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CONTRA COSTA COUNTY  
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**TO:** Internal Operations Committee  
Supervisor John Gioia, Chair  
Supervisor Candace Andersen, Vice Chair

**FROM:** Daniel Pellegrini, Chair  
Fish and Wildlife Committee

By: Maureen Parkes, Planning Technician III  
Staff to Fish and Wildlife Committee

*Maureen Parkes*

**DATE:** August 16, 2016

**SUBJECT:** Contra Costa County Fish and Wildlife Committee Recommendation to Print and Distribute 5,000 "Wildlife in Your Backyard" Brochures

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The Contra Costa County Fish and Wildlife Committee (FWC) requests the Internal Operations Committee's (IOC) consideration of the expenditure of up to \$1,400 from the Fish and Wildlife Propagation Fund (Fund) to print and distribute 5,000 updated "Wildlife in Your Backyard" brochures. The brochures inform County residents about how to manage wildlife in urban settings. The FWC is requesting that the IOC consider this recommendation and make their own recommendation for consideration by the full Board of Supervisors (Board). This memo provides background on the Fish and Wildlife Propagation Fund, the "Wildlife in Your Backyard" brochure, the review process performed by the FWC and documents the FWC's recommendation to authorize the expenditure.

## **I. Background**

The Fish and Wildlife Propagation Fund was established in accordance with the California Fish and Game Code (Code) 13100 as a repository for fines collected for certain violations of the Code and other regulations related to fish and game. The most common fines are small (\$25-\$150) and are processed through the four Superior Courts in Contra Costa County. The fines typically stem from hunting or fishing violations (e.g. not possessing a valid license), illegal take and illegal dumping. Occasionally there are larger fines that result from larger violations, including failure to obtain appropriate permits for activities such as streambed alteration. A portion of the fines are deposited into the Fish and Wildlife Propagation Fund. California Fish and Game Code 13103 defines how money in this fund may be spent, but the Board of Supervisors is in charge of authorizing specific expenditures. The "Wildlife in Your Backyard" brochure project is consistent with the expenditure criteria established by State law because it relates to public education on fish and wildlife issues. As of August 15, 2016, the Fund had an available balance of \$263,658.81.

These funds will also be available for the funding of eligible projects that benefit fish and wildlife during the 2017 Contra Costa County Fish and Wildlife Propagation Fund grant cycle.

The “Wildlife in Your Backyard” brochure was first developed by the Fish and Wildlife Committee in 2004 to inform residents in the County how to manage wildlife in urban settings. Many homes are located near natural areas and open space. This proximity creates an opportunity for negative human/wildlife interactions. For example, some County residents have encounters with raccoons living in their attics or deer eating their flowers and vegetables from their backyards. Residents often contact the County Fish and Wildlife Committee, County Animal Services Department or Lindsay Wildlife Experience for information on how to handle these situations. The Committee concluded that it was very important to create a brochure that people can bring home or access online to refer to when they encounter situations with wildlife.

The FWC decided to update the 2004 brochure. The Committee worked for several months on the revisions which include reformatted easy-to-read text and the addition of several photos of wild animals. Most of the text remains the same, although some content and contact numbers have been updated. The draft revised brochure is 16 pages long and stapled in the middle (8.5 by 5.5 inches finished). On January 20, 2016, the FWC approved the final text and recommended expenditure of up to \$1,400 to print and distribute 5,000 copies of the brochure. A copy of the draft revised brochure is attached.

If the revised brochure is approved, it will be posted on the FWC web page and distributed throughout the County in public places, when and where permission is granted, including County Animal Services, East Bay Municipal Utility District’s visitor center at their reservoir, at local or regional parks, and Lindsey Wildlife Experience in Walnut Creek. The FWC also plans to send the brochures to real estate agents and homeowners that are located near natural areas or open space.

Please contact Maureen Parkes at 925-674-7831 or Abigail Fateman at 925-674-7820 with any questions.

Attachment: Draft Revised Brochure

# **WILDLIFE IN YOUR BACKYARD**



Guide developed and funded by the  
Contra Costa County Fish and Wildlife Committee

# Introduction

One of the Bay Area's greatest assets is its abundance of woodland, grassland and wetland habitats.

Many wildlife species live in close proximity to their human neighbors as housing development expands in our region.

We invite you to take a few minutes to read about some of the common wildlife species found in Contra Costa County and several things you can do to get along with these original "residents" of your neighborhood.



## How To Be Wildlife Friendly

There are a few important steps to take to keep a healthy distance between your family and wildlife in the neighborhood. Following these tips helps to make wild animals welcome guests rather than pests.

- Keep garbage in tightly covered containers and pick up fallen fruit from fruit trees. Without the smells associated with food stuffs from our houses and gardens, animals are much less likely to create nuisances in our yards.
- Do not leave pet food or water out in your yard. Close pet doors at night to keep wild animals outside.
- Maintain bird feeders by collecting fallen and discarded seeds which attract rats, squirrels and other wildlife.
- Keeping cats indoors will protect them from disease and predators, as well as to help conserve native songbirds, lizards, salamanders and other small animals. Several sources, including the Audubon Society, report that free-roaming cats have devastating effects on native animals.
- Close or screen entrances to attics, vents and crawl spaces, and areas under sheds and decks so animals cannot use those areas to sleep, den or breed.
- If deer are a problem in your area, plant "deer resistant"

plants recommended by your local nursery.

■ If raccoons or skunks are digging in your lawn, you may have a grub (insect larvae that eat grass roots) problem. Watering the lawn in the morning rather than the evening will make the lawn more difficult to dig and keep grubs deeper in the soil during the evening hours. Heavy grub infestations should be treated with the minimum amount of toxic substances. Ask your local nursery about beneficial nematodes for grub control.

■ Use black or cayenne pepper on the lawn to discourage wildlife from digging. Dog and cat repellent may work as well.

■ Let native wildlife stay wild. Although well intentioned, feeding wildlife disrupts natural behaviors and can reduce long-term survival.

■ Do not handle wildlife. This can harm animals and expose you to disease.

## **Our Furry, Feathered and Scaly Friends**

The following are some of the more common local animal residents in the county. The recommendations noted for each species can help to maintain a harmonious relationship with them.



### **Raccoons**

These black-masked, dexterous mammals are active mostly at night and eat an extremely wide variety of foods. Raccoons digging in lawns are a common problem in suburban areas. To prevent raccoons from routine visits to your yard, follow the

general tips on page 2, particularly regarding grub infestations. In addition, limit access to attics and crawl spaces by screening. If needed:

- Wrap metal guards, 18 inches or wider, around tree trunks five or six feet above the ground to keep raccoons from climbing trees to get to roof tops and fruit. Trim bushes and tree branches three feet back from the roofline.
- To protect fish in a pond, submerge a wire mesh horizontally around the edge, leaving the center open. Raccoons cannot reach past the wire and will not stand on it because it is unstable. Submerge terra cotta pipes for fish escape cover.

## Pocket Gopher



*Photo by Chuck Abbe*

Gophers are herbivores and eat a variety of plants, such as leafy vegetables above ground and roots and tubers underground. They constitute an important food source for many wild animals. Owls, hawks, foxes, coyotes, badgers, weasels and snakes eat gophers. Gophers also play a major role in soil dynamics. Their constant digging results in vertical cycling of

soil. This counteracts the packing effect of grazers, makes the soil more porous and permeable, reduces run off and provides increased aeration for plants.

Gophers dig two types of burrows. One is a long, winding, shallow tunnel to obtain food, and the second a deep tunnel for shelter with chambers for food and nesting. Fan-shaped mounds of loose dirt distinguish gopher holes from circular mole hills.

### **For gophers eating plants and tunneling:**

- Place hardware cloth (1/4 inch or 1/2 inch mesh) 18-20 inches deep around the perimeter of your garden to exclude

gophers. Fasten commercial tree wrap around ornamental plants and trees.

■ Plant daffodils, oleander, gopher or mole plant (*Euphorbia lathyris*) or other plants that gophers dislike. Check at your local nursery for suggestions.

**To protect plant roots:**

■ Plant in underground baskets of 1/4 inch hardware cloth. Line the sides and bottoms of all planting holes and beds with galvanized wire mesh or light gauge mesh when planting trees and shrubs; they need protection only when young and vulnerable. Use a heavier mesh for permanent beds where you grow annuals and vegetables. Be sure to place the mesh deep enough to accommodate growing root crops and bulbs, and leave at least 3 inches of mesh above ground.

■ Make your own root protectors using 3/4 inch hexagonal wire netting or purchase them ready-made.



## Moles

Moles are insectivores and are very beneficial, aerating the soil and eating insects harmful to gardens. They do not eat vegetation and cause very little damage to plants. Gopher plant is reported to repel moles. Mole-Med is a castor bean extract that may repel moles when sprayed on lawns.

# California Ground Squirrel

Ground squirrels live in colonies in open areas where they can burrow, and are present in most agricultural and rural areas in California. They are also found around buildings, gardens and industrial sites.

## For ground squirrels burrowing in your yard:

- Place hardware cloth (1/4 inch or 1/2 inch mesh) to a depth of 18-20 inches around small plots of individual ornamental plants and trees.
- Remove brush piles and debris, reduce cover, and control weeds to make the area more open and to remove food sources.
- Encourage raptors such as hawks and owls by erecting a raptor perch or pole.

## For ground squirrels eating plants:

- Wrap tree and shrub trunks with commercial tree wrap.
- Spray rodent repellent on ornamental plants, which has an extremely bitter taste (may include Benzylidylethyl as an active ingredient). Cribbing spray and Roepel are available commercially. Avoid using gas cartridges and anticoagulants, which can poison non-target species directly or secondarily. Squirrel burrows are used by a wide variety of wildlife species.

# Striped Skunks

The common skunk is another creature of the night that, like the raccoon, eats a wide variety of foods. A skunk typically will not use its most famous feature, its odor, unless provoked. Skunks digging in lawns are a common problem in suburban areas. To keep skunks away from your yard, follow the general tips on page 2, particularly regarding grub infestations.



Keeping garbage and pet food inaccessible is especially important, as well as screening vents and crawl spaces.



If a skunk sprays you or your pet, mix together into solution (but not in a closed container, as it's potentially volatile): 1 quart 3% hydrogen peroxide, 1/4 cup baking soda, 1 tsp. Dawn dish detergent.

Apply immediately, keeping it out of the animal's eyes, nose and mouth. Leave for several minutes and rinse with water. This amount is enough for a small dog. You should double the ingredients for medium dogs and triple for large dogs. Apply several times if needed. Commercial deodorizers are available from veterinarians and feed stores.

## Songbirds

Due to the diversity of habitats throughout Contra Costa County, more than 180 species of birds can be found here. Many are year-round residents, while others pass through during spring and fall migration.

If you choose to keep a bird feeder and/or a birdbath, keep them clean. Dirty feathers spread disease. Once a week, wash your feeder with soapy water, rinse and soak in a



diluted solution of bleach (1 part bleach to 32 parts water). Always use fresh, high-quality sterile seed. If the seed gets wet from rain, replace it with dry seed immediately before mold develops.

The American Bird Conservancy, the National Audubon Society and the Humane Society urge owners to keep cats confined indoors and controlled to protect birds and other wildlife. If your cat injures a bird, place the bird in a small container such as a paper lined box. Call Lindsay Wildlife Experience (see back page for number) for care information.



## **Black-tailed Deer**

Deer eat a variety of plants and seem particularly attracted to many of the trees, bushes and perennials commonly used in your yard. While eight to ten foot high fencing is the only sure method of preventing deer from eating your plants, an alternative is to erect screens or other barriers around individual plants to protect them.

Your local nursery can help you find plants less likely to be grazed by deer. Repellents can be successful, but instructions must be followed carefully. You may need to try several different brands of repellents to find one that actually repels deer in your yard. Deer repellents are available at nurseries and home improvement stores. Motion activated sprinklers work well to scare and startle deer from your garden.

## **Opossums**

The opossum is the only marsupial native to North America. It was introduced into California in San Jose during the 1920s as a game animal, and has dispersed throughout the state.



Opossums are active at night, and are known to “play dead” when startled or confronted. They generally are not aggressive or destructive, but may try to bluff their attacker by hissing, salivating and opening their mouths wide to show their 50 teeth. Opossums are less likely to linger if garbage cans are well sealed and pet food is not left out.



*Photo by CDFW*

## **Snakes**

The Bay Area is home to many different species of snakes, including the gopher snake, king snake and rattlesnake. The only potentially dangerous venomous snake in the Bay Area is the Northern Pacific Rattlesnake.

Although the Night Snake and Ring-necked snake with rear fangs are mildly poisonous, they are generally not harmful to humans due to their size and demeanor.

Gopher snakes are more common than rattlesnakes in the Bay Area and are often mistaken for rattlesnakes. A gopher snake has a pointed tail. A rattlesnake will have rattles on its tail, or if it is young, it may have a rounded tail with a button, but will never have a pointed tail.

Rattlesnakes are potentially dangerous to humans and pets. Any rattlesnake bite should be treated as a medical emergency that requires immediate care for humans or veterinary care for pets. The bite victim should be immobilized, remain calm and be transported to a hospital. Vaccinations are available for pets.

Snakes are beneficial because they eat many animals we consider to be pests, such as mice, rats and ground squirrels. They should not be killed.

To make your yard less attractive to snakes, clear or thin dense brush and weeds from around your house to reduce rodents. In particular, discouraging ground squirrels will also reduce the attractiveness of an area to rattlesnakes.

Fencing may keep most snakes out of yards. Use small-mesh wire fence that extends 18 inches into the ground and 3 feet above ground. Do not use plastic mesh because snakes can become entangled.

## Coyotes

Coyotes are found throughout California in a variety of habitats, including urban areas. They resemble a small German shepherd dog with the exception of the long snout and bushy, black-tipped tail. Feeding coyotes, whether deliberately or not, puts you, your pets and your neighbors at risk.



Feed pets indoors or promptly remove outdoor dishes when your pet is finished. Store kibbled pet food in trash cans with tight lids that prevent spilling if the can tips over. To make your home less attractive to rodents clear brush and dense weeds.

Never leave small children unattended in areas known to be frequented by coyotes. Protect your pets by keeping small animals indoors. Coyotes may seek cats and small dogs in residential areas. Cats should never be allowed to wander outside in coyote country. Bring dogs indoors at night and never allow them to run loose.

## Wild Turkeys

Wild turkeys were first introduced into California about 100

years ago with many subsequent reintroductions throughout the state. They have become well established in many areas, including the Bay Area. Turkey nests and eggs are protected by Federal law.



Wild turkeys live in woodland habitats, which contain both trees for roosting and open grasslands for foraging and nesting. Local turkey populations have recently increased in size, with some flocks containing 50 or more birds.

Turkeys are ground feeders, and consume a wide variety of food including grasses, grains, acorns, fruits, insects and agricultural crops. In particular, their fondness for acorns may hinder oak regeneration and rob native wildlife of a valuable food resource. Turkeys are a protected game species.

Many residents enjoy seeing these impressive birds; however, they have become a nuisance in some suburban areas due to the damage they can cause by foraging in gardens and landscaping and the droppings they leave behind. In many cases, these problems are caused or exacerbated by residents who feed the turkeys and thereby attract them to residential neighborhoods. Feeding wild turkeys puts them in jeopardy by altering their wild behavior and encouraging close contact with people.

If wild turkeys begin roosting in your trees or causing damage to your property and you need help, the California Department of Fish and Wildlife can provide specific advice. Turkeys can be discouraged from your property with motion-activated sprinklers.

# Mice and Rats



*Photo by USGS*

Rodents most commonly seen in and around dwellings in the Bay Area include the house mouse, roof rat (black rat) and Norway rat (brown rat). These animals are not native to North America, cause millions of dollars in damage each year, and can cause food poisoning and spread diseases such as plague and typhus to humans.

In the Bay Area, we also have many native rodents such as deer mice, harvest mice, California voles (meadow mice) and dusky-footed woodrats (pack rats). These native species are usually seen away from homes, but sometimes may be found close to or in dwellings when populations increase periodically.

You can make your home and garden less attractive to rodents:

- Keep leaf litter, lumber, trash, brush, wood and rock piles to a minimum to reduce hiding places. Ground cover such as ivy is commonly used by non-native rodents.
- Remove all sources of food. Fruit and vegetables should be promptly harvested and not allowed to accumulate or drop to the ground.
- Bird feeders should contain seeds and not allow them to drop to the ground.
- Seal all places where rodents may enter your house. Mice can get through an opening the size of a dime; rats can enter through openings the size of a quarter.

## **In your home:**

- Do not use glue traps or poison. Glue traps are inhumane and can catch unintended victims such as lizards and birds. Poisoned rodents may secondarily poison non-target predators or pets. Snap traps are the most effective, humane method of

control.

- If you hire a pest control operator, make sure they use traps and exclusion instead of poisons.

## Bats

The Bay Area is home to many species of bats. They are a protected non-game species and may not be harmed, except under special conditions set by the California Department of Fish and Wildlife.

Bats are very beneficial because they eat a large variety of harmful insects. A colony of 500 bats can easily capture over a half a million insects nightly.



Some bats roost in trees and rock crevices. Other colonial species roost in buildings or may have nighttime feeding roosts. Bats roosting on porches and eaves are usually Pallid bats which come at night to roost and feed on their meal; insect body parts are often found below the roost. To deter bats from roosting, cover the area with smooth, tight-fitting plastic, such as Plexiglas or other hard plastic, so they can't crawl under or cling to it. Naphthalene flakes (moth balls) suspended in netting or socks sometimes deter bats from roosting in an area.

Never attempt to handle any bat, as they are potential vectors of the lethal rabies virus. However, less than one half-percent of bats actually contract rabies.

Eliminate openings where bats may enter a building. If a bat enters a building allow it to fly out by itself through open windows or doors.

Never seal a roosting area from May through August in case there is a nursery colony with baby bats that cannot fly out.

If humans or pets come in direct contact or are bitten by a bat, collect the bat and seek immediate medical advice from your local county health department and doctor.



## Mountain Lions

The mountain lion is an apex predator coexisting with us in the east San Francisco Bay area. Mountain lions are a keystone species which reflects the health of the environment.

In Contra Costa County mountain lions are faced with several challenges, particularly the fragmentation of habitat.

Mountain lions require large tracts of land territory and home range. Our freeways and suburbanization have divided the region into isolated, disconnected areas which mountain lions must navigate to access preferred habitat.

Vehicles are a leading cause of death for these animals. Upon entering into our backyards or cities, they pose a potential public safety concern. Your chances of being attacked by a mountain lion are extremely low.

There have been 16 confirmed attacks on humans by mountain lions in California since 1890. For comparison, one is 1,000 times more likely to be struck by lightning and 500 times more likely to be killed by a domestic dog.

### **To minimize risks of mountain lion attacks:**

- Do not hike alone. Hike in groups.
- Keep children close to you and within your sight at all times when in lion country.
- Do not approach a lion. Most mountain lions will generally try to avoid a confrontation. Give them a way to escape.



- Do not run from a lion. Running may stimulate a mountain lion's instinct to chase. Instead, stand and face the animal. Make eye contact. If you have small children, pick them up if possible so they do not panic and run.
- Do not crouch or bend over. A person squatting or bending over looks a lot like a four-legged prey animal.
- Do all you can to appear larger. Raise your arms. Open your jacket if you are wearing one. Throw stones, branches or what ever you can reach without crouching or turning your back. Wave your arms slowly and speak firmly in a loud voice.
- Fight back if attacked with any means available, protecting your head and neck.



## Pets and Wildlife

Indoor cats avoid exposure to disease and predators. Free-roaming cats and small dogs can become part of the food chain, with consequences for both pets and wildlife. Indoor cats live an average of five times longer than free-roaming cats.

Dogs should be kept in fenced yards, on leash or under direct control. Keep vaccinations for dogs and cats current to minimize risk of disease transmission between domestic and wild animals. Your veterinarian can give you more information about preventing problems caused by encounters between pets and wildlife.

# And, Finally...

We hope that this guide shows that living with wildlife is not much of a burden. Most of what works to keep wildlife populations healthy is common sense.

## Keep creeks clean

If you are aware of pollutants such as oil, pesticides, pool water, yard clippings or other man-made pollutants entering local creeks, inform your city's public works department.

Californian Office of Emergency Services (800) 852-7550  
California Dept. of Fish & Wildlife (707) 944-5500  
CCC Animal Services Dept. (Central/Eastern County)  
(925) 335-8300

CCC Animal Services Dept. (Western County)  
(510) 374-3966

Contra Costa Clean Water Program (800) NODUMPING  
Contra Costa Dept. of Agriculture (925) 646-5250  
Contra Costa Mosquito & Vector Control (925) 685-9301  
Lindsay Wildlife Experience (925) 935-1978

## Save water

Reducing residential and business water use relieves the intense pressure on our water resources posed by our growing population. For example, use native plants that do not require heavy watering, and use a broom instead of the hose when cleaning around your home or at work.

## Visit local parks and creeks

There is high quality wildlife habitat not far from your home. Getting to know the region's animals is a pleasure and shows the value of our efforts to preserve, conserve and restore wildlife.