birds but on where they are and when. The concentration of geese in open grassy areas, particularly in mid-summer when people want to use those areas, is a hot button issue. Solutions need to address the specific conflicts and the sites on which they are occurring.

GeesePeace™, an organization dedicated to building better communities through innovative, effective, and humane solutions to wildlife conflicts, has developed an effective template that communities can adopt.

- **Curtail Reproduction**—Treat (addle) eggs so they don't hatch to reduce future population. This frees adults from tending flightless goslings so the geese can be readily convinced to leave a site. It also halts the cycle of breeding.
- **Site Aversion**—Teach geese that the site is unsafe before they molt, or lose their flight feathers, in early summer. They will be reluctant to remain in an area that is unsafe when they cannot fly.
- **Habitat Modification**—Reduce food, reduce preferred nesting and brood-rearing areas, and increase the sense of danger so the site is less attractive to geese.

Effective solutions to goose conflicts get synergy from combining two or three key components—especially curtailing reproduction and site aversion. So, curtailing reproduction is almost always the most important first step. It has been used successfully for more than a decade in many communities.

Geese favor places with plenty of open grass and water for raising young. These sites can be the source of conflicts throughout the summer while parents stay close to flightless goslings. The actual nests, however, may be some distance from these nurseries. To addle, volunteers and staff must find the nests—either on your site or on your neighbors' property. In many communities, this means getting neighbors into the program.

Each site doesn't have to solve the conflict alone. Community wide programs have a number of advantages:

- Reduces hatching wherever geese nest—benefiting sites where geese nest and sites where geese spend other parts of the year.
- Adding volunteers can be recruited from throughout the community and deployed where needed.
- Resources, like trained border collies, can be shared across properties.

Canada geese in Olney, Maryland

A property manager convinced the Environ Homeowners Association board to round up and kill Canada geese in a suburban condominium community—and to keep the decision to themselves so the geese would be killed before residents knew or could object.

But residents learned about the plan at the eleventh hour and many objected strongly. The manager and board stonewalled. The property manager, aware a petition against killing was circulating, got the trapper out before business hours while the petition was sitting on her office fax.

One hundred geese were gassed to death in front of residents and video cameras. Footage played on the evening news and the story ran in major papers. The decision makers believed the end of the geese would be the end of their problems.

Goose lovers were doubly incensed and other residents were angry about the secretiveness. Half the board lost seats at the next election, and the new board replaced the property manager. Hard feelings lingered, staining many other areas of the community's life, and the community's public image suffered.

Canada geese at Lake Barcroft, Virginia

The homeowners' association of this lake community considered rounding up and killing Canada geese. When some residents insisted there had to be a better way, the board agreed to suspend the round-up plan to allow a committee to investigate alternatives.

The committee formed an action team, naming themselves GeesePeace. They built momentum and support within the community by targeting small, finite, achievable objectives. They also avoided putting all their (goose) eggs in one basket and didn't rely on any one product or technique that, if it failed, would doom the entire effort. Different techniques were combined to craft solutions for specific elements of the larger goose conflict. At Lake Barcroft, annual addling is followed by harassment from border collies. After several years, the dogs became unnecessary: The geese have learned to leave in May after they fail to produce young. The summers are goose-nuisance free.

Now successful for more than a decade at Lake Barcroft, GeesePeace showed that humane treatment of wildlife is a source of community strength, spirit, and positive action with benefits reaching far beyond solving a wildlife conflict. In GeesePeace's experience, the differences between successful, harmonious communities and those in conflict are leadership and commitment to action.



COMMON LESSONS

Lake Barcroft and Environ faced similar dilemmas. One ended with a win-win situation for the human and avian residents, and one did not. The big difference was the decision-making process. As with most things in life, how you go about making decisions about wildlife issues is at least as important as what decision you reach.

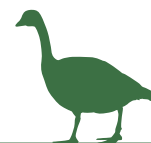
Local leaders can avoid or defuse conflict with an open and transparent process. Such an approach offers several benefits (adapted from the Institute for Local Government):

- Better identify the public's values, ideas, and recommendations.
- Better inform residents about issues and local agencies.
- Better decisions and better actions, with better impacts and outcomes.
- Enhance community buy-in and support; less contentiousness.
- Faster implementation with less need to revisit decisions.
- More trust—in each other and in local government.
- More community participation and leadership development.

To achieve these benefits, decision-making should truly engage the public. Among recognized best practices, a few are keys in resolving wildlife conflicts:

- **Transparency**—the process is clear to all.
- **Authentic intent**—the process generates public views and ideas to help shape local action or policy, not to persuade residents to accept a decision that has already been made.
- **Broad participation**—inclusion of a wide range of people and viewpoints ensures that all concerns are taken into consideration.
- **Authentic use of information received**—public contributions are seriously considered by decision makers.

The Environ HOA's decision-making was opaque, limited to views that agreed with favored outcome, and deaf to discordant views to the point of dodging a properly submitted petition. In contrast, Lake Barcroft's process was transparent, inclusive, and used residents' input to create a new programmatic approach now being replicated in numerous communities elsewhere.



DEER CONFLICTS

Deer—white-tailed, black-tailed, and mule deer—are the most recognized wild animal in North America and the largest wild animal most people encounter. But not long ago, deer were hunted so intensively they had almost disappeared from many places. Like Canada geese, wildlife managers actively restored populations and managed herds with the aim of having more deer.

And like Canada geese, deer thrive in our densest communities. Deer are icons of the wild forest, but in fact the edges where woods and open areas meet can support more deer than the same size area covered by trees. They find shelter in the woods and food in the open areas.



MEET THE ANIMALS

White-tailed Deer

“Our population shifts already have proved deer adapt easily to suburban areas. ... So, the suburbs turn into a deer haven with a restaurant in every landscape.”

Ward Upham, Kansas State University Cooperative Extension

- Deer thrive in the ideal urban/suburban edge habitat that we’ve created.
- Deer cross roads to reach needed resources, moving more at dawn and dusk and during the fall rut (mating season).
- Bike trails, railways, conservation set-asides, and utility right-of-ways serve as deer highways through suburbia.
- Deer are drawn to the salt that collects along the edges of highways treated during snowstorms.



MEET THE MANAGERS

State Wildlife Agencies or Departments of Natural Resources (DNR)

“State wildlife agencies face tremendous challenges attempting to conserve declining wildlife and dwindling habitats, while meeting skyrocketing wildlife conservation education and recreation demands—all on a shoestring budget.”

David Waller, former director Georgia DNR Wildlife Resource Division

- These agencies regulate hunting, fishing, and trapping (consumptive uses), making license fees the main revenue source and consumptive users a major constituency, even while their numbers are small and declining.
- They enforce state wildlife laws against poaching.



MEET THE PUBLIC

Private Property Owners—homeowners, gardeners, HOAs, others

It is utterly forbidden to be half-hearted about gardening. You have got to love your garden whether you like it or not.”

W.C. Sellar & R.J. Yeatman, authors of Garden Rubbish

- Some are concerned about wild animals damaging their properties.
- Some provide attractive habitat and food because they want wild animals to share their properties.



MEET THE PUBLIC

Conservationists—birders, local land conservation groups, environmentalists

“Humankind has not woven the web of life. We are but one thread within it. Whatever we do to the web, we do to ourselves. All things are bound together. All things connect.”

Attributed to Si’adl (Seattle) Dkhw’Duw’Absh chief

- Some actively engage with nature (hiking, watching wildlife); many value nature for its general benefits to society.
- Some place different values on different wildlife species, and some value plant communities or ecosystems as highly as or more highly than they value some wildlife species.



Problem

Common broad-leaved plants in our lawns and flowers and shrubs in our landscaped beds are succulent treats to deer. Some people are thrilled to see a doe and fawn on their lawn, while others don't want their landscaping browsed. Public parks can face this same dichotomy: Where deer browse heavily, local park managers, conservationists, and birders worry about young trees and understory plants, and the animals that use those plants.

Solution

For gardens in deer country, plants that deer find unpalatable may provide a perfect solution in many cases. For others, repellents (that make plants unpalatable) may be all that's needed. For heavy browsing, fencing keeps deer away from plants.

Problem

Aside from the risk deer pose to our plantings, deer can be a safety hazard as they cross roadways to find mates or to reach food, water, or safe cover. They are also drawn to artificial roadside "salt licks" created when transportation departments treat streets in winter. Car-deer interaction can cause serious damage to both parties.

Solution

The right fencing is the ultimate solution for deer conflicts. Fencing can keep deer off the most hazardous stretches of road and funnel their movement to wildlife crossing structures or less hazardous crossing locations. Also, shifting away from using salt to melt snow and ice eliminates this attractant at the edge of our roads. But the most readily available ways to prevent deer-vehicle crashes are not in the road but behind the wheel—driver education, alertness, and controlling speed. These are especially important during fall and early winter when deer are mating and at dawn and dusk when deer are most active.

Whether communities are concerned about traffic safety, heavy browse damage, or both of these problems, immunocontraception is emerging as the humane option when a community decides that it must have fewer deer. This method of birth control uses the body's immune response to prevent pregnancy. Right now, one immunocontraceptive product (GonaCon™) is registered with the U.S. Environmental Protection Agency for use by federal and state wildlife management agencies. Another product (porcine zona pellucida or PZP) is presently being used on deer experimentally and will likely be registered in the near future. PZP has stabilized or reduced deer population size to recommended management levels at three study locations.

Problem

Deer are one host of the ticks that spread Lyme disease. But removing deer doesn't get rid of the ticks—the parasites simply latch on to the remaining deer. Nor are deer the only home for the ticks; mice and other small animals are equally significant harbors of pre-adult ticks. Changes in *their* numbers are more important than deer numbers in terms of how many people contract Lyme disease.

Solution

The way to reduce rates of Lyme disease is to reduce the number of ticks—and thus the number of ticks carrying the disease—and keep ticks and people apart.

- Change landscaping to make it less hospitable to ticks and their hosts (especially mice) by keeping vegetation low and removing debris piles.
- Encourage people to use anti-tick measures such as appropriate clothes and repellents when they're outdoors and to check for ticks after they come inside.
- Exterminate ticks on mice and deer with pesticides like those used on pets delivered through innovative devices. By using the 4-Poster Deer Treatment Bait Station to do this, *deer* can actually help *reduce* the incidence of Lyme disease in a community.

TRUE STORIES

Deer in Solon, Ohio

Solon, an affluent suburb of Cleveland, was named for an ancient Athenian known as the father of democracy. But recently Solon has become better known as a conspicuous example of a community fractured by controversy over deer management.

In 2005, the city of Solon hired a private company to shoot deer. This was not deer hunting. With the cooperation of some citizens, shooters put out attractive bait in residential yards so naïve deer could be easily shot.

Residents asked the city to listen to their input on deer management decisions and consider alternatives to killing. Some residents raised safety concerns. Others pointed out that when deer numbers go down reproduction goes up, so herd size rebounds quickly. The City Council decided to go ahead with the killing despite resistance from a growing number of concerned citizens.

The outcome was neighbor pitted against neighbor and residents at odds with city officials—and controversy continually played out in the press. There were legal challenges to the city's actions. Citizens formed a coalition to oppose both the deer killing and the re-election of City Council members who supported it.

Some homeowners put out bagfuls of corn to direct deer away from backyards where shooters waited. Others tearfully requested that the shooter spare individual beloved deer. One woman reported that she had to seek medical treatment for emotional trauma. Another said her kids couldn't sleep at night because they were so upset. Meanwhile, the city considered a proposal to make it illegal to feed deer rather than addressing residents' concerns.

From 2005 to 2009 the city paid over \$800,000 to kill 1,300 deer—about \$400 per deer. The killing only stopped when the city, faced with a tight budget, decided it was too expensive. Deer numbers rebounded. The program had accomplished nothing.

Despite the failure of killing to resolve deer conflicts, an internally prepared plan to resume killing was approved by the City Council in 2011. In addition to shooting baited deer, however, city employees and residents would be allowed to hunt the animals with cross bows, and deer would be trapped in nets and killed. Given that bow hunting and trap-and-kill are less efficient than sharpshooting, not to mention less humane, it is highly likely that the new plan will yield even less satisfactory results than the previous one and the overall "deer problem" will continue.

Meanwhile, resident Lane Ferrante organized a successful petition drive to put an anti-lethal control question on the ballot. Although the measure did not pass, 38 percent of the voters supported it. John Nolan, spokesman for local residents advocating humane management, believes the city should have taken input from "non-lethal proponents – a significant segment of the population that needs to be addressed." In a town named for the father of democracy, it shouldn't be so hard for the people's voices to be heard on this issue.



TRUE STORIES

Deer on Fripp Island, South Carolina

In 2001, the developing coastal resort of Fripp Island had all the usual concerns about white-tailed deer eating garden plants, walking on the roads, and being hit by cars.

The Fripp Island Property Owners Association (FIPOA) formed a committee which did a study, reported results, and surveyed residents. They proposed three options: 1) do nothing, 2) shoot deer, or 3) immunize deer with contraceptives.

For a while the association did nothing. The prospect of shooting deer was distasteful to many residents, and all of them recognized shooting would only reduce numbers temporarily, since fewer deer sharing the food leads to more births of multiple fawns. FIPOA concluded shooting would be more expensive and less effective than contraception.

In 2005, FIPOA invited The HSUS and Tufts University Cummings School of Veterinary Medicine to carry out a study of the PZP contraceptive vaccine on area deer. PZP had been used on deer before, as well as on wild horses, elephants, and a host of species in zoos, with a good track record of safety and effectiveness.

There was a problem, though. PZP had to be given twice in the initial year, and every year thereafter. This is fine for zoos, but free-roaming deer and wild horses don't always show up for their annual injections. A single-shot vaccine that would last for several years was needed.

Working under a research permit granted by the South Carolina Department of Natural Resources, the research team contracepted 243 female deer on Fripp Island between 2005 and 2010. They used several different PZP vaccine test preparations, including "timed-release" pellets, looking for the best multi-year, single-shot option. These pellets were successfully produced and demonstrated.

Notwithstanding a few glitches, the PZP treatments worked. As of 2010, the number of fawns born dropped by over 80 percent, while the general population had decreased by about half. Residents on the island are pleased, remarking to researchers that they see fewer deer and the deer they see look healthier. With the data collected at Fripp and elsewhere, the research team will ask the U.S. Environmental Protection Agency to formally register PZP as a deer contraceptive so it will be available to other communities.



COMMON LESSONS

In the early 2000s, some Fripp Island and Solon residents were concerned about deer, some didn't think deer were a problem, and some didn't think about deer at all. Wildlife issues tend to move through common stages, but different members of the community will be at different stages as the issue evolves (adapted from The Northeast Wildlife Damage Management Research and Outreach Cooperative):

- **Concern**—some individuals or groups see undesirable impact from wildlife.
- **Involvement**—some concerned people contact decision makers. Different stakeholders often see things very differently at this stage. Concerned people may see “too many animals” while others think those people are intolerant or unwilling to adapt.
- **Issue**—general agreement can form about the primary impacts. Agreement about the existence and nature of a problem is essential to progress towards resolution.
- **Alternatives**—people suggest different actions to address the issue.
- **Consequences**—likely outcomes of adopting different alternative actions are evaluated from different perspectives.
- **Choice**—ideally stakeholders themselves resolve differences and choose acceptable actions.
- **Implementation**—chosen actions are taken.
- **Evaluation**—impacts of actions are assessed. If not done formally, people will still judge the actions taken.

The process is rarely perfectly linear, but fitting an issue into this framework can help determine what kind of responses can be helpful and appropriate. For example, examining alternatives suggested by a limited circle before there is broad agreement on the issue is a common point of serious conflict. And even when there is general agreement on the issue, agreement on actions will rarely follow automatically.

Solon floundered where there was lack of general agreement about a “deer problem” and the city bulldozed ahead without seriously considering alternatives to their pre-selected action. Solon seems entrenched in excluding stakeholders even after years of controversy. Its new deer management plan was produced by city staff headed by the strongest proponent for lethal control.

FIPOA, on the other hand, used a deliberate process to engage a range of stakeholders in their community and reach a decision. As with many communities, they formed a committee and asked residents for their input. Involving stakeholders in the decision process can significantly reduce conflict. But effective stakeholder engagement is not one-size-fits-all. FIPOA's committee and survey are examples of just two of many possible techniques to involve stakeholders.



Start by thinking about the steps to guide the stakeholder engagement process (adapted from The Northeast Wildlife Damage Management Research and Outreach Cooperative):

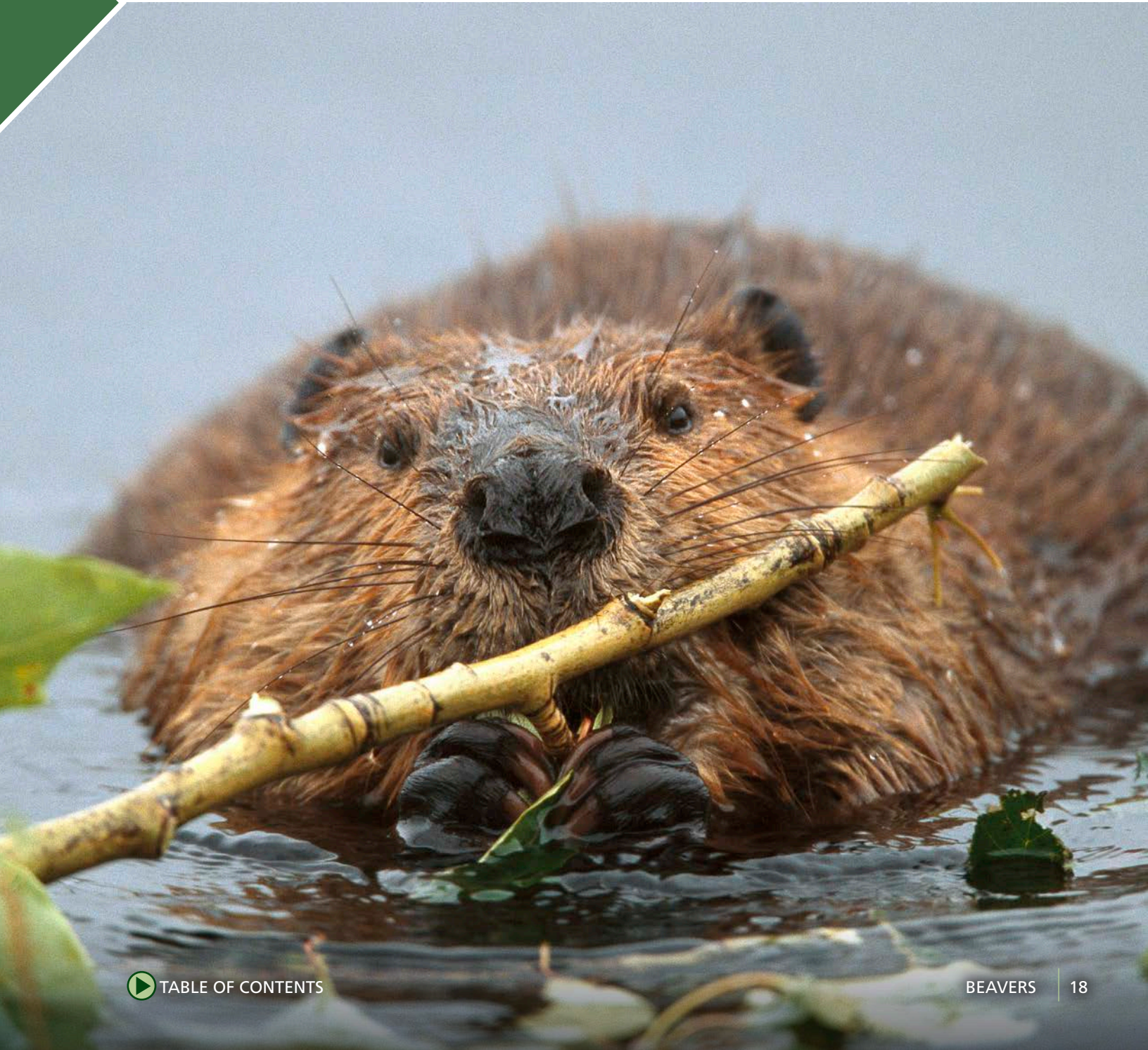
- **Understand the situation**—fit the issue into the framework (above) and review what the community already knows and is already doing.
- **Identify stakeholders**—include individuals and groups who 1) are interested, 2) are affected, and/or 3) can influence management. Don't exclude stakeholders who disagree.
- **Set clear objectives**—with stakeholders, determine what role they will play and what concrete objectives stakeholder engagement will reach. Stakeholder engagement should be more than a feel-good exercise.
- **Select an approach**—approaches differ in how much control stakeholders will exercise and what decision makers want the process to achieve. Placing more control in stakeholders' hands also places more responsibility there—responsibility for selecting actions that work for all in the community and for helping implement those actions.

- **Design strategies**—strategies tailored to reach the identified objectives nearly always require combinations of techniques.
- **Implement strategies**—what techniques are used can sometimes be less important than how they are used. Keep an open mind, take a broad perspective, and focus on solving problems rather than just walking through the process.
- **Evaluate**—in the end, were the objectives reached? If they were, how can they be improved? If they were not, how can they be met?



BEAVER CONFLICTS

Once driven to the brink of extinction by the fur trade, beavers are making a comeback. Yet since people now claim the many streams and ponds beavers once occupied, humans and beavers come into conflict. Conflicts focus on damage to trees and flooding, both of which can be prevented by means other than trapping. Trapping simply leaves habitat open for more animals. One study in New England and New York looked at 69 sites where people tried to fix beaver problems by trapping. Nearly 80 percent had new beaver colonies within 1 to 2 years. Protecting vulnerable resources instead of trapping resolves problems with beavers.



MEET THE ANIMALS

Beavers

“Beavers are not just a natural part of the riparian landscape, they are the architects of the system.”

B.A. Schulte and D. Muller-Schwarze

- Returning to their historic range after people nearly wiped them out, beavers create wetlands, providing significant ecological benefits including maintaining a healthy water table.
- They cut trees and branches for dam-building material and for food, eating the inner bark layer in addition to leaves, shoots, and aquatic plants.



MEET THE MANAGERS

U.S. Department of Agriculture’s Wildlife Services (USDA WS)

“Federal trappers like to think they’re good at what they do and most of the time they are—but only when it comes to killing. When it comes to conserving ... that’s where the agency is woefully, willfully sloppy.”

Carter Niemeyer, retired Wildlife Services employee

- Farmers and property owners hire USDA’s Wildlife Services to deal with damage caused by wild animals—often by lethal methods.
- Historically a major force in eliminating wolf and grizzly bear populations in the continental United States, USDA’s Wildlife Services now kills millions of animals annually.
- The Wildlife Services program is usually funded by a combination of federal tax dollars and fees paid by farmers and property owners.



MEET THE PUBLIC

Consumptive Users—hunters, trappers, anglers

“Hunters can...rake very large bags..., but a true sportsman... will not commit such needless butcheries.”

Theodore Roosevelt

- Believing animals exist for people to use, some feel consumptive activities are more legitimate than non-consumptive
- They believe consumptive activities help wildlife and local communities.



Problem

Beaver-cut trees aren't pretty, and it can be especially irksome if beavers destroy highly valued ornamental trees.

Solution

Protect individual trees with wire mesh guards or a paint-and-sand mixture. Protect stands of trees with short fences.

Problem

Sometimes beaver dams raise the water level enough to inundate nearby property. Culverts that carry water under roads, rail lines, and similar structures are especially attractive to beavers—and especially sensitive to flooding damage. Sanitary sewer lines are often laid alongside streams and in floodplains. High water levels caused by beaver dams blocking culverts can undermine roadbeds, bridge piers, and similar structures leading to serious damage and can swamp sewer lines.

Solution

Prevent blocked culverts and flooding from beaver dams by installing water flow devices.

- **Culvert Protection**—keeps beavers far enough away from culvert opening that they are no longer prompted to plug it up.
- **Flow Control**—controls water flow through beaver dam so people, rather than beavers, decide the maximum water level behind the dam.

Water flow devices work well, and communities that use them report they are satisfied with this solution. The up-front costs of water flow devices may be a concern, but investing in these long-term solutions, and doing just a little bit of maintenance, ends up saving money in the long run. The devices also have long, useful lives.

With modest maintenance a community should expect a well-built, properly installed device to prevent beaver problems for a decade or longer.

By comparison, without devices, road workers can spend significant time physically removing beaver dams and debris from culverts. Plus, damage from flooding has to be repaired. The Virginia Department of Transportation (VDOT) spent over \$300,000 per year on just 14 problem sites, or more than \$20,000 per year per site. Between June 2004 and November 2005, the state installed water flow devices at the same sites at a cost of just over \$3,000 per site. VDOT saved \$250,000 in the devices' first year of use and then spent \$20 per year thereafter, on average, to maintain them.

TRUE STORIES

Beavers in Newtown, Connecticut

Beavers have been around Newtown on and off for the last couple of decades. The town tried various means over the years to control road flooding after heavy rains where beaver dams blocked pond outlets and road culverts.

Early on, beavers were trapped and relocated but, of course, soon there were new beavers. In the years since, the town and private property owners spent considerable time and money breaking up beaver dams and clearing out blocked culverts. Newtown Forest Association spent more than \$4,000 to keep culverts clear during just one summer. Homeowner Bridget Seaman told the local Newtown Bee paper that husband Jim Walker broke up as many as seven or eight dams on their property consistently. And by consistently, Ms. Seaman said, “I’m talking every day.”

The town’s public works staff repeatedly cleared culverts at six sites. The public works director even recounted how he spent \$2,500 on explosives and materials to blow up beaver dams. While debris could be seen in nearby trees, the beavers rebuilt their dams overnight.

Throughout these efforts, the town encouraged trappers to trap and kill beavers. This so-called “free” fix to beaver problems is clearly anything but, since it doesn’t count the considerable ongoing cost to remove dams and clear culverts. And with attractive habitat and an established local population, there will always be more beavers moving in to build dams and block culverts.

In 2010, the town installed three water flow control devices—two in adjacent culverts at the most problematic site. Things seemed to be on track to a better long-term solution for flooding problems. But a few months later, public works staff repairing the two adjacent culverts changed site conditions, damaged fencing installed to keep beavers away from the culverts, and unknowingly damaged one of the flow devices. Suddenly, beaver problems returned. The devices were blamed, even though their ability to function was impaired by the culvert repairs.

The problems with the devices could have been fixed. Instead, the town seemed to just throw up their hands and returned to the treadmill of trapping, dam removal, and culvert clearing. They can say that “something is being done,” but they are not addressing the problem at its source nor ending complaints.



TRUE STORIES

Beavers in Alhambra Creek, Martinez, California

Residents of Martinez remember that they live in the hometown of conservationist John Muir. When beavers settled in Alhambra Creek right in the middle of town, Martinez ultimately found an opportunity to keep Muir's spirit alive by coexisting with these returning wild residents, although this new relationship started out a little shaky.

Alhambra Creek is prone to flooding, and Martinez spent millions of dollars on flood control. When beavers arrived and started building a dam, the city and creek-side property owners feared more flooding. The city initially proposed killing the beavers, then considered relocating them, an option that seems kinder but has dubious benefits for city and beavers. Relocated beavers would likely be replaced by new beavers in a short time. While relocated beavers sometimes survive, some do not, and all face difficulties finding what they need to live in an unfamiliar place.

Local reporter Richard Parks swore the beaver issue was the most hot-button topic he covered all year. Some local beaver supporters formed "Worth a Dam" to oppose relocation. The city council listened to the significant public opposition to removing the beavers from town and asked a committee of two council members and representatives of local stakeholders to explore and report on other options.

One of their first, and ultimately most useful, actions was to get expert advice. An expert from Beaver Deceivers, a beaver management company in New England, where beavers returned to the environment decades earlier, was consulted and installed a flow control device. When the committee researched and presented the issues and options for their urban beavers to the city council, the success of the flow control device gave credence to their coexistence recommendations.

Meanwhile, the beavers became local celebrities, visited by locals and out-of-towners, featured on their own line of souvenirs and website, and center of an annual festival. The beavers' dams created small ponds which support other wildlife that hadn't been seen in Martinez perhaps since Muir's time.



COMMON LESSONS

It's human nature for people to ask, "What's in it for me?" When we resolve conflicts with wild animals, we have opportunities to help animals that can also be opportunities to help ourselves. Doing right by beavers, and by other wild animals in our communities, pays us extremely valuable secondary dividends.

Solving beaver problems with water flow devices and tree wrapping allows beavers to create significant ecological benefits. Ecosystems with beavers have better water quality, habitat that supports more biological diversity, higher water tables, and less soil erosion, among other benefits.

Long-term solutions usually end up being less expensive than repeating cycles of stop-gap measures. Water flow devices and tree wrapping are also more humane. It works out this way for conflicts with other species as well. Long-term solutions are usually both cheaper for us and more humane.



COYOTE CONFLICTS

Coyotes have been hunted, trapped, poisoned, and persecuted ever since the early days of western settlement. Today, the old struggle between livestock producers and coyotes has been transposed onto the suburban/urban stage, as coyote sightings raise alarm and unfounded fears—and lead to misguided programs to ‘control’ or kill these animals. But trying to eliminate coyotes isn’t the answer.

Killing is ineffective and costly. Being highly intelligent, coyotes are difficult to catch. Nor will killing reduce coyote populations: When killed in large numbers, coyotes increase their reproductive rate and quickly bounce back. Despite bounties and large-scale killing over the last century, coyotes have quadrupled their range.

Trapping is inhumane. Traps and snares cause severe injuries, pain, and suffering to coyotes as well as to pets and non-target wild animals who are unintentional victims. Despite the appearance of official sanction from state wildlife agencies, who collect license fees from trappers, trapping is a business—not a public service. Trappers are in business to sell their service—trapping.



MEET THE ANIMALS

Coyotes

“Even long ago, ... Coyote was always in trouble.”

Ndee (Apache) story

- Coyotes spread throughout North America after people removed wolves.
- Omnivores like their fox cousins, coyotes eat primarily small mammals (rodents and rabbits) and fruit.



MEET THE MANAGERS

Local Public Managers—parks directors, golf course supervisors, natural resource managers, roads and highways supervisors, public works directors

“All of the public should be able to enjoy safe, clean and healthy parks.”

Les Chang, director Honolulu Parks and Recreation

- They serve constituents who make many, sometimes incompatible, demands on public facilities and lands.
- Though frequently in charge of developing and implementing programs to resolve human-wildlife conflicts, few have wildlife-related education or experience.



MEET THE PUBLIC

Other Members of the Public

“The most important political office is that of the private citizen.”

Louis Brandeis, US Supreme Court Justice

- They can be drawn into conflicts over wild animals, sometimes bringing unrelated axes to grind.
- They expect decisions to be made openly and fairly, regardless of their views on animals.



Problem

While coyotes generally avoid humans, coyotes who have become too comfortable around people (habituated) may not run when approached. This generally happens when a coyote has found a free buffet in the form of pet food or unsecured garbage in suburban yards. A coyote who finds food in one yard may learn to search for food in others. And coyotes who come to expect this food may begin to approach people and act “too tame” or even appear aggressive.

Solution

First, educate people on removing the free buffet. Clean up leftover pet food, fallen fruit, bird seed, and open compost piles; secure garbage cans; keep cats indoors and supervise dogs when outside.

Then, add education for coyotes—hazing. Hazing can re-instill habituated coyotes’

natural fear of humans. Hazing is often as simple as being *loud* (by yelling or using homemade noisemakers) and *large* (by standing tall and waving arms). It can be scaled up to throwing small objects towards (not at) the coyote and spraying with hose, water guns, spray bottles, or pepper spray.

Problem

Coyotes are secretive animals who can live near homes for a long time without ever being noticed. Such coyotes are “abiding by the rules” and should be left alone. However, in the spring, when coyotes give birth and begin to raise young, they stay near their dens. The parents may become highly defensive and challenge any other coyote or dog that comes close to the pups. Even people walking their dogs may be challenged.

Solution

It’s important to recognize this for what it is—parents defending space and young, not random attacks. Enforcing leash laws in open spaces and natural areas will keep coyotes, dogs, and humans safe.

TRUE STORIES

Coyotes in Wheaton, Illinois

In February 2010, coyote attacks on several dogs in Wheaton spurred a heated debate. No people were ever bitten by a coyote in Wheaton, or anywhere in the entire Chicago metropolitan region, where coyotes are plentiful. But some residents worried their children were not safe and demanded the city “do something” about coyotes. And that “something” was just to repeat the past when coyotes, perceived as “nuisances” or “potentially dangerous,” were trapped and killed. Other residents and one city councilman asserted that non-lethal methods—education and hazing—were more humane and more effective, especially over the long term.

Despite objections raised at several heated city council meetings, the city hired a trapper. Over the next several months, the trapper killed five coyotes. All the while, residents who wanted a humane solution continued to voice their intense opposition.

In the end, a few residents were appeased but many others resented their community leaders. And the city had done nothing to address the root causes of coyote conflicts. So, not surprisingly, within just a few months of the killings, calls from residents concerned about coyote sightings were on the increase again.

By the end of 2010, Wheaton decided to follow in the footsteps of cities with successful programs and began to develop a comprehensive coyote management program. Plans for their new program focus on teaching residents about coyotes, finding and removing coyote attractants, and hazing troublesome coyotes so they re-learn to be wary of people and property—very much like a successful program in Denver. So, a brighter future may be coming for people and wildlife in Wheaton.



TRUE STORIES

Coyotes in Denver, Colorado

In early 2009, Denver residents had some fairly serious concerns about coyotes. People reported seeing coyotes more frequently than before, pet dogs and cats were attacked, and a woman was bitten by a coyote while walking her dog. The situation was most intense in Bible Park, where members of one coyote family attacked dogs and “stalked” joggers on the trail.

Denver officials could have started down the commonly traveled, unending road of trapping and killing coyotes. Instead, they blazed a better path with a comprehensive non-lethal program that did two things:

- Tackled the root causes of human-coyote conflicts.
- Re-educated the minority of coyotes who were too comfortable around people (habituated coyotes).

The city set up a coyote hotline to listen to concerns and went out to neighborhoods to teach residents about coyotes and how not to attract them. Residents in coyote hotspots got more in-depth education on how to co-exist in coyote country: how to remove coyote attractants, how to protect their pets, and how to haze habituated coyotes and re-instill a healthy wariness of people and their property. Park staff were also taught hazing techniques.

By including residents in coyote management, Denver managers gained the assistance and support of the community. Residents who took the city’s coyote hazing training reported in a recent survey that they:

- Had more positive opinions of coyotes.
- Changed their behavior to prevent coyote conflicts.
- Felt confident that they could haze a coyote if they encounter one.

Denver has greatly reduced human-coyote conflicts. Hazing by park staff changed the behavior of bold and habituated coyotes, including the family in Bible Park who no longer attack dogs or worry joggers. No one in Denver has been bitten by a coyote since the coyote program was started. Ashley DeLaup, wildlife ecologist for the city and county of Denver parks and recreation reports, “Living with urban coyotes is a new reality in urban areas throughout the country and if we approach the concerns in a proactive manner and involve the residents in understanding and defining this new relationship, we’ll be able to reduce human/coyote/pet conflicts down the road.”

Denver’s coyote management program is now a model for surrounding communities. Aurora, Centennial, and Broomfield all adopted similar programs and report similar success reducing coyote conflicts.



COMMON LESSONS

Denver and Wheaton faced similar dilemmas. One community moved quickly to a win-win solution. The other is getting there but only after painful controversy. The difference was that Denver started right out looking for options that would not only be effective in the long term, but acceptable to their residents and feasible to implement. Wheaton leaders erred by buying a common “silver bullet” solution that proved to be anything but.

Communities can avoid the “looking-for-a-silver-bullet” mistake by starting with the best wildlife management principles before acting. Actions to resolve wildlife conflicts, with coyotes or with any wild animal, should be:

1. **Justified**—need to act is clear. Action is only taken when (and if) a significant problem really exists, not just to soothe alarmed constituents. Coyotes going about their business in natural areas, not bothering anyone, aren't a significant problem. Coyotes spending time in backyards and approaching people and pets could be symptoms of a problem.
2. **Achievable**—benefits are realistic. Action is realistically expected to resolve the problem long term. Expecting that people will never see another goose dropping in a grassy park, for example, is not realistic.
3. **Effective**—methods achieve benefits. Action actually resolves the problem. It's easy to fall into the trap of thinking that if something didn't work as hoped, we must not have tried hard enough or that the fault lies elsewhere. When people kill beavers and still have beaver problems, they may think they just need to kill more beavers. And the cycle of killing continues without re-examination.
4. **Specific**—approach is targeted. Action addresses the identified problem specifically. If the problem is one coyote approaching people and pets, killing random coyotes who happen to get in a trap does not address the conflict. Instead, communities can educate (aversively condition) the bold coyotes. Conditioned coyotes will teach their young to avoid people, too. If the problem is that off-leash dogs are getting into fights with coyote parents during pup season, keep the dogs leashed.
5. **Humane**—methods are morally grounded. Action is humane to avoid unnecessary suffering. Treating animals humanely will prevent conflict between (human) residents over animal welfare. It is not humane to kill wild animals merely because they are perceived to be a nuisance.
6. **Evaluated**—consequences are examined. Action is followed by examining how well it did or didn't work. The criteria for success are defined before action. If action is taken because of deer-vehicle collisions on busy roads, evaluate how often deer and vehicles collide on those roads—not how often deer are sighted in yards or how many deer live in the community. To evaluate whether your “after” picture is an improvement, you need a “before” picture of the same thing.
7. **Followed-up**—benefits are maintained. Action is on-going, although less frequent and/or intense. Part of the no-silver-bullet reality is that dealing with wildlife is rarely a once-and-done project. Young coyotes looking for homes of their own may wander into a community and need education. Old resident coyotes may need a refresher course.

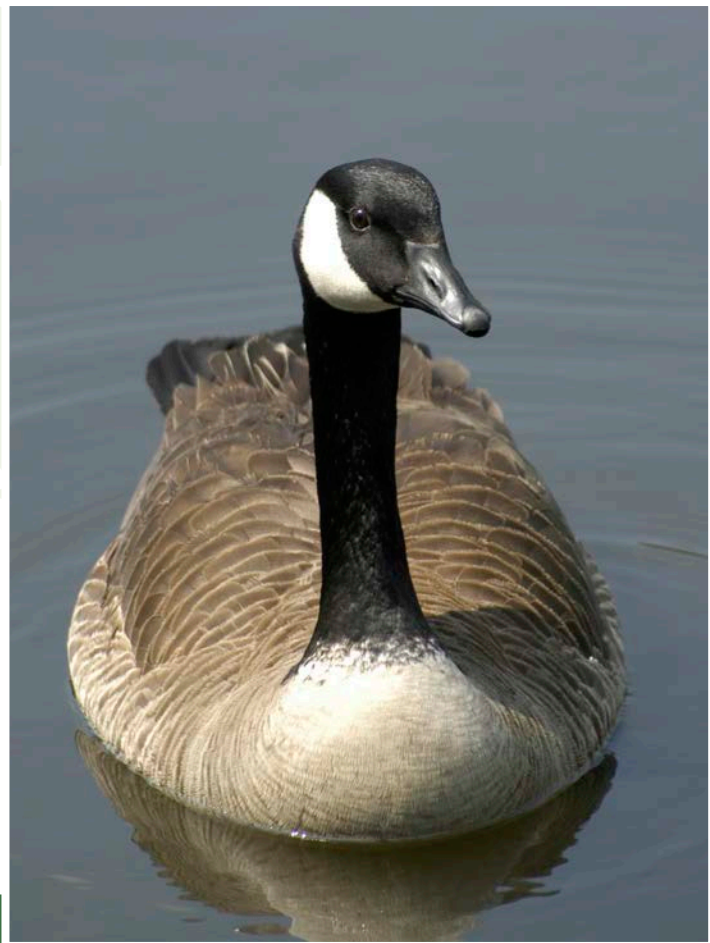
FINAL THOUGHTS

Local leaders face difficult choices when confronted by conflicts over wildlife. It may be a cliché, but when these conflicts arise, they are both problems and opportunities.

Some of the stories in this guide illustrate how local communities can stumble into common pitfalls when faced with decisions about wildlife issues. In contrast, the stories of successful resolutions show how communities used processes described in this guide. Those communities:

- Used transparent decision-making process.
- Included broad range of stakeholders' views.
- Used stakeholder input to shape decision.
- Did not allow outcome to be pre-selected by insiders.
- Understood that there's no silver-bullet solution.
- Pursued long-term solution even when that meant discarding familiar approaches.

This guide focuses on four species that are common flashpoints for community conflicts, but the lessons gleaned apply to any species in any community. Whatever animal issue your community confronts—from armadillos in Texas gardens to yellow-bellied marmots in California parks—embracing the opportunities wild animals offer your community can make it a great place for both people and wildlife.



ONLINE RESOURCES

Canada geese

- Geese : The Humane Society of the United States
- Details on how to implement humane Canada goose management are available in The HSUS' guide, *Canada Geese: Living with our Wild Neighbors in Urban and Suburban Communities*.
- Visit the GeesePeace website at geesepeace.com

Deer

- Deer : The Humane Society of the United States
- There are many online resources for keeping up with deer issues and news, including deerfriendly.com

Beaver

- Beavers : The Humane Society of the United States
- This booklet, written by Sherry Tippie, director of Wildlife 2000, and produced with the Grand Canyon Trust, offers practical how-to advice: *Working with Beaver*
- For more information about the beavers in Martinez, Calif., visit martinezbeavers.org.
- To reach the expert who installed their devices, visit Beaver Deceivers
- Purchase an instructional DVD on installing beaver devices at Beaver Solutions—Self Help DVD

Coyotes

- Coyotes : The Humane Society of the United States
- Project Coyote advocates for better treatment of coyotes.
- Information on the most complete and up-to-date research on urban coyotes being done by the Cook County, Illinois, Coyote Project: Urban Coyote Ecology and Management
- Denver, Colorado, web pages for residents:
 - Coyotes in the City: A guide to living with urban coyotes;
 - How to Haze: effective reshaping of coyote behavior

Urban Wildlife Resources

- *Wild Neighbors: the humane approach to living with wildlife* by John Hadidian, Margaret Baird, Maggie Brasted, Lauren Nolfo-Clements, Dave Pauli, and Laura Simon, published 2007 by Humane Society Press. Copies may be ordered here: *Wild Neighbors* : The Humane Society of the United States
- The Wild Neighbors program of The Humane Society of the United States
- An electronic version of this PDF with live links can be downloaded at humanesociety.org/animals/wild_neighbors.

Local Government Resources

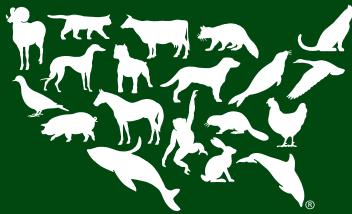
- Institute for Local Government

About The HSUS

The HSUS is the nation's largest and most powerful animal protection organization—backed by 11 million Americans, or one in every 28.

Established in 1954, The HSUS seeks a humane and sustainable world for all animals, including people. We are America's mainstream force against cruelty, exploitation, and neglect, and also the nation's most trusted voice extolling the human-animal bond.

Celebrating Animals | Confronting Cruelty



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