

Co-existing with Large Carnivores

Our islands are habitat for large wildlife. Records of cougar on Vashon start as early as 1915 with occasional visits reported through the 1920's, 2011, 2015, and 2016–17. Black bears have been recorded several times since the 1980's. The first coyote on Vashon was recorded in 1960 with multiple packs becoming established by 2005.



Did You Know?

- **Coyotes** are dedicated parents and will defend their pups (born April-May). 90% of island coyote diet consists of rodents. They also eat fruit, vegetables, deer, raccoon, squirrels, and unprotected pets and livestock. Coyotes inhabit all areas of Vashon-Maury. Currently, there are at least five family groups on the islands (subject to change).
- **Cougars** eat mostly deer but will occasionally take unprotected pets/livestock. Mature male cougars preside over territories that overlap several females. Between 18–24 months, young male cougars are forced to disperse from their mother's territory. These young males often move to small temporary territories on the urban fringe where they are safe from adult males while they grow to maturity. Our islands are a safe temporary range for a young cougar to grow and thus most cougar visitors are young males.
- **Black bears** are extremely intelligent and adaptable and will take advantage of any unsecured food from garbage to livestock. Bears tend to be seen most often on island late fall or early spring when they are either preparing for torpor or waking up from torpor ready to fill their bellies.

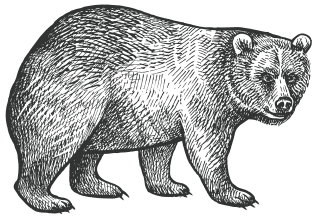
It is best to learn to live with wildlife

Research shows the most effective way to reduce wildlife conflict is to increase community awareness and knowledge of wildlife and to modify human behavior. Killing or relocating wildlife is risky and will sometimes lead to higher levels of conflict by disrupting existing natural social controls in animal societies. Killing older, wiser animals often leaves younger more desperate animals that are less experienced in avoiding conflict with humans.



Know Your Animal Etiquette

This is wildlife habitat. We have the power to reduce conflict by managing our own actions and making smart decisions.



BEAR

If you encounter a Bear:

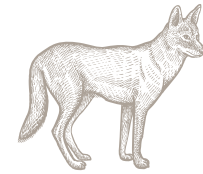
- Stop, pick up small children and pets, don't run. A bear can run up to 35 mph.
- **Avoid direct eye contact.**
- If the bear walks towards you stand tall, wave your arms, and talk to the bear in a low voice.
- Clap your hands for noise, stomp feet and yell.
- **Do not throw anything at a bear.**
- As a last resort, fight aggressively or use bear spray.



COUGAR

If you encounter a Cougar:

- Stop, pick up small children and pets, don't run. A cougar can run up to 50 mph.
- **Maintain eye contact.**
- Face the cougar, talk to it firmly, back away slowly.
- Do anything you can to look large (don't crouch down).
- **Always leave a cougar an escape route and give time for it to retreat** — cougars rarely run from humans, they walk, appearing nonchalant.
- If a cougar continues to approach or starts to growl, **throw something at the cougar.**
- As a last resort, fight aggressively or use bear spray.



COYOTE

If you encounter a Coyote:

- **Coyotes should flee running.**
- If they don't flee, pick up small children and secure pets.
- Yell at the coyote, clap your hands, stomp your feet, spray a hose or vinegar water, use a noise maker.
- If the coyote is still reluctant to leave, **assess whether you could be near a den site** (is it between February and July? Are you in a forested ravine near water or hear/see other coyotes?) **or whether the coyote is sick/injured.** If so, make sure pets and children are secure, leave the area, and report to a local wildlife agency.
- If you have determined the coyote is not sick/injured and you are not near a den site, **continue to haze until the coyote leaves.**

General Safety Tips

- **Don't feed wildlife.** Secure garbage, compost, pets, livestock. Feed pets inside. Don't feed non-pets.
- **Keep pets on a leash.** Most wildlife conflicts in recreational areas have been started by off-leash pets. On the islands, loose dogs have been injured after finding coyote dens.
- **Keep pets indoors at night.** This will not eliminate risk but it will greatly reduce it.
- **Consider building a catio.** This is an indoor/outdoor enclosure for cats.
- **Only use bear spray for protection.** Do not use pepper spray. Spray made to deter human attackers is not strong enough for wildlife. Watch a tutorial on how to use bear spray.
- **Be smart outdoors:** Recreate with a buddy, use a walking stick, wear lights when biking/running/walking in low light.

For more information including a Co-existence packet with resources for livestock and pet owners:
vashonnaturecenter.org/living-wildlife/



Vashon Island Coyotes: Helpful tips for pet owners

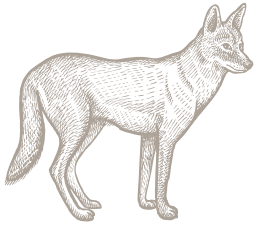
Keeping coyotes wary and wild of humans and teaching them to stay away from human dominated areas is a key preventative measure for keeping conflicts at a minimum (please see our Hazing Guide, page 2). In addition, by taking the actions listed below, pet owners can help further minimize risks to pets.

1. **Keep cats indoors**, especially through the night from dusk to a few hours after dawn.
2. **Secure pet doors** during the night.
3. **Accompany your dog out at night.** If they need to go out take them on a leash.
4. **For those who have pets that absolutely insist on night time hours:** be aware that keeping them in is the best option. However, a correctly built fence (see below) is another option. If a fence is not possible, leaving patio lights on, providing refuge poles for cats to climb (see below), or using motion sensor lights or sprayers within close proximity to the house may deter coyotes although not as well as keeping pets in.
5. **If you have a wandering pet:** it's best for everyone on the island if you keep them leashed or fenced. Each pet that is left vulnerable to coyotes reinforces to coyotes that small pets are easy food, and that large pets must be dealt with aggressively having no respect for coyote property boundaries.
6. **Fence a safe enclosure for pets:** Fencing should be at least 6 feet high and buried approximately 1 foot below the ground to prevent digging. Openings should be no more than 4x4 inches. Coyotes are amazing at squeezing through small spaces. Topping the fence with barbed wire, electric wire or a coyote roller provides further protection against climbing. If retro-fitting a fence, exact height is less important than bottom and top barriers in deterring coyotes.
7. **During day time hours** do not allow dogs of any size to wander. Supervise small dogs closely, even close to home.
8. **Coyotes exist in all areas of the islands including the Burton Peninsula (the last place they became established).** Although coyotes remain relatively cautious of humans and conflicts have remained at a minimum for over 15 years, a few off-leash dogs have been attacked, likely when inadvertently crossing a territorial boundary or getting too close to pups.
9. **Install "catios" and cat safety posts.** "Catio" are outdoor enclosures that keep cats outside yet protected. A cat safety post at least 7 feet high, lined with carpet or something easy for cats to climb, with a small flat platform on top provides a safe place for a cat to flee if trees aren't available.
10. **Feed your pets indoors.** Pet food left outside may attract coyotes. Avoid feeding feral cats outside as well.
11. **Keep your home habitat clean.** Secure garbage as you would for raccoons, secure compost, pick up fallen fruit, clean up bird feeder spills, and secure farm animals (see our livestock management guide).
12. **If you see a coyote that appears comfortable in your yard** or walking the streets of your neighborhood SCARE them away. Please see our hazing guide to learn proper hazing techniques and times when you should not haze.

All of us who have pets must think of them in the context of our larger community. When we contain our own beloved pets and keep our home habitats clean we are not only protecting our pets, we are doing a service for our whole community including other pets and the wildlife that calls these islands home.



Vashon Island Coyotes: Hazing Guide



What Is Hazing?

Hazing simply means scaring a coyote away from you, your yard, or your neighborhood. Keeping coyotes wary of people is the key to avoiding conflict and living in harmony with them. Hazing includes passive means like securing pet food, pets, garbage, compost, and other coyote attractants so that they learn that they will not be rewarded for approaching your home. Active hazing strategies are detailed below.

When and how to haze...

- **Haze if a coyote approaches you** (unless you are near a den) or seems comfortable walking the streets or yards of your neighborhood.
- **Be persistent:** always haze whenever you see too-close-for-comfort behavior.
- **Act Big, Bad, and Loud.** Maintain eye contact and wave your arms, a stick, or a jacket. Pop up an umbrella and make noise with pots, pans or a noisemaker. Use your imagination and vary your technique.
- **Don't stop until the coyote gets your message** and leaves or you will teach the coyote that hazing is nothing to worry about.
- **Do not haze from inside your house or vehicle.** You want the coyote to associate your person with the danger/discomfort.
- **Share your knowledge** with neighbors and work together!

Do not haze if...

- **A coyote is at a comfortable distance from you.** Seeing a coyote at a distance is no cause for alarm. Coyotes are active both day and night.
- **If it is April–August, you could be near a den or pups.** Often dens are in steep, forested ravines on Vashon, but could be other places too. Coyotes need space and privacy to raise their young and feel safe. A coyote may try to haze you away from his/her family by acting anxious and assertive. If you find a den or family area, keep pets on leash and give coyotes a wide berth.
- **You think a coyote is sick or injured.** Call a wildlife rehabilitation center. The closest one is Westsound Wildlife Shelter: 206-855-9057. Another option is PAWS: 425-412-4040.



Estimated coyote territories on Vashon Island

Coyotes can be found anywhere on Vashon-Maury. Using a combination of wildlife camera data, scat DNA analysis, reported sightings, and an annual howling survey we have generated this mapped estimate of coyote group ranges and activity on the islands. This is a community science endeavor and we welcome community volunteers!

Please email info@vashonnaturecenter.org to participate in our wildcam network or any of the above community science projects that are helping us understand and monitor our local coyote and large carnivore populations. Along with island volunteers, we are partnering with the Grit City Carnivore network at UW Tacoma, Prugh Carnivore Research lab at UW Seattle, King County, Pt. Defiance Zoo and Aquarium, NW Trek, and CREOi. Learn more at: vashonnaturecenter.org/living-wildlife.

Active Livestock Management Guide for Vashon and Maury Islands



The purpose of this guide is to assist islanders in the transition to living with coyotes, bears, and cougars by re-invigorating active livestock management practices—some new and some that have been used with success for many generations.

Active livestock management means approaching animal husbandry in a pro-active manner where the animal owner anticipates challenges to their animals' health and well-being and develops and enacts a plan for minimizing those challenges.

This guide represents a collaborative effort of local islanders and has been reviewed by wildlife officials and local livestock experts. It is intended as a first step towards sustainable protection practices for island livestock.



*BAA, RAM, EWE — DONKEYS, GOATS, AND
LLAMAS, TOO — ALL YOUR ANIMALS SAY
THANKS FOR READING THIS GUIDE!*



Vashon
Nature
Center

info@vashonnaturecenter.org • 206-755-5798 • vashonnaturecenter.org

A Little About Large Carnivores on Vashon and Maury Islands

While Vashon and Maury Islands have always had occasional visits from bears and cougars, in recent years the islands have experienced an increase in visits, as well as population growth of large carnivores, and some have made permanent homes here. Our islands are now home to a coyote population, in addition to occasional cougar and bear.

As mainland areas surrounding the islands become more densely populated, larger wildlife seek rural areas like Vashon for needed habitat and food sources. It is impossible to predict when animals will swim over. Wild predators can help control populations of animals such as deer and rodents. However, their presence requires an increased awareness and adaptability on the part of human populations to avoid conflicts. Regardless of how, when, or why these animals are here, large carnivores are now a regular presence. The purpose of this guide is to help animal owners adapt to these new conditions.

Knowledge of the habits, behaviors, and seasonal patterns of wild animals can help protect livestock and pets. We encourage animal owners to learn as much as possible about the habits of local wildlife. For example, knowing that coyote conflicts generally increase during their denning and pup-raising seasons (February-August on Vashon), may lead one to be more vigilant with protection practices at those times of year. Some may elect to change lambing times to avoid a confluence of vulnerable livestock at the same time as

coyotes are trying to feed their young. Knowing that cougars rely on their extremely good night vision, and that they rely on the element of surprise in their attacks, means protecting animals from dusk until dawn, clearing pastures of brush, and keeping animals out of areas with trees, bushes, or other hiding places. According to Vashon Nature Center records from 2016 and 2017, all suspected cougar attacks on Vashon occurred at night; the majority in brushy or treed areas.

Knowing the habits of wild animals and adapting to take advantage of them is the single most significant way to reduce livestock loss. We have included a list of references and books for more information at the end of this guide.

Domestic dogs are well known to attack and kill livestock on Vashon and Maury Islands. Dog behavior patterns can be very different than wild animals. For example, dogs—especially those that are left outdoors without containment—may wander neighborhoods during the day while their owners are away. If they join other dogs, they can form a pack, which can be more destructive than a solo animal. Owners of domestic dogs often do not believe that their pets would attack other animals, but it is well-documented that domestic dogs have a strong instinct to attack other animals, especially those that are running away from them. Domestic dogs may also maul livestock.

Large Carnivores and Common Livestock Species That They May Prey Upon

Large carnivores	Livestock species
Cougars	Llamas, alpacas, miniature horses, goats, sheep, donkeys, occasionally horses
Bears	Horses, donkeys, miniature horses, poultry, goats, sheep, occasionally cows
Coyotes	Llamas, alpacas, miniature horses, goats, sheep, poultry, domestic dogs and cats
Domesticated dogs	Miniature horses and donkeys, goats, sheep, poultry, also can significantly injure horses if dogs are in a pack

Protecting Livestock

Most wild predators want to use the easiest approach to get food. Therefore, it is not surprising or unnatural behavior for wild predators to cue in to unprotected livestock as food. But, no one wants to lose a domestic animal under their care. Following are techniques that can be implemented to minimize risk of predation by making your animals harder to access. It is important to realize that no system is 100% foolproof, and protecting livestock is a process of continual development and experimentation to find techniques that are effective for your individual farm and daily routine.

Livestock losses hurt everyone, not only on an emotional and financial level, but because

losses can encourage predators to go after livestock again, and to try harder each time they are successful. Our individual actions and approaches can impact others. Even people who don't own livestock can help increase the effectiveness of community livestock efforts. (See page 9.)



Active Management

Regardless of whether you own livestock or companion animals, the basic goal of managing their care is the same: To provide animals with excellent quality of life. If you raise livestock for commercial purposes, you are trying to balance the cost of meeting this goal while maximizing your profit. If you have a companion animal, you are trying to provide a safe and healthy environment throughout its life.

Before you decide the best way to protect your animals from wild predators, it is important to first ask yourself what type of animals you are actively managing, and how much risk you are

comfortable with. The most basic definition of livestock are animals kept for use or profit. These include dairy cows or goats, sheep raised for meat or fiber, and pigs raised for meat. Animals kept for fun, without use or profit in mind, are generally considered companion animals rather than livestock. Sometimes, even the owners of these animals struggle to put their in animals into one of these two categories. How you choose to protect your animals may be different depending on the nature of your relationship to them.

Weighing Risk

People keep animals for many reasons—livestock, pets, or companion animals. When deciding on how to make infrastructure and other changes to your home and land to protect animals, part of your job as an animal guardian is to weigh the risks involved. Consider the consequences, both emotional and economic, of your actions or inactions. Although no plan is fool-proof, there are a wide variety of ways to limit the risk to animals in your care, and increase their protection. The choice is yours—from doing nothing to checking every box in this guide—depending on the level of risk you choose to live with. Once you have considered and determined your “risk comfort zone,” it will be easier to decide on a plan of action.

Best Management Practices

EXCLUSION

Practice	Pros	Cons	Predator Type
Fencing	<ul style="list-style-type: none"> • Fencing provides a first line of defense from predators. • Adding electricity is very effective at deterring curious invaders, as well as keeping your livestock where you want them. • Homemade coyote rollers on fencing are very effective in keeping coyotes out. 	<ul style="list-style-type: none"> • Permanent fencing is very expensive, especially if electrified. • Portable electric is more affordable, but more work to maintain. • Fencing limits natural wildlife movement. • Fences must be checked on a weekly basis and repaired or replaced as needed. 	<ul style="list-style-type: none"> • Bears, coyotes, and dogs are deterred by well-maintained electrified fencing. • Coyotes are deterred very effectively with coyote rollers. • For most people, fencing a cougar out is not feasible as they can jump more than 15 feet high. However, fencing in good repair and cleared of brush can discourage cougars, even if it is not high. • In addition, field fencing can be used to keep livestock out of pasture locations that contain brush or trees where cougars can hide.
Livestock Guardian Animals (Dogs, Llamas, Donkeys, Mules, Geese/Guinea Fowl)	Livestock guardian animals provide constant presence and protection as they live with the livestock they are trained to protect. There are pros and cons to each type of livestock guardian animal so it takes research to decide what best fits each case.	<ul style="list-style-type: none"> • Not a stand-alone protection method—only works in tandem with other methods. • Additional animal to feed and care for. • Most livestock guardian animals can be quite loud, possibly leading to conflicts with neighbors. 	<ul style="list-style-type: none"> • Can help deter any animal coming onto your property, including humans. • Livestock guardian dogs can be extremely effective in deterring cougars, but other livestock guardian animals may not be.

Best Management Practices, continued

CULTURAL METHODS

Practice	Pros	Cons	Predator Type
Animal Husbandry	<ul style="list-style-type: none"> • Change birthing season so it doesn't coincide with season of highest predation (spring). • Move animals into a nighttime enclosure. • Only allow animals out into pastures or fields during daylight hours. • Confine/enclose animals during birthing season. • Keep feed contained and secured. 	<ul style="list-style-type: none"> • Requires attention to breeding cycles and control over breeding. • Added cost of feed/hay. • Added cost of enclosure. • Added cost of building out a confinement/heavy use area. • Mud management may be required. 	<ul style="list-style-type: none"> • Coyotes are most predatory after having pups. • Bears may be less active in fall/winter. • The most effective way of minimizing cougar predation is enclosing animals in indoor spaces at night.
Waste	<ul style="list-style-type: none"> • Remove animal waste and or carcasses from areas where livestock congregate. This provides better hygiene for your animals and reduces odiferous bait. 	<ul style="list-style-type: none"> • Time and energy for manure and mortality management. • Potential cost to build a manure-management structure. 	<ul style="list-style-type: none"> • Good practice for all predators.

HABITAT CONTROL

Practice	Pros	Cons	Predator Type
Removal	<ul style="list-style-type: none"> • Cut back brush and keep fields open. The more open a field or pasture, the less hiding places for predators. 	<ul style="list-style-type: none"> • Requires periodic removal of brush and invasive plants. 	<ul style="list-style-type: none"> • Cougars especially rely on the element of surprise and will be deterred if there is a good chance of being seen. • Cougars, coyotes, and roaming dogs are less likely to cross an open pasture in pursuit of prey.
Location	<ul style="list-style-type: none"> • Keep animals close to human activities and the primary residence during vulnerable times; i.e., birthing season. • Keep animals away from edges of pasture with thick or dense shrubs, and forested areas. 	<ul style="list-style-type: none"> • Noise, smell, and overall habits of animals may be undesirable close to home. • May mean not every inch of a pasture is grazed. • Requires mowing and brush removal. 	<ul style="list-style-type: none"> • Cougars, coyotes, and roaming dogs are often deterred by human noise and activity.

Best Management Practices, continued

SCARE TACTICS

Practice	Pros	Cons	Predator Type
Devices	<ul style="list-style-type: none"> • Motion sensor lights or sounds can eliminate the element of surprise. 	<ul style="list-style-type: none"> • These methods may disrupt humans/ neighbors at night. • May cause animals to scatter and then become vulnerable after the device shuts off. 	<ul style="list-style-type: none"> • All predators can be deterred, but may build up a tolerance if other protection methods are not in place. • These devices add another layer of protection, but should not be the only method used.
Repellents	<ul style="list-style-type: none"> • Urine of potential predators can repel lesser predators. • Some odors, such as mothballs, can confuse predators. 	<ul style="list-style-type: none"> • If the predator is a top carnivore, there is no effect from urine. • Odors may be offensive to you and your animals as well. 	

RESOURCES

Local Resources for Livestock Owners and Companion Animal Owners

Following are some local examples of actions that island livestock and companion animal owners have taken to secure livestock.

Islanders we spoke to agree that the number of animals you own is a main factor influencing your management strategy. Essentially, for those with fewer animals, night enclosures seem to be a very effective way of protecting livestock. (See the examples on page 7.) Animals may take time to adapt to night enclosures. However, after this adjustment time, many animals seem to indicate a preference for being securely housed. Night shelters combined with adequate fencing and habitat control provide sound security for animals.

For those with many animals, night enclosures become more cost prohibitive. It is also harder

to maintain conditions that are sanitary and comfortable for the animals. Local farmers with many animals have had the most success with a combination of good fencing, habitat control, and livestock guardian animals.

In this section, we provide local examples and/ or local contacts for all the for the management practices outlined in this guide.



Local livestock guardian dog at work.
Photo: Tammy Dunakin

RESOURCES

Night Enclosure for Companion Animals

Pictured here, is a locally built, custom-designed enclosure that houses sheep and goats. It has connected inside and outside areas, both fully enclosed.

The owner reports that the wide door prevents animals from balking at entering. She feeds the animals in the enclosure and says they seem very content in the space and regularly wait for her inside the enclosure rather than in the pasture when she gets home. A door connects the fully covered area of the enclosure with the outside space, allowing animals and owner a choice.

The outside space has eight-foot-high mesh fencing and the roof is made of wire mesh panels. The poles extend an additional two feet in height and are positioned at a 45-degree angle and covered with chicken wire. A motion sensor light called a Nite Guard Solar Light is attached to the middle post for additional predator deterrence.

Approximate cost of the enclosure (excluding labor): \$1,600. Here is a link to plans that one can modify to suit individual needs (with a comparable price range).



Photos: Debbie Butler

Stable Retrofit for Miniature Horses

This “covered porch” was built connected to an existing horse stable to protect four miniature horses at night. The wide side door provides easy access, and the rubber mats cut down on mud issues. The roof is aluminum and the side panels are 2x4 framing with mesh, which maintains very good airflow.



Photos: Sharon and Dick Danielson

RESOURCES

Guidelines for Retrofitting Existing Structures

The following advice is taken from the Mountain Lion Foundation Livestock Portal. (mountainlion.org/portalprotect.asp)

1. Walls: If your barn or shed is built from wood, make sure all boards are in sturdy condition. Replace or reinforce any broken or rotting pieces. Board up any openings that wild animals can fit through. If there are too many openings between boards, consider reinforcing the walls with chain link. Make sure all windows are closable with glass, chain link, or latched shutters—or board them up. Be sure to consider proper ventilation for the health of your animals, but be aware that predators can enter through large openings.
2. Floor: The walls of your enclosure should extend all the way to the ground, and ideally, for coyote protection, be buried at least a foot. An apron is a great way to keep out digging predators.
3. Door: The entrance should have a sturdy door that closes and latches. If you have bears in the area, you will need a more complicated lock than if you are only concerned about mountain lions and/or coyotes. Double check that there are no large openings around the frame for bears to get purchase.
4. Roof: Mountain lions can jump more than 15 feet, so a sturdy roof is mandatory to ensure your livestock is safe. Close off large gaps to keep your furry ones safe and dry inside. Consider installing mesh or a screen over small openings to keep out small rodents.

Fencing and Fencing Supplies

Premier1 has a variety of electrified fencing supplies for all types of livestock. Their website contains extensive information and guidelines on electric fencing: premier1supplies.com or 800-282-6631.

Rent-A-Ruminant offers occasional workshops on electric fencing and sells electric fencing: info@rentaruminant.com



An example of a well-designed and maintained island fence with a top and bottom string of hotWire. Photo: Tammy Dunakin

Peer Groups

Peer groups can help you increase your knowledge, and sharing ideas and challenges with others might make it seem less daunting to change your practices. If you are not already a member, consider joining the following island groups:

Vashon Island Growers Association (VIGA) This group maintains an email listserv, and hosts events for members, including livestock practices that work well on island farms. vigavashon.org

Vashon Island Fruit Club This group has regular meetings that always include an educational element especially focused on fruit growing here on the island. vashonislandfruitclub.wordpress.com

Vashon-Maury Island Land Trust This non-profit, member-supported organization works to conserve habitat on the island, as well as make it publicly accessible to all. They keep members informed through emails, a newsletter, and mailers about all aspects of the natural environments on Vashon. vashonlandtrust.org

Vashon Nature Center Vashon Nature Center is a community of backyard naturalists, curious kids and families, and professional biologists and ecologists working together to build greater awareness and understanding of local wildlife and natural places on the islands we call home. VNC is creating a community database of all island wildlife species, runs a wildlife camera network, conducts citizen-science based monitoring and assessments of natural areas and research on local wildlife, creates educational and outreach publications, and conducts courses on nature topics. Visit their living with wildlife page for more information, fact sheets, and local data about wild carnivores. vashonnaturecenter.org/living-wildlife/

Vashon Island Horse Association This is the Island equestrian group. 206-463-0550, vashonhorse@gmail.com

RESOURCES

Need some additional help?

On-island resources

Amy Holmes — local farmer, natural resources specialist, and islander. Contact her for in-person consultation rates: holmesteadfarms@gmail.com or 206-719-5500.

Tammy Dunakin — Rent-a-Ruminant: Electric fencing and livestock guardian dog questions: info@rentaruminant.com.

Maggi McClure — Livestock guardian dog questions: maggi@mightymutt.com or 206-380-1191.

Off-island resources

Rick Reinlasoder — King County Livestock Specialist: rick.reinlasoder@kingcounty.gov or 206-477-4810.

Washington Department of Fish and Wildlife Regional office — Kim Chandler, Law Enforcement Officer: 425-775-1311

What can I do if I don't own livestock or companion animals?

Successful active livestock management requires a community mindset. Here are some ways to contribute, even if you don't own livestock or companion animals:

- Secure your smaller pets (cats and dogs) from predators.
- Learn how to act around wild predators.
- Secure your garbage and any other food attractants that can bring large animals to your neighborhood.
- Learn how to act around working livestock guardian dogs. They are not pets!
- Increase your patience and tolerance for working animals. (Your neighbor's livestock guardian dog may bark at night, which means it is doing its job.)
- Volunteer for barn raisings or fence clearing/repair work parties in your neighborhood (or offer to help a local farmer).
- Pass the word to neighbors. Visit Vashon Nature Center's Living with Wildlife pages for information packets that can be dispersed to neighborhood groups: vashonnaturecenter.org/living-with-wildlife.
- Help start and organize a community fund for livestock owners.

Next Steps

This guide is intended to be a first step towards a sustainable local protection system for livestock. It is intended to help livestock owners find reasonable and effective solutions and will be expanded and changed as they learn more. However, information alone is not enough. Other communities have been successful by developing some of the following support structures in tandem with individual efforts:

- Identify groups of volunteers that can help with infrastructure upgrades.
- Identify local resources that can help islanders (we've started a list above) so that we aren't so dependent on off-island agencies.
- Network with other towns—for example, invite speakers from other communities to share success stories.
- Encourage people to network and share what is working for them.
- Establish a fund for assisting community members with infrastructure upgrades.
- Create a community plan that addresses the multiple goals of safety for humans, livestock, pets, and wildlife. Some examples: Marin County Livestock and Wildlife Protection Program and City of Lake Forest Park Wildlife Management Plan.

REFERENCES

Further Resources for Livestock Management

A livestock management perspective: (UMass Amherst The Center for Agriculture, Food and the Environment)

Andelt, WF, Hopper, SN. 2000. Livestock guard dog reduce predation on domestic sheep in Colorado. *Journal of Range Management*. 53: 259-267. Available on-line: <http://mountainlion.org/US/co/LIBRARY/CO-R-Andelt-2000-Livestock-Guard-Dogs-Reduce-Predation-on-Domestic-Sheep-in-Colorado.pdf>

The Mountain Lion Foundation Portal to protect livestock: <http://mountainlion.org/portalprotectlivestock.asp>

Marin County Livestock and Wildlife Protection program: <http://www.projectcoyote.org/project/marin-county-livestock-wildlife-protection-program/>

Do it yourself coyote roller for keeping coyotes out: https://www.youtube.com/watch?v=aAC_JTdsTCw

VNC white paper on Coyotes and Livestock management by Robert Fuerstenburg: <http://vashonnaturecenter.org/wp-content/uploads/2014/12/Coyotes-on-Vashon-livestock-recs1.pdf>

Vorwald, D. J. 2016. *Farm dogs: a comprehensive breed guide*

Pavia, A. 2011. Nature's Own: horses, minis, foals and predators. *Stable Management Journal*. Available on-line: <https://stablemanagement.com/articles/natures-own>



Coyote rollers installed on the top of fences prevent coyotes from scaling the fence. They can be purchased or made at home (see reference section for a DIY video).
Photo: www.RollersDirect.com

Ecology and Behavior of Large Carnivores

Boitani L and Powell RA. 2012. *Carnivore Ecology and Conservation: A handbook of techniques*

Bradshaw, G. 2017. *Carnivore Minds: who these fearsome animals really are*

Eisenberg, C. 2014. *The Carnivore Way*

Flores, Dan. 2016. *Coyote America: A natural and supernatural history*

Gross, L. 2017. How fear of humans can ripple through food webs and reshape landscapes. *Smithsonian* available on-line: <http://www.smithsonianmag.com/science-nature/how-fear-humans-can-ripple-through-food-webs-reshape-landscapes-180963987/>

Lawrence, R.D. 1983. *The Ghost Walker*

Masterson, L and Beausoliel R. 2016. *Living with Bears handbook*

Hornocker N, and Negri S. 2009. *Cougar: Ecology and Conservation*

Ripple RJ et al. 2014. Status and Ecological Effects of the World's largest carnivores. *Science* 343. Available on-line: <http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/46657/RippleWilliamForestEcosystemsSocietyStatusEcologicalEffects.pdf?sequence=1>

Wild, Paula. 2014. *The Cougar: Beautiful, wild, and dangerous*

Acknowledgements

Thank you to all who provided insight and contributed their time, suggestions and comments to help create this livestock management guide: Amy Holmes and Bianca Perla (lead authors), Tammy Dunakin, Maggie McClure, Christie True, Julia Montagnet, Brian Kertson (WDFW), Bob McCoy (Mountain Lion Foundation), Sharon and Dick Danielson, Debbie Butler, Kathryn True (editing), Jenna Riggs (graphic design, jennariggs.com). This guide was produced in part through a King County Community Service Area grant.

WILDLIFE NUMBERS

Emergency? Call 911 and ask for State Patrol.

Non-emergency wildlife complaints or questions: WDFW Wildlife Enforcement Officer
Kim Chandler-425-775-1311.

Poaching or other wildlife violations: WDFW- 877-933-9874 or online:

<https://wdfw.wa.gov/about/enforcement/report>

Marine mammals (injured, stranded, dead): Ann Stateler NOAA coordinator: 206-463-9041. If Ann doesn't answer: Cascadia Research: 360-791-9555.

Small DEAD animals (birds, minks, etc.) that could be good teaching specimens:

Gary Shugart, Head Curator, Slater Natural History Museum:

gshugart@pugetsound.edu-- 253-879-3356.

Injured wildlife:

PAWS-- 425-787-2500

Westsound Wildlife Rehabilitation-- 206-855-9057

Sarvey Wildlife Care Center-- 360-435-4817

Pets: Call VIPP 206-389-1085 or Amy Carey directly 206-755-3981

If you have further questions or need further assistance you can always contact VNC:

206-755-5798, info@vashonnaturecenter.org