



Source Water Protection Practices Bulletin

Managing Pet and Wildlife Waste to Prevent Contamination of Drinking Water

Animal waste or feces have long been isolated from people for public health reasons. However, droppings from pets, such as dogs, cats, exotic birds and rabbits, are deposited into rivers, streams, and other water bodies and can threaten human health. This fact sheet addresses some of the measures pet owners can take to improve water quality and reduce the burden on drinking water treatment. (See the fact sheet on livestock, poultry, and horse wastes for information on management measures related to these animals.)



SOURCES OF PET AND WILDLIFE WASTE

While livestock are the greatest contributor of animal waste, perhaps the least suspected source of animal waste is man's very own best friend. Pets, particularly dogs, are significant contributors to source water contamination. Studies performed on watersheds in the Seattle, Washington, area found that nearly 20 percent of the bacteria found in water samples were matched with dogs as the host animals.

Wild birds and small mammals can introduce microorganisms into a water supply through direct contact or from watershed runoff. Wildlife commonly associated with microbial



Snow geese

contamination of drinking water supplies include deer, beavers, muskrats, rodents, gulls, and geese. Birds are widely reported to be one of the most common and significant sources of contamination of open reservoirs. Areas that are suitable for pets can attract wildlife as well, so tips pet owners can use to deter wildlife are presented in this fact sheet.

WHY IS IT IMPORTANT TO MANAGE PET AND WILDLIFE WASTE NEAR THE SOURCES OF YOUR DRINKING WATER?

Probably the greatest health concern associated with animal wastes is pathogens. Many pathogens found in animal waste can infect humans if ingested. Organisms such as *Cryptosporidium*, *Giardia lamblia*, and *Salmonella* can induce symptoms ranging from skin sores to chest pain. *E. coli*, which causes diarrhea and abdominal gas, has been the source of disease outbreaks in several States. Particularly virulent strains of *E. coli* can cause serious illness and fatalities. *Cryptosporidium* is of particular concern because it is highly resistant to disinfection with chlorine. This protozoan causes gastrointestinal illness lasting two to ten days in healthy individuals but can be fatal in people with weakened immune systems.

Dog and cat droppings often contain roundworms and other parasitic nematodes. Infection by just a few roundworms usually causes no problems, but more severe infections may cause fevers, bronchitis, asthma, or vision problems. Cat feces may contain toxoplasmosis, a parasite that infects humans and other animals. Cats are the only animals known to excrete toxoplasmosis oocysts, which are resistant to most disinfectants. Toxoplasmosis is a serious health concern for pregnant women and immuno-compromised individuals.

AVAILABLE PREVENTION MEASURES TO ADDRESS PET AND WILDLIFE WASTE

The most effective way for pet owners to limit their pet's contribution to source water contamination is to simply ***clean up and dispose of pet waste***. As long as the droppings are not mixed with other materials, pet waste should be flushed down the toilet. This allows waste to be properly treated by a community sewage plant or septic system. Also, pet waste can be buried or sealed in a plastic bag and put into the garbage if local law allows it (check with the local health department to be sure).

To ***bury pet wastes***, dig a hole at least one foot deep, and place three to four inches of pet waste at the bottom. Use a shovel to chop and mix the wastes into the soil at the bottom, then cover the wastes with at least eight inches of soil to keep rodents and pets from digging them up. Pet wastes should only be buried around ornamental plants, and never in vegetable gardens or food-growing locations.

Pet wastes are ***not recommended for back yard compost piles***. While animal manures can make useful fertilizer, parasites carried in dog and cat feces can cause diseases in humans and should not be incorporated into compost piles. Dogs and cats should be kept away from gardens as well.

Pets should not be walked near streams, ponds, or lakes. Stream banks should not be part of the normal territory of animals. Instead, walk pets in grassy areas, parks, or undeveloped areas. Pet wastes left on sidewalks, streets, or other paved and hard surfaces are readily carried by storm water into streams. Pet wastes should be kept out of street gutters and storm drains.



Some more advanced practices that can be adopted in public parks are doggy loos and pooch patches. ***Doggy loos*** are disposal units installed in the ground where decomposition can occur. If pets are allowed off-leash, they can be trained to defecate on ***pooch patches***, which are sandy areas designated for that purpose. Special bins can also be provided for the disposal of pet waste. Wherever pets defecate, whether in public parks or backyards, the ***“Long Grass Principle”*** can be used to prevent source water contamination. Not only are dogs readily attracted to long grass, but long grass helps to filter pollutants and the feces can decompose

naturally while minimally polluting runoff. A height of around ten centimeters (10 cm) is appropriate for such long grass. These long grass areas, however, should be placed away from overland flow paths, stream channels, lakes, drinking water wells, and storm water drainage inlets.

Managing Wildlife

Although there are a variety of ways to decrease the risk posed by non-domestic animals by removing attractants or harassing nuisance species, any such plans should be implemented only with a good understanding of the nuisance wildlife population in question. For example, Federal or State permits might be required for wildlife control harassment programs; in addition, some nuisance species, such as Canada geese, are protected by Federal law, and harming the birds or their eggs can result in stiff penalties. Consult fish and wildlife agencies regarding the handling of protected species.

Harassment programs can be implemented to repel birds and wildlife from valuable surface waters. Available methods include habitat modification, decoys, eagle kites, noisemakers, and scarecrows or plastic owls. A daily human presence can keep birds and other wild species away.

Reducing the attractiveness of yards to wildlife might encourage these species to live elsewhere. Species can be diverted from sensitive areas by using fencing, mowing, landscaping changes, tree pruning (to reduce bird roosting), or drainage devices (to keep beavers and muskrats from building dams and dens). Food sources can be kept to a minimum by prohibiting feeding by the public, removing trash, securing pet feed, and reducing palatable plant species.

FOR ADDITIONAL INFORMATION

These sources contain information on pet waste pollution prevention measures. All of the documents listed are available free of charge on the Internet.

If your community does not regulate pet waste, e.g., with a “pooper-scooper” ordinance, try to make it a priority of your local governing body. Contact the local animal control officer or local or State department of health. Encourage the parks and recreation department to place pet waste collection and disposal stations in public parks.

Home*A*Syst (www.uwex.edu/homeasyst) provides valuable information on environmental and health issues in and around the home.

U.S. EPA, *Long Island Sound Study. Pet Waste Poster*. Retrieved February 19, 2001, from the World Wide Web: <http://www.epa.gov/region01/eco/lis/posters/pet.html>