

North Island Labs

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How do our everyday household activities impact our drinking water?

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When we think of pollution, pictures of messy oil spills and the smoking stack of industry come to mind. However, non-point source (NPS) pollution is now recognized as the leading cause of water quality degradation. Although a single household might only contribute minor amounts, the combined effects of an entire neighbourhood can be serious.

The soil's natural filtering effect gives us the crystal clear water we expect of groundwater. However, if the soil itself is contaminated then the water passing through the soil will become contaminated and unfit for consumption.

Additionally traditional development practices, such as paved driveways & ditching prevent this natural filtering process from happening as well as impairing natural groundwater recharge.

So what can we do? The following are some simple steps to help reduce your household impact on water quality. (continued on page 2...)

Everyday activities can have a harmful impact on our groundwater supply

Non-point source contamination (NPS) is caused by one or several activities that introduce pollutants into our environment over a broad area. Agriculture, Forestry and day-to-day household activities are examples.



How do you dispose of pollutants in your home?

You may be surprised to learn that the way you dispose of products you use at home can contribute to the contamination of your community's ground water. The truth is, however, that common household products like motor oil, pesticides, left-over paints or paint cans, mothballs, flea collars, weed killers, household cleaners, and even a number of medicines contain materials that can be harmful to ground water and to the environment in general.

Simple measures can be taken to protect our environment

The average American disposes of approximately one pound of this type of waste each year. Therefore, with a population of nearly 63,000, this means 63,000lbs of hazardous or toxic substances being disposed of by residents in the Comox Valley every year. So, although the amount of any of these substances that you, as an individual, pour down your drain, put in your trash, or dump on the ground may seem insignificant to you, try multiplying it by the number of people in your community. That amount may not seem so insignificant.

Firstly, Don't Pour It Down the Drain! Anything you pour down your drain or flush down your toilet will enter your septic system or your community's sewer system. Using this method to dispose of products that contain harmful substances can affect your septic system's ability to treat human wastes. Once in the ground, these harmful substances can eventually contaminate the ground water. In addition, most community wastewater treatment plants are not designed to treat many of these substances. Thus, they can eventually be discharged into bodies of surface water and cause contamination.

Don't Put It in the Trash! Community landfills also generally are not equipped to handle hazardous materials. As rain and snow pass through the landfill, the water can become contaminated by these products and eventually carry them into the ground water and surface water.

Don't Dump It on the Ground! Hazardous wastes that are dumped on or buried in the ground can contaminate the soil and either leach down into the ground water or be carried into a nearby body of surface water by runoff during rainstorms.

Do Use and Dispose of Harmful Materials Properly! There are very few options for disposing of hazardous products used in your home, so the first step may be to limit your use of such products. Whenever possible, substitute a non-hazardous product. When that is not possible, buy only as much as you need. Larger quantities may be less expensive, but they leave you with the problem of disposing of them safely. Finally, urge community officials to sponsor periodic household hazardous waste collection days if they have not established this policy. By helping your community to centralize collection of hazardous household wastes for appropriate disposal, you will be helping your community to make a major contribution toward protecting its ground water. The saying "Garbage in, garbage out" applies to more than computer data bases.

Household Contaminants to Consider

- ❖ *Fuel, oil, and other automotive fluids*
- ❖ *Furniture stripping & refinishing fluids*
- ❖ *Fertilizers & pesticides*
- ❖ *Animal manure*
- ❖ *Paints & paint removers*
- ❖ *Septic Systems*
- ❖ *Swimming pool/hot tub chemicals*
- ❖ *Household solvents*
- ❖ *Soap & detergents*

Simple ways to minimize household contamination of groundwater

- 1. Proper Chemical Use, Storage & Disposal.** Keep an inventory of all hazardous chemicals in your home & store them safely. It is also important that they are disposed of properly. Check out the waste disposal directory now available on the RDCS website under recycling.
- 2. Use Greener Alternatives.** Do you really need the chemicals you use? Many retailers carry green or organic alternatives. Check with stores in your area for more information.
- 3. Limit Paved or Impervious Surfaces.** This helps reduce runoff & allows for groundwater recharge. Many use gravel, paving stones, & wooden decks to landscape with stunning effects.
- 4. Reduce the Use of Pesticides & Fertilizers.** Reducing lawn area helps reduce the need for pesticides & fertilizers and saves time. Consider a cobblestone patio surrounded by natural vegetation. This attracts birds, which help reduce pests.
- 5. Xeriscape** (water-conserving landscapes). Consider drought tolerant plants when landscaping to reduce water consumption and save you time.



Many recycling stations provide chemical waste disposal

Seven Basic Steps To Maintaining Safe Water

1. Identify and monitor potential problem sources.
2. Talk to local experts.
3. Have your water tested periodically.
4. Have the test results interpreted and explained clearly.
5. Set a regular maintenance schedule for your well and follow through on it.
6. Keep accurate up-to date records on work done and tests performed.
7. Remedy any problems quickly and thoroughly.

For Your Consideration

- ❖ Baynes Sound: contamination of shellfish through storm water runoff, sewage seepage and agricultural runoff total annual economic efficiency losses* of \$ 400 000
- ❖ Victoria and Esquimalt harbors remain closed to commercial crab harvesting due to dioxin/ furan contamination.
- ❖ High levels of heavy metals have been measured in sediments near storm water outfalls. These contaminants can cause sub lethal toxicity to benthic (bottom dwelling) organisms.

*Economic efficiency loss: The sum range of household risk avoidance expenditures and the willingness to pay estimates to avoid health risks.

Information taken from: www.env.gov.bc.ca/wat/wq/bmps/npsaction.html

Web Links

Non-Source Point Pollution

www.epa.gov/owow/nps/whatis.html

www.env.gov.bc.ca/wat/wq/bmps/npsaction.html

Recycling Programs

Comox & Strathcona Districts

www.rdc.bc.ca/section_recycling/

Nanaimo, Parksville & Qualicum Beach

www.rdn.bc.ca/cms.asp?wpID=98

www.recycling.bc.ca/index.htm

General Water Quality

Should I get my water tested?

www.bchealthguide.org/healthfiles/hfile45.stm

Action Plan for Safe Water in BC

www.healthservices.gov.bc.ca/cpa/publications/safe_drinking_printcopy.pdf

Water quality and health

www.hc-sc.gc.ca/ewh-semt/water-eau/index_e.html

Ground water basics

www.groundwater.org/gi/gi.html

Groundwater in Canada

http://www.ec.gc.ca/water/en/nature/grdwtr/e_gdwtr.htm

Water Stewardship BC

www.env.gov.bc.ca/wsd/

Guide to well water treatment and maintenance

www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/well-puits_e.html

Check our website, www.nilabs.com, for more information and past newsletters.

Please email us at nilen@telus.net if you wish to be removed from our newsletter listing. Unfortunately information of previous requests was lost during recent computer updates. We apologize for any inconvenience. Also if you have any ideas of interesting topics you would like to see in future issues, your suggestions are always welcome.

JANUARY 2008						
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Use the calendars to schedule your recycling