

Water Quality Protection

SAFE AND HEALTHY LIVES
IN SAFE AND HEALTHY
COMMUNITIES



Residential Series
March 2004



Pet Waste

RHODE ISLAND IS A STATE RICH IN WATER RESOURCES. From our freshwater lakes and ponds, rivers and streams, and abundant groundwater resources to our coastal ponds, estuaries, Narragansett Bay, and the Atlantic Ocean, our water resources sustain our livelihood. Our land use activities affect the quality of these water resources. There are many things that each of us can do to protect water resources. In this factsheet, we focus on Pet Waste and Water Quality. To find out more about other ways of reducing pollution, refer to the factsheet *What You Can Do About Nonpoint Source Pollution*.

What do you do?

- ◆ When you take your dog for a walk or empty the kitty litter box, do you leave pet waste on the sidewalk, along the edge of the street, or dispose of it directly into a storm drain?
- ◆ When riding your horse, does it deposit manure in or near a stream or pond along your trail route?
- ◆ Do you keep a few livestock and pile the manure in areas exposed to rainfall and snowmelt?
- ◆ Do your trips to the park always end in feeding the geese and ducks?

If you can answer "yes" to any of these questions, you may be surprised to learn that these everyday activities, which are a normal part of caring for your pets and livestock, can be a source of water pollution. It may be difficult to picture how one dog or one horse depositing a small amount of animal waste here and there can result in potential water pollution. However, studies have shown that the cumulative impact of waste from all the pets, livestock, and resident waterfowl within a watershed can have a significant impact on water quality and may also cause human health risks.

What are the concerns?

Pet waste and livestock manure left on the ground, exposed to rainfall and snowmelt, or disposed of in storm drains can mix with runoff and eventually enter lakes, streams, Narragansett Bay, coastal ponds, or drinking water reservoirs. Animal waste can pose several water quality concerns. It is a potential source of nutrients and pathogens (disease-causing organisms), which can degrade water quality making it unsafe and undesirable for drinking, swimming, boating, fishing, shellfishing, scenic value, and aquatic life. Refer to factsheet *What You Can Do About Nonpoint Source Pollution* for more information about the effects of nonpoint source pollution.

What are some solutions?

There are safe practices for handling and disposing of pet waste. In doing so, you are protecting both the environment and your health.

Pick up after your pet

When walking the dog, take a plastic bag and scooper for picking up solid waste. Many communities have "pooper scooper" laws requiring immediate pet waste removal. Call your town hall about pet waste laws in your community.

Pet waste should also be collected daily from your own yard. Pet waste should not be deposited or left near drinking water wells,

storm drains, surface water bodies, or children's play areas. Keep these areas clean.

**What should you do with pet waste?
No solution is perfect, but here are
a few choices:**

1. Flush pet waste down the toilet.

The water from your toilet goes to either a sewage treatment plant or a septic system. Both are designed to treat human waste. To prevent plumbing problems or serious septic system malfunction, **don't flush debris such as rocks, sticks, or cat litter.** Cat feces may be scooped out and flushed down the toilet, but used litter should be put in a securely closed bag and then disposed of in the trash.

2. Bury pet waste in the yard.

Dig a hole or trench that is:

- At least 5 inches deep
- Away from vegetable gardens
- Away from any lake, stream, ditch, or drinking water well
- Preferably in grass or wooded areas (excluding fruit or nut trees that you eat from)

Microorganisms in the top layer of soil will break down the waste. Don't add pet waste to your compost pile, because the pile will not get hot enough to kill disease organisms.

You can install an in-ground pet waste disposal system or digester, which works like a small septic tank. Check local laws that may restrict their use, design, or location. Pet waste digesters may

be a suitable alternative when site conditions are favorable. An enzyme powder and water are used to assist with the decomposition. Pet waste digesters require a deep hole and do not function well in heavy clay or compacted soils, or at temperatures below 40 degrees F. During winter months, an alternative disposal method will be needed. A pet waste digester system should not be located near a drinking water well, storm drain, surface water, or vegetable garden.

Both pet waste digesters and straight burial are not recommended at sites where there is a high

water table within 18 inches or less from the ground surface.

3. Put pet waste in the trash.

If you dispose of pet waste in the trash, wrap it carefully in a sealed bag so it will not spill during trash collection. While cat feces can be managed using options 1 or 2, used cat litter should be disposed of in the trash. Do not flush cat litter down the toilet or bury it in the yard.

What about dog yards and runs? Dog yards and runs should never be located near a drinking water well (including your neighbor's) or immediately upslope of a surface water body. Ideally, the area should be fairly level and well vegetated away from vegetable gardens and children's play areas. Collect and dispose of pet waste as suggested above.



Don't feed the waterfowl!

Feeding waterfowl encourages more birds than natural food supplies can support. These large flocks also deposit large quantities of waste in and around surface waters that can significantly degrade water quality.

Keep livestock manure and bedding piles protected from the weather

If you have horses or other livestock and stockpile or compost the manure and bedding waste, keep the storage areas sheltered from the weather and away from drinking water wells or other nearby surface waters. Do not allow rainfall or snowmelt to mix with the pile and wash it off-site.

Depending on the amount of manure and bedding waste generated on a daily basis and the amount of land you own or have access to, it may be necessary





to think about some options for handling, utilizing, or disposing of the animal waste properly. **Contact the USDA Natural Resources Conservation Service and your local Conservation District at (401) 828-1300 for more information and assistance with the following points.**

Livestock manure can be a valuable source of plant fertilizer and soil organic matter. However, when it is over-applied or applied at the wrong times, it can be a source of ground and surface water pollution. If you have more manure than you can use, consider finding others who can use it. In addition to neighbors with gardens, nurseries and fields used to produce hay, corn, and other field crops can be candidates for using surplus manure.

Temporary Storage Area.

Protect waste storage areas from the weather and keep stormwater runoff from roofs, driveways, and other areas away. Lining the storage area helps prevent leaching of nutrients and pathogens into the groundwater, and never locate a manure storage area near a drinking water well, storm drain, or surface water.

Compost the manure.

Compost is high in organic matter and

provides a more stable, slow release of plant nutrients. Depending on your situation, you may have the space and some small equipment to compost the manure. This option may also depend on how much bedding and feed waste is generated, as this reduces the need for imported ingredients to do the composting process.

What about animal pens and corrals?

These areas are usually small and occupied daily. They are concentrated sources of nutrients and pathogens that could pollute water resources. Ideally, locate pens in areas that are level and well vegetated. If space allows, having more than one pen to rotate animals between, along with planting a less palatable grass mixture, can help maintain some degree of vegetative cover. This will also help reduce erosion and runoff. Surround the outside of the animal pen with a good vegetative buffer and pick up solid waste periodically. Where there is adequate pastureland, proper grazing management is key towards balancing plant nutrients and animal waste.

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Diseases that can be transmitted from pet waste to humans include:

- ◆ **Campylobacteriosis** – A bacterial infection carried by dogs and cats that causes diarrhea in humans.
- ◆ **Cryptosporidiosis** – A parasitic infection that causes diarrhea and abdominal pain.
- ◆ **Giardiasis** – A protozoan infection of the small intestine that can cause diarrhea, cramping, fatigue, and weight loss.
- ◆ **Salmonellosis** – The most common bacterial infection transmitted to humans by other animals. Symptoms include fever, muscle aches, headache, vomiting, and diarrhea.
- ◆ **Toxocariasis** – Roundworms usually transmitted from dogs to humans, often without noticeable symptoms, but can cause vision loss, a rash, a fever, or a cough.
- ◆ **Toxoplasmosis** – A protozoan parasite carried by cats that can cause birth defects such as mental retardation and blindness if a woman becomes infected during pregnancy. It is also a problem for people with depressed immune systems. Symptoms include headache, muscle aches, and lymph node enlargement.

For More Information:

University of Rhode Island Cooperative Extension Home*A*Syst Program

Offers assistance, information, and workshops on residential pollution prevention including private well water protection, septic system operation and maintenance, landscaping for water quality protection, and actions residents can take to reduce pollution.

401-874-5398 www.uri.edu/ce/wq

RI Department of Health, Office of Drinking Water Quality

Offers assistance and information on private well water testing and state certified water testing laboratories.

401- 222-6867 <http://www.health.ri.gov/environment/dwq/Home.htm>

For a listing of HEALTH's certified private laboratories in Rhode Island <http://www.health.ri.gov/labs/instate.htm>

USDA Natural Resources Conservation Service

Your local Conservation Districts

For technical assistance with the management of livestock manure and waste

401-828-1300 www.ri.nrcs.usda.gov

Adapted from "Pet Waste and Water Quality," University of Wisconsin, Extension, 1993. "Pet Waste and Water Quality," Rutgers Cooperative Extension. FS922. "Clean Waters Starting in Your Home and Yard," University of Connecticut Sea Grant Extension Program and Cooperative Extension System's NEMO Project, 1999.

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