



Islands Trust

# Living On Hornby Island

October 2009

Hornby Island is part of the Islands Trust, which was created in 1974 as a land use and planning agency with a legislated mandate to preserve and protect the Islands Trust Area and its unique amenities and environment.

Key components of our Island's natural environment are its forests and its shoreline, both containing sensitive ecosystems. A primary element, supporting all living systems, is freshwater - much of it conveyed below the surface as groundwater. Protecting ecosystems and the aquifers supplying the Island's water requires the co-operation of landowners, residents and visitors.

Many of us live in the forest or by the sea and there are particular considerations for protecting those environments. All of us can have a positive impact on our water resource by using water wisely and protecting our aquifers. Here are some things to think about.

## Using water wisely

Most islanders get their water from wells, supplemented by some water catchment. Hornby's limited groundwater, replenished by winter rains, is steadily depleted in summer as the number of people on the Island soars. This leads to significant water shortages. Particularly serious is the potential for salt water intrusion along the settled coastal areas. Heavy pumping can draw sea water into the aquifer, contaminating the fresh water. Most of Hornby's aquifers are classified as "moderately developed." The Whaling Station Bay - Anderson Drive area is classified as "highly developed, highly vulnerable" - the most sensitive provincial aquifer classification, requiring particular care with water withdrawal.

### ~ How we can be water-wise

- Establish a rainwater catchment and storage system to reduce reliance upon well water.
- Use water-saving devices such as low-flow showerheads and low-flush toilets.
- Limit the number of people using your property during dry periods and teach them about wise water use.
- Re-use kitchen water on flowerbeds or planters.
- Shower briefly, or go for a swim and wear those clothes one more time.
- Avoid pumping too much water at any one time. Allow the well a period of recovery between showers or laundry loads.
- Reduce garden irrigation. Plant drought-resistant species, landscape with native plants, and use mulch to retain moisture.
- Stop running water while cleaning teeth or vegetables. Instead, use a glass of water for rinsing teeth and a bowl or dishpan to wash vegetables.
- Place a sealed container of water or sand in the toilet tank to reduce the flush volume.
- Establish household rules for water use and...fix leaks!



Photo by Joanne Ovitsland

## Protecting our Aquifers

About 20% of our rainfall penetrates the surface and becomes "groundwater" in the faults and fissures of the underlying sedimentary rock. This is our main source of domestic water. Although some may resurface as springs and most of it eventually reaches the ocean, more than 500 wells intercept its flow.

Hornby's aquifers are classified as "highly vulnerable" because there is no confining layer to protect them. This means that any harmful materials entering the ground may contaminate well water and pollute the marine environment. Wells themselves can be a means of introducing pollutants into the groundwater.

Inadequate treatment of human waste is a serious health concern. Innovative treatment systems, more suitable for some situations, are starting to become available. However, all dwellings on Hornby are legislated to provide effective wastewater treatment.

- Ensure you have an adequate, functioning waste treatment system. There are local experts who can help you evaluate your system and provide

recommendations for improvement.

- Make sure your septic system is regularly inspected and pumped out.
- Do not overload your septic system or allow harmful chemicals to be flushed into it.
- Outhouses should be vaulted and pumped as needed.
- Take steps to improve the protection of your wellhead.
- Abandoned wells should be properly capped.
- Don't use chemical fertilizers and pesticides.
- Store and apply animal manure well away from watercourses, wells and saturated ground.

## Living in the Forest

The Coastal Douglas-fir ecosystem is the most endangered and the least protected in B.C. It also has the highest biodiversity - which means it supports the highest number of species per unit of area. Many of these are rare or threatened. No doubt others remain to be discovered.

This ecosystem is only found on the Gulf Islands, part of the East Coast of Vancouver Island, and the San Juan Islands, with a narrow strip on the Sunshine Coast. Less than 3% of this area is protected - far short of the Provincial goal of 12%. Only 1% of the original forest remains in an undisturbed state. The Coastal Douglas-fir zone includes the increasingly rare Garry oak woodlands.

### ~What forest dwellers can do

- Avoid the temptation to create a park-like landscape. Underbrush, snags and fallen dead trees all play an important part in the ecosystem.
- Talk with neighbours about establishing connected "wild areas" across adjoining properties.
- Retain significant areas of natural vegetation on your property. Logged-over land will eventually become "old growth" again.
- Ensure the natural vegetation you retain is protected and cherished in the future with a conservation covenant. (See side box)
- Control invasive species such as broom, holly, daphne, ivy and orchard grass, which eliminate habitat for species such as rare butterflies.
- Use native vegetation for landscaping -- saving water.
- Stay on trails when walking in the forest and keep dogs leashed in public places.
- Become more informed about our forest ecosystem.

## Living by the Sea

Hornby's coastline is valued for its views and for recreation by residents and visitors. More than 80% of Hornby's wildlife is found along the shoreline and in rare ecosystems on land adjacent to the sea. Our rich and diverse marine environment is vulnerable to pollution from run-off and seepage along the shoreline. Physical action and climate change make this an ever-changing zone.

### ~ What waterfront dwellers can do

- Observe the minimum 15 meter setback from the natural boundary of the sea for all structures.
- Allow natural debris to accumulate to provide a buffer.
- Retain natural vegetation as much as possible and restore native species if they have been removed.
- To maintain views, carefully prune trees rather than felling or topping them.
- Ensure that wildlife is not disturbed by dogs and human activity. Harlequin ducks are particularly vulnerable during their breeding and molting phase in June and July.
- Make sure that your sewage disposal system is adequate and functioning well. Non-existent or poorly functioning systems pollute the foreshore killing intertidal species or making them inedible.
- Do not overload the septic system or draw heavily upon well water.
- Use alternative cleaners such as phosphate-free soap, baking soda and vinegar instead of toxic products.

### Good General Practices to Sustain Ecosystems

- Maintain natural surface drainage and wetlands. Ditches, roadways and paved surfaces can have a significant hydrological impact.
- Handle fuels, oil, paints and chemicals carefully to avoid spills.
- In place of pesticides and chemical fertilizers, learn about plant-based formulas for pest resistance and the art of composting.
- Refrain from removing rocks from foreshore or any material affecting fish habitat.

### Covenants and the Islands Trust Fund

*The Islands Trust Fund is a conservation land trust established in 1990 to preserve and protect unique ecological and cultural properties in the Islands Trust Area. As one of British Columbia's leading conservation trusts, the Islands Trust Fund works with landowners to protect special places for the future through conservation covenants. A conservation covenant allows landowners to enlist the help of a conservation organization to ensure the natural values of their property are protected permanently, regardless of who owns the land in the future. For more information on covenants visit the Islands Trust Fund web site at: [islandstrustfund.bc.ca](http://islandstrustfund.bc.ca)*

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