Living On the Land

Simple Steps To Protect Your

Surface and Well Water

When we think of water pollution, many of us think in terms of industrial pollution pouring out of pipes. However, a large amount of contamination comes from a variety of sources and people's everday activities. This "non-point" contamination comes from many sources spread over a wide area. Pesticides and fertilizers from yards, gardens and farms, petroleum products from vehicles, and animal waste from pets and livestock can leach into the groundwater or runoff into streams when transported by rainwater. Taken alone, each source may not pose a significant threat to clean water, but when added up over a wider geographic area, the problem can become quite severe and complex. Often, surburban areas add more than rural farm communities due to careless lawn care, poor vehicle maintenance, and outdoor pets.

Rainwater travels through or over a substance, partially dissolving or detaching small particles that are then transported with the rainwater runoff. And where does that water go? Onto your property or your neighbors or into ponds, lakes, streams, and wetlands. Over time, this process can have some negative impacts both on your health and pocketbook as well as on the environment.

So, what are we talking about and what can you do?

1. **Protect Your Well.** It is important to protect your drinking water source. As a "rule of thumb", any activities that might contaminate your well should be at least 100 feet from your well. This includes nearby mixing and storage of pesticides and petroleum products, or livestock confinement areas and septic tanks. A greater distance is recommended if the well is in more permeable soils. Installing antiback-siphon devices on your well and outdoor faucets will further protect your well from potential contamination. If you abandon or temporarily stop using a well, cap it to prevent potential contamination of the groundwater source. If you think you might have a contaminated well or are just curious, you can have your well tested for nitrates, lead, arsenic, and bacterial contamination.

2. **Maintain Septic Systems.** Properly maintaining your septic system can greatly reduce most potential contamination to your water. Generally, your septic tank should be pumped every three to five years depending on your

	Pump Your Septic Tank every:					
	1 yr	2 yrs	3 yrs	4 yrs	5 yrs	6 yrs
Tank Size (gallons)	Number of People					
1000	12	6	4	3	2	2
1250	16	8	5	3	3	2
1500	19	9	6	4	3	3

septic system and the number of people in your household. Other measures help prolong septic system life and decrease the frequency of pumping: Avoid adding extra water; repair any leaks immediately; do not dispose of household hazardous wastes (petroleum products, pesticides, antifreeze, paint, bleach, etc.) into your septic system because they kill the bacteria that break down human waste. The County Health Department requires proof of inspection and pumping when a property is sold.

We often forget the drainfield, which is an integral part of a functioning septic system. Avoid compacting this area by keeping vehicles and large livestock off of the drainfield area: you might crush the pipes or plug drainholes. Avoid planting deep rooted plants over the drainfield since plant roots can also impair proper functioning.

3. **Divert Rain Water.** Keep clean water clean and reduce mud by maintaining gutters and downspouts that divert rainwater away from livestock areas, fertilizer, etc. Concentated runoff picks up contaminates as it flows over the ground. Just remember that for every 10 foot by 10 foot (100 square feet) of roof surface, one inch of rain will produce 62 gallons of water.

4. **Install grassed waterways and swales.** Creating shallow swales covered with vegetation slows runoff which prevents soil erosion and keeps silt and pesticides from reaching streams. These swales also help water infiltrate into the ground.

5. **Practice low input gardening.** Reduce the use of pesticides and fertilizers by planting cover crops on larger areas before heavy fall and winter rainfalls. These crops utilize some of the nutrients, such as nitrogen. Incorporating these cover crops into the soil before spring planting releases the nutrients for the next crop. When in doubt, test your soil! Soil labs will provide a fertilizer recommendation that matches your soil fertility. This prevents excess application that could contaminate wells and water bodies. This will also save you money on fertilizers.

6. **Use Integrated Pest Management (IPM) practices.** Certain practices reduce your reliance on potential contaminants:

   - Use pest resistant plant varieties in landscaping.
   - Use native plants.
   - Determine pest levels before using pesticides.
   - Use biological pest control.
   - Choose pesticides that are the least persistent and least toxic. Spot spray.
   - Handle pesticides safely and apply them accurately to reduce pesticide contamination. More is not better when using herbicides and pesticides and overapplication often reduces effectiveness.

7. Cover manure piles. Those with livestock should cover manure piles to prevent the leaching and runoff of concentrated nutrients, salts, and bacteria into wells and water bodies. This can be as simple as covering manure with a tarp or building a small shed. Composting wastes reduces the volume of the manure and stabilizes nutrients into a form that does not as easily leach and runoff.

Want more information?

- Call WSU Extension at (360) 397-6060 ext. 0 for fact sheets and pamphlets on ground water protection.
- WSU Extension, in partnership with the Clark County Clean Water Program and Clark Conservation District, offer classes and volunteer programs to train people to be better stewards of the land. Call (360) 397-6060, ext. 7720 for more information.
- The Natural Resource Conservation Service and the Clark Conservation District provide technical knowledge and cost sharing to implement some of these practices. For more information call (360) 883-1987.

Adapted by Doug Stienbarger, WSU Extension Clark County, and Cindy Stienbarger, Clark County Pulbic Works (November 2003) from:

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Easy BMP, Roof Water Diversion. 1995. Everett: Snohomish Conservation District.

A Homeowners Guide to Septic Systems, EPA-832-B-02-005. 2002. Washington, DC: Environmental Protection Agency.

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