



SPOTLIGHT ON... DEALING WITH DOG WASTE

Dog Lovers for Clean Water

Puget Sound is home to over 1.1 million dogs. The bulk of our dogs are in the most urban areas of Puget Sound, at an average rate of 1.5 dogs per dog-owning household. Dogs in the Puget Sound region produce almost 400,000 pounds of dog waste per day. Almost all dog waste in the region is ‘deposited’ in backyards. Left untreated, it can pose many dangers for the health of Puget Sound, pets and the people around them.

Don’t all animals poop, though? Why is dog waste singled out for attention in this newsletter? If you consider the number of dogs in Puget Sound, it far exceeds the number of deer, bears, whales or other large mammals you would find in nature, and so does the amount of waste they produce. Cats were also considered, but even though there are more cats than dogs, much of the waste is handled in litter boxes and the waste is smaller in volume. Livestock owners must have manure management plans and receive lots of support in creating those plans.

The Problems:

Pet waste can transmit parasites and infectious disease, including a host of pathogens that can cause digestion distress, such as *Giardia*, *Ancylostoma* and *Cryptosporidium*. Some of these pathogens can live in nature for extended periods. *Toxocara canis* eggs can live in the soil between 6 months and 4 years.

Pet waste can pollute ground and surface water. Many Puget Sound streams exceed state limits for fecal coliform, bacteria that is relatively cheap to test and indicative of other pathogens / bacteria present in the system. These bacteria are in the digestive tracts of mammals and aid in the digestion of food. Dog feces are a source of fecal coliform. When it rains or snows, all that waste gets washed directly into streams, lakes, ditches or the sound itself. Water that flows into our storm drains is often untreated before it discharges to a nearby water body.

Pet waste can attract flies and other pests, cause unpleasant odors, and be carried into the house via “dirty shoes”.

Scoop it, Bag it, Put it in the Trash!

Clean up after your dog every day or every other day. When she poops, scoop it, bag it and put it in the trash. That is the best, and least gross, option. In some communities, you can flush it down the toilet if your home is on a public sewer system – check with your local waste treatment plant. Do not flush dog waste if you are on a septic system! Processing pet waste

County	No. of Dogs	Waste / Day (lbs.)
Island	24,544	8099
Jefferson	10,537	3477
King	524,723	173,158
Kitsap	66,486	21,940
Mason	19,347	6,385
Pierce	206,768	68,233
San Juan	7,351	2426
Skagit	31,478	10,388
Snohomish	177,286	58,504
Thurston	66,545	21,960
Whatcom	56,299	18,579
Total	1,191,364	393,150

From Snohomish County Surface Water Management, 2009.

Fecal coliform bacteria machine



may exceed the design capacity of your septic system. High volumes of hair and ash, not found in human waste, can clog the drain field. If you are on a septic system, place the waste in the trash that goes to the landfill.

The goal is to prevent the waste from contaminating surface water. To do this, you must remove it from the environment. Because landfills and sewage treatment plants are carefully monitored and have ways to catch the leachate (what leaks out), they can more safely handle contaminated material such as dog waste and cat litter, as well as disposable diapers.

It is legal to bag your dog waste and put it in the garbage can. Even if everyone were to put 100% of their pet waste in the trash, this would not cause much of an increase in waste volumes. Double bagging the poop is a courtesy to garbage haulers. Don't worry about buying the biodegradable plastic bags – nothing degrades in the landfill – not even food and newspapers. This is a great way to reuse all of those plastic bags that come with us!

Why burning and composting won't work:

These are not safe ways to dispose of pet waste. Burying will contribute to water pollution and will not kill the pathogens. Imagine putting 400,000 pounds of raw sewage in the ground to biodegrade, every day – it will leach into ground and surface water. Pet waste is raw sewage. Also, home compost piles do not reach temperatures high enough to kill pathogens. To kill *E.coli* and *Salmonella*, for example, the compost pile temperature must reach 140 degrees for an extended time; other pathogens can survive temperature extremes, chlorination, and drying. *Cryptosporidium*, *Leptospira*, *Salmonella*, and *E. coli* can survive in feces or soil for months. Roundworm eggs can survive years in soil. Again, our landfill systems and some waste water treatment systems safely handle pet waste.

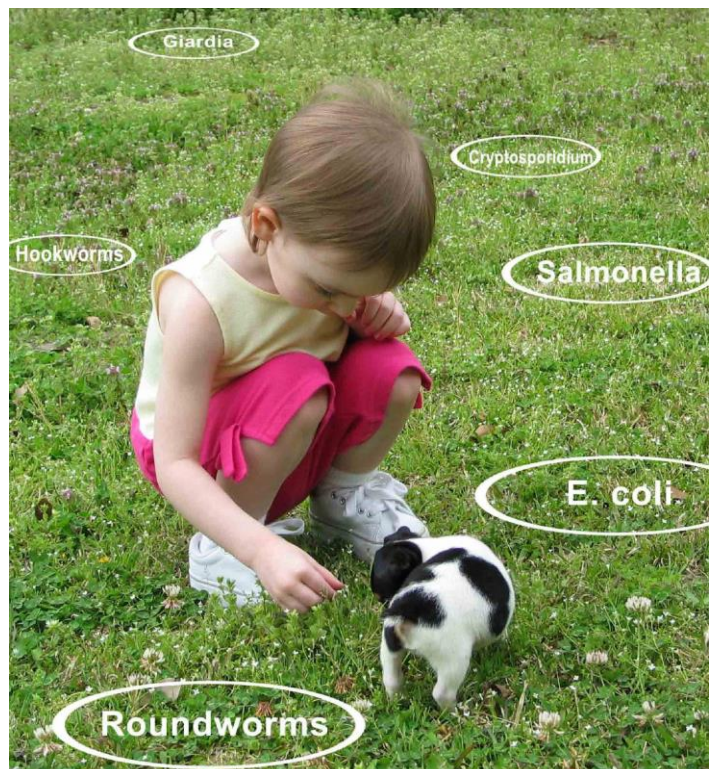
In Alaska and Vancouver, Canada, large-scale pet waste composting systems are being tested. Although somewhat successful, temperature standards are not consistently met. At this point, scientists believe the health and environmental risks are far too great for home composting to process our pet waste. Should you decide to home compost dog waste, in spite of the above recommendations, never use the resulting compost on food crops; it must be kept separate from your food crop compost. Even the tools must be kept apart.

Pet waste or doggie septic systems:

We do not recommend these devices. Commercially produced pet waste digesters are similar to burial; there is no way to know for sure if they are working properly. We have not found any scientific studies that show these devices work. According to the manufacturer literature, they do not function properly where water tables are high, in low temperatures, in some soil types, and with dog food high in ash content. Again, we recommend throwing waste in the trash or flushing it.

Dog waste doesn't just go out with the tide...

Dog waste will dissolve in water. It will mix into the sand or be washed away by the tide. But the hazardous bacteria and excess nutrients are not gone. Bacteria, parasites, and other harmful organisms generally cannot be seen by the naked eye and they are hardy and long-lived.



In addition to polluting water, dog waste can pollute marine organisms. Shellfish take in and filter the water around them. That means if the water near where you are harvesting shellfish is polluted by dog waste (or other pollutants), you could well be harvesting unsafe shellfish. Some of our commercial shellfish beds are at risk of closure or are already closed due to increasing fecal coliform levels in their home waters.

Responsible pet ownership

Cleaning up after your pet in public areas is a standard practice. We can and should be cleaning up after our pets even on our own property. Do it for clean shoes, clean lawns and clean water.

Sources

Snohomish County Surface Water Management Presentations, Stef Frenzl, Stef.Frenzl@snoco.org

Compost Science and Utilization (2007) Vol. 15, No. 4, 237-242.

Design, Testing and Implementation of a Large-Scale Urban Dog Waste Composting Program. Leah Nemiroff and Judith Patterson. Environmental Protection Administration (4606) July 2001.

EPA Source Water Protection Practices Bulletin Managing Pet and Wildlife Waste to Prevent Contamination of Drinking Water. EPA 916-F-01-027

Microbes and Urban Watersheds: Concentrations, Sources, and Pathways. Feature article from Watershed Protection Techniques. 3(1): 554-565.

Reducing Pet Waste. Submitted to: Southwest Florida Water Management District. Submitted by: McKenzie-Mohr and Associates

This "Spotlight On" publication was originally a Shore Stewards Newsletter compiled by Darcy McNamara, Jefferson County, and Chrys Bertolotto, Snohomish County, published on April 2010



Shore Stewards is a program of Washington State University Extension.

Extension programs and policies are consistent with federal and state laws and regulations on nondiscrimination regarding race, sex, religion, age, color, creed, national or ethnic origin; physical, mental or sensory disability; marital status, sexual orientation, or status as a Vietnam-era or disabled veteran. Evidence of noncompliance may be reported through your local Extension office.

