

**Household Water on Gabriola Island**  
***Get the Facts - Know What to Do!***  
**An Information Guide for Homeowners and Residents**

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## PREFACE

### **Indigenous Ways of Knowing - Snuneymuxw Teachings**

As we have explored the topic of water, which connects all living things and whose availability to future generations depends on our choices in the present, we have realized that it is particularly appropriate to frame our discussion in relation to the teachings of the Snuneymuxw, in whose territory Gabriola is located. Their traditional worldview is reflected on the Snuneymuxw website:

*Snawaylth are our Teachings - they govern and guide all aspects of our lives. Snawaylth are our laws, values, beliefs, spiritual guidance, and principles for action. They are comprehensive in that no aspect of our lives, the actions and choices we make, can be understood apart from our Snawaylth.*

*At the heart of our Snawaylth is a worldview that sees the interconnected relationship between all living things in creation. Seeing this interconnectedness teaches us that all things must be honoured and respected, for they all have a spirit and purpose. This guides us in our daily lives, and in the decisions we make as a community. For example, from our worldview to speak of the “impact” of a decision, means to view the impacts holistically through a lens that recognizes the living spirit within all things, and how everything is connected and relates to one another.*

Snuneymuxw First Nation,  
Snuneymuxw Teachings  
<https://www.snuneymuxw.ca/snuneymuxw-teachings/>

The Snawaylth way of viewing the world is very different from a prevailing western worldview where, for example, the value of standing trees, natural vegetation and water is measured in terms of the direct benefit to humans. With regard to freshwater in particular, the hydrological cycle is essential to maintain life and ecosystems everywhere on Earth; water is shared and recycled with all flora and fauna.

Current science, research and technologies have enabled us to effectively quantify and monitor natural resources, and it is within our grasp to achieve responsible and sustainable use. Whether thinking broadly or locally, when planning for the future and considering adaptation to climate and other changes we must make decisions that do

not focus exclusively on sustaining human life, but instead focus on sustaining the biodiversity of *all* life.

Although the following guide necessarily considers freshwater use and management primarily through the lens of private, individual water systems, it is done so knowing that these systems are part of a bigger picture. We simply *cannot* view water resources on Gabriola from the perspective of ownership and exclusive use. Instead, we must understand and respect, as in the Snuneymuxw Snawaylth, that everything is interconnected and interdependent; and that we must do whatever we can to assist with the ‘preserve and protect’ mandate of the Islands Trust.

## **PART 1) Introduction and Background**

### **A. Disclaimer**

The following guide will go a long way toward familiarizing homeowners and residents with water systems on Gabriola. It directs the reader to a range of information via linked sites; but in itself this guide cannot in any way be used or regarded as:

- 1) an official or authorized manual; information and recommendations given in, or inferred from, this guide might or might not be complete, relevant, or even helpful in various circumstances; this guide assumes no responsibility whatsoever for any actions, or results of those actions, as taken by a reader
- 2) a source for ‘legal’ advice on the awareness and applicability of specific regulations, codes or bylaws

### **B. Purpose and Overview**

The main purpose of this guide is to provide straightforward information on typical water systems designed for individual, household residences on Gabriola Island. Commercial and/or high density residential water systems differ from individual residential systems in either (or both) design and regulation, and are therefore not included in this guide.

Various configurations of water systems are covered, and the information provided is therefore relevant to a range of readers. For example, you might be:

- an established resident on Gabriola wanting to assess your current water system, and to consider possible upgrades
- the new owner of an established household wanting to understand, and possibly upgrade, the water system you have just acquired
- building a new home and want to be fully informed about options for selecting and installing a new water system

### C. Responsibility – It's in your hands!

Almost all household water systems on Gabriola are managed privately. It is the *responsibility of the homeowner or resident* to:

- be fully informed about their household water system
- ensure that it is efficient, sustainable, maintained and environmentally safe
- ensure that it is compliant with applicable codes, regulations and bylaws

### D. Primary Information Sources - Websites and Links:

**The Islands Trust**

**The Regional District of Nanaimo (RDN)**

**The British Columbia Government**

While it is always a good idea to consider information from a broad range of sources, it must be stressed here that Gabriola Island is included within the special governance of the **Islands Trust**, and is *Electoral Area B* in the **Regional District of Nanaimo (RDN)**; it is therefore strongly recommended that information available on both the Islands Trust and RDN websites *always* be consulted in addition to whatever other sources the homeowner might consult. Similarly, the **British Columbia Government** websites on household or domestic water (and related topics) should also be consulted.

The numerous website links included in this document are (with a few exceptions) limited to the three governing bodies mentioned above. The reader is urged to consult these sites as they arise; the information provided therein is important with regard to the topic at hand.

**Broken Links?** All website links included in this document were functional at the time of its completion (version 26 Nov. 2025). However, broken or non-functioning links can occur over time. Should you encounter a broken link, try searching the topic using appropriate key words; you might find the specific missing site, or you might find an alternate site that will provide the relevant information.

## **E. The Islands Trust**

**It's where you live.** It is important to bear in mind that the overall Islands Trust Area is divided into Local Trust Areas (island groups) and that each Area has local representation; Gabriola is in the *Gabriola Island Trust Area*. Information provided by the Trust could therefore be specific to Gabriola, and/or applicable to the overall Trust Area.

The Islands Trust,  
*Governance*

<https://islandstrust.bc.ca/about-us/governance/>

The Islands Trust,  
*Gabriola Island*

<https://islandstrust.bc.ca/location/gabriola/>

***Freshwater Sustainability Website.*** With regard to freshwater use and sustainability, the Islands Trust has taken a multi-pronged approach. Its current, comprehensive website *Freshwater Sustainability* presents a range of key topics. It opens with the following:

*Freshwater sustainability is a shared responsibility.*

*Islands Trust's mandate is to preserve and protect the unique amenities and environment of the Islands Trust Area. Among these unique amenities is freshwater, which is inherently vulnerable on the islands. As development pressures continue, population grows, and the impacts of a changing climate intensify, freshwater vulnerabilities for communities, economies, Indigenous heritage, and ecological systems increase.*

The Islands Trust,  
*Freshwater Sustainability*

<https://islandstrust.bc.ca/programs/freshwater-sustainability/>

## **F. Climate Change**

Most climate models indicate warmer, rainier winters and longer, hotter, summers in the future for southwestern British Columbia, including the Gulf Islands. Dry or drought conditions arising from these longer summers can result in groundwater recharge stopping earlier and not resuming until later in the year, thus stressing the aquifers and lowering water tables. Heavier rains in the winter may increase the amount of rainwater lost to run-off, escalating erosion damage to streams.

As a result of climate change, diminishing or changing water sources could mean that the water system you currently have, or intend to install, might or might not continue to function optimally (or function at all) over time. For example, wells that have produced reliably over many years could now, both in seasonal variation and in overall yearly decline, become increasingly intermittent or unreliable. In other words, wells could run dry (or run dry sooner than usual), and could take longer to recover.

Therefore, both assessing and planning water systems should be approached from a long term perspective of flexibility and adaptability. In other words, a current water system should look both to today and tomorrow, designed to accommodate different water supply sources and/or be able to increase its overall storage capacity as needed.

Links to information on climate:

The Islands Trust,  
*Climate Projections for Island Trust Area*  
<https://islandstrust.bc.ca/document/climate-projections-for-islands-trust-area/>

Regional District of Nanaimo,  
*Energy and Sustainability, Climate Action*  
<https://rdn.bc.ca/climate-action>

## **G. Definitions: Water Use and Water Consumption**

The average daily amount of water used per person on the Gulf Islands varies according to a range of factors (location, individual habits, seasonal variations, etc.). On the conservative side, it appears that average use falls somewhere between 150 - 250 (or more) litres per person, per day. Data regarding Individual or household water use is important when it comes to assessing an existing water system or designing a new one. For example, here is a common situation and corresponding question that could arise: is your current (or projected) water system capable of supporting the

increased demand caused by household visitors who often arrive in the dry, water-scarce summer months? If your system isn't capable of meeting this demand, what is your plan? In other words, with supply and demand *both* being variable (and potentially unpredictable), is your water system designed to accommodate your calculated, year-round water use and supply?

Link to calculator for individual or household water use:

Home Water Works, Calculator  
<https://home-water-works.org/calculator>

It is important to understand the difference between *water use* and *water consumption*. Water used for drinking, showering, clothes and dish washing, as well as for toilets, is not consumptive. This is because the water used here is cycled into the septic tank and then out to the septic field where, after treatment, it rejoins the groundwater system (more on this later).

Consumptive water differs in that it is *not* returned to the groundwater system; this includes, for example, irrigation water which is transpired by plants back to the atmosphere, or cooking water that is boiled away. Most household water use is not consumptive; in other words, a significant percentage of the water used by a household is actually cycled back into the groundwater system.

Link to information on household water use:

The Islands Trust,  
*Groundwater: Our Shared Responsibility*  
<https://islandstrust.bc.ca/document/groundwater-conservation-brochure/>

## **PART 2) A Typical Household Water System**

### **A. Sources of Household Water on Gabriola**

The three main sources for household water on Gabriola include:

- **drilled wells** (groundwater / aquifer)
- **catchment systems** (rainwater harvesting)
- **delivery service** (cistern storage) / with providers from both on and off-island

For potable use, water from all sources should be treated.

**Greywater** is a specific type of wastewater. Although, potentially, it is an additional source of water, it is NOT potable (and it cannot be made so); its use is therefore both limited and subject to regulations (more on greywater upcoming).

**Surface Water**, includes streams, ponds, wetlands, swamps, marshes, etc. While the topic of surface water falls outside the scope of this document, it is important to understand that surface water and groundwater are connected.

Links to information on Gabriola's surface water:

Gabriola Land & Trails Trust  
Streams and Wetlands  
<https://galtt.ca/streams-wetlands/>

Nick Doe  
*Locations and names of wetlands and waterways on Gabriola.* (2024)  
<https://www.nickdoe.ca/pdfs/Webp661.pdf>

## **B. Water Incoming and Outgoing: the Groundwater Cycle**

Whether the primary water source is a drilled well, rainwater catchment, or delivery service, the typical household water system normally includes the following:

### **Water Incoming**

- 1) **water source** - well (with well pump), catchment or delivered
- 2) **storage cistern(s)** - plastic or concrete
- 3) **pump** (separate from well pump) transfers water from cistern to pressure tank
- 4) **pressure tank** - supplies even, steady water pressure for household use
- 5) **water treatment** - filters and UV (etc.)
- 6) **household use**

### **Water Outgoing** (wastewater)

- 7) **down the drain** - where is it going?
- 8) **greywater diversion** - if incorporated
- 9) **septic tank** - storing and processing wastewater and sewage
- 10) **septic field** - final filtering and distribution (wastewater to groundwater)

**The Groundwater Cycle.** The components listed above (1-10) indicate the successive steps or stages that groundwater takes in household use. As mentioned earlier, most household water use is *not* consumptive; the importance of appropriate, properly functioning wastewater treatment is immediately and abundantly clear; household wastewater returns to the environment as groundwater, and therefore, potentially, right back into your own and/or your neighbour's well. (It should be mentioned here that the groundwater recharge rate can be slow and variable, depending on aquifer properties.)

Link to additional information on surface water and groundwater connections:

Regional District of Nanaimo

*Groundwater Connections*

<https://www.getinvolved.rdn.ca/groundwater-connections>

**Concrete Cistern.** A common alternative to outdoor, plastic cisterns are concrete cisterns; these can be positioned independently (stand alone) or be incorporated into the structural (or foundational) design of the house itself.

Keeping the typical water system in mind (above), individual household water systems do vary; and this is due largely to water source(s) and specific location requirements. Nonetheless, and no matter how different they might be, water quality and safety applies equally to all household water systems.

### **PART 3) Water Quality and Safety - Treatment and Testing**

#### **IMPORTANT**

- Regardless of the source(s), all water used in the household should be tested regularly for quality and safety (especially for bacteria).
- All household water systems should include water treatment.
- Water treatment equipment *must* be serviced and maintained on a regular basis (e.g. filters, UV).

#### **A. Typical Water Treatment System**

A typical household water treatment system includes two basic components:

- 1) **Filters:** 2 or 3 - generally a 30 micron filter followed by a 5 micron filter, and, occasionally, a carbon filter to end. Depending on your system, filters are normally changed either every 6 months or every 12 months.
- 2) **Ultraviolet Light (UV)** - essential for killing bacteria. Normally, the UV light must be changed every 12 months; it is equipped with a 365-day countdown display.

Additional forms of water treatment are available (e.g. reverse osmosis), but the need for these is variable depending on individual circumstances. A professional assessment (including water testing) is recommended for identifying both specific requirements and the appropriate treatment system.

## **B. Other Indicators**

Water treatment filters can provide initial, visible indicators of both water quality and *changing* water quality as might arise with seasonal variations. Staining that builds up in the toilet bowl can also be a visible indicator. For example, orange (reddish) coloured stains could mean the iron level is high; dark or black stains could mean the manganese level is high.

In any case, and to reiterate, *water testing should be done regularly.*

Links to information on water testing and quality:

BC Government, HealthLink BC,  
*Well water testing*  
<https://www.healthlinkbc.ca/healthlinkbc-files/well-water-testing>

Regional District of Nanaimo  
*Water Quality Testing*  
<https://www.rdn.bc.ca/water-quality-testing>

Regional District of Nanaimo,  
*Wellsmart (see: Information for Well Owners)*  
<https://www.rdn.bc.ca/wellsmart>

BC Government, Ministry of Health  
*Guidance for Treatment of Rainwater Harvested for Potable Use*  
[https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/how-drinking-water-is-protected-in-bc/dwog\\_part\\_b\\_-\\_14\\_rainwater\\_harvested\\_for\\_potable\\_use.pdf](https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/how-drinking-water-is-protected-in-bc/dwog_part_b_-_14_rainwater_harvested_for_potable_use.pdf)

Government of Canada,  
*Guidelines for Canadian Drinking Water Quality: Operational Parameters*  
<https://www.canada.ca/en/health-canada/programs/guidelines-canadian-drinking-water-quality-operational-parameters.html>

Link to **rebates** offered by the Regional District of Nanaimo for water testing (and other water system services):

Regional District of Nanaimo,  
*Rebates - Water Stewardship*  
<https://rdn.bc.ca/rdn-rebates>

## **PART 4) Drilled Wells**

### **A. Aquifers and Well Types**

**Groundwater aquifers** on Gabriola exist predominantly in fractured bedrock, and these are accessed by drilled wells. Two large aquifers (or aquifer areas) are the sources for well water on Gabriola: aquifer 706 and 709.

Link to map of Gabriola aquifers and wells (and related information):

BC Government,  
*Groundwater Wells and Aquifers, Aquifer 709 Summary*  
<https://apps.nrs.gov.bc.ca/gwells/aquifers/709>

On the same site (above), see also: *Aquifer Classification Worksheet*  
[https://s3.ca-central-1.amazonaws.com/aquifer-docs/00700/AQ\\_00709\\_Aquifer\\_Mapping\\_Report.pdf](https://s3.ca-central-1.amazonaws.com/aquifer-docs/00700/AQ_00709_Aquifer_Mapping_Report.pdf)

Link to detailed diagram showing aquifer groundwater and the water table:

The Islands Trust,  
*Gulf Islands Groundwater Protection, A Regulatory Toolkit* - see 'Figure 1' page 2  
<https://islandstrust.bc.ca/document/gulf-islands-groundwater-protection-2023/>

**Well Types.** Different types of domestic drilled wells exist. See the following links for detailed, explanatory diagrams that show different well types and well components:

The Islands Trust, Freshwater Footprint Project, Gabriola Island Pilot (2024)  
*Frequently Asked Questions about the Freshwater Footprint Project* - see pages 3-5  
<https://islandstrust.bc.ca/document/faq-freshwater-footprint-project-gabriola-island-pilot/>

Regional District of Nanaimo,  
*Drinking Water and Watershed Protection,*  
*Frequently Asked Questions*  
<https://www.rdn.bc.ca/well-upgrades-faq>

BC Government,  
*Best Practices for Dug Wells*  
[https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/bc\\_gov\\_dugwell\\_brochure.pdf](https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/bc_gov_dugwell_brochure.pdf)

## **B. Pumps: Well and Cistern - Below and Above Ground**

Well water can be pumped directly to the household, or (as mentioned) it can be pumped first to a storage cistern which, in turn, gets pumped to the household by way of a transfer (or jet) pump. Although directly linked in the same system, well and transfer pumps normally operate independently.

Well pumps differ, and can be located either above ground (usually with shallow wells) or be submerged in the well itself. In the latter case, the pump is suspended at a depth that is usually about 10-12 feet above the bottom of the well. If incorporated, the transfer (or jet) pump is positioned above ground, normally in an insulated pump shed or in the house.

Pros and cons: Well water pumped directly from the well to the household is as fresh as it gets; but because there is no substantial reservoir capacity in this set-up, the water supply will cease immediately if a malfunction occurs or if the well runs dry.

## **C. Submerged Well Pump Protection**

Depending on its site and configuration, it's possible for a well to run dry or to be pumped to a level that is too low. Either case could result in the pump being suspended above the well's waterline. This must be avoided (!) as the pump will be damaged if it operates out of water. Moreover, if repeatedly pumped too low, there is the possibility that the well's structural integrity could become compromised.

**Recommended:** The well system should be equipped with an electronic sensory device that automatically shuts the well pump off when an insufficient water level is

reached. Normally, this device is equipped with a timer that is used to set a desired recovery time (for example, the timer could be set for 4 hours, meaning the pump will not resume operation until this 4-hour refill interval has passed).

#### D. Well and Cistern in Combination

A well water system that incorporates a storage cistern(s) facilitates the following:

- 1) **Household Reservoir.** Should the well run dry or malfunction, household water is still available until the cistern runs dry (average household water use and the cistern's capacity can be used to calculate how long the water supply will last). A dry well might recover in a relatively short time (hours or days), or it might take months! (For example, a shallow well will require the seasonal water table to rise before it can recover.)
- 2) **Float Switch.** Cisterns directly connected to wells are normally equipped with a float switch. In a basic set-up, this switch functions as the 'on-off' switch for the well pump. When the cistern is full, the float switch automatically turns the well pump off; during 'off' periods recovery time for the well is provided. But here's a potential problem: heavy or constant water use means the cistern float switch could be continually asking the well for more water, and if the well cannot keep up to this demand it will eventually be pumped too low or even dry. There is a solution: install a well pump timer.
- 3) **Well Pump Timer.** The well pump can be equipped with an operating timer; this can be set to ensure regular and optimal recovery time for the well. For example, the timer could be set so that the well pump can only operate for 5 minutes every 8 hours. Therefore, when the float switch is 'on' (asking the well to pump water), the well will not do so until the timer enables operation; conversely, when the timer enables operation, pumping will not occur unless the float switch is 'on', actively asking for water. This combination of timer and float switch could be the optimal set-up for regulating well usage and recovery time. (Note: a well pump low-water sensory device is, as mentioned, equipped with its own timer, but this functions independently of both an operating timer and float switch.)
- 4) **Power Outages.** If the household is equipped with solar panels or a generator for backup power, the backup electrical system should be configured to include the

transfer or jet pump; household cistern water will then be available during the outage (in this case, UV treatment should be included in the backup power system).

- 5) **Backup Plan.** In the event both the well and its storage cistern(s) run dry, the well's storage cistern can be refilled with delivered water. It is important to emphasize here that the well itself is not refilled with delivered water, but rather only the well water storage cisterns. In addition, when adding water from a different source, caution must be observed to avoid the possibility of cross-contamination. (See also Hard Water and Soft Water - p. 22)

6) **E. Well Location**

A drilled well's yield (GPM = gallons per minute) is determined primarily by its location, depth, local aquifer characteristics, and possibly (if not commonly) by seasonal variation in groundwater levels. When it comes to locating the specific site for a new well, this is done by, or in consultation with, a professional driller and/or hydrogeologist. An additional range of factors must be considered when determining the optimal location of a well; including, for example:

- the required distance from any septic field (yours and your neighbour's)
- the possibility for incorporating a nearby pump-shed and or cistern
- the potability or quality of the water
- the possibility of salt water intrusion
- the possibility of sediment intrusion
- the proximity to possible surface contaminants
- the probable impact on the aquifer
- the probable impact on neighbouring wells
- the probable impact on and possible interaction with surface water bodies

**F. Wells and Salt Water Intrusion**

Saltwater intrusion occurs when seawater (saline) is drawn into a freshwater aquifer and, in turn, into your well. Whether occurring in household use (especially drinking water) or in plant irrigation, excessive saline content is a serious and unhealthy problem.

Wells located on, or close to, waterfront properties are of particular concern, but saltwater intrusion can also be drawn further inland. This is normally caused by a high

density of wells that, in overall combination, place high demand on the freshwater aquifer; this results in the aquifer having a low water level that, in turn, invites saltwater intrusion. Saltwater can find its way to an inland well via a single fracture in the bedrock! Once saltwater intrusion occurs, changes in the aquifer may be irreversible, or may take many years to recover.

**Recommended:** Saltwater intrusion has occurred on Gabriola and other Gulf Islands. If you have an operating well located in an area that is, or could be, at risk for saltwater intrusion, *then have the water tested regularly*. If you want to drill a new well in a potentially at-risk area, be sure to have a *full assessment* done beforehand by qualified professionals.

Finally, if your well does have saltwater intrusion you must take appropriate action.

Links to information on saltwater intrusion:

Regional District of Nanaimo,  
*Groundwater Connections, Seawater Intrusion (pages 10 - 11)*  
<https://www.calameo.com/read/00488370944694e79a792>

BC Government,  
*Well Drilling & Operation Advisory, Risk of Sea Water Intrusion  
Southern Gulf Islands, B.C.*  
[https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/  
sea\\_water\\_intrusion\\_advisory\\_s\\_gulf\\_islands\\_final.pdf](https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/sea_water_intrusion_advisory_s_gulf_islands_final.pdf)

BC Government,  
*Best Practices for Prevention of Saltwater Intrusion:*  
[https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/  
saltwaterintrusion\\_factsheet\\_flnro\\_web.pdf](https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/saltwaterintrusion_factsheet_flnro_web.pdf)

The Islands Trust,  
*Webinar: Groundwater Conservation and Saltwater Intrusion in the Islands Trust Area*  
<https://islandstrust.bc.ca/programs/stewardship-education/>

## **G. Wells and Sediment Intrusion**

Not uncommonly associated with ageing wells, sediment intrusion can be caused by various factors such as: low aquifer levels, low well-water levels, low (submerged) well pump positioning, well erosion (including casing or screen), heavy rain and flooding. It

is important to note that sediment intrusion can be either inorganic or organic (or both), and may pose a potential health risk.

Murky or discoloured household tap water might be an indication of sediment intrusion and/or contamination. Sediment intrusion can also be observed in the water treatment filters and, if not filtered-out sufficiently, at the bottom of toilet tanks where it settles and builds up over time.

**Possible Fixes:** If sediment intrusion occurs or increases, the water treatment filters can be adjusted accordingly. If this alone doesn't help, an additional fix that might (or might not) work for a submerged well pump is to raise it by stages until it reaches a level where sediment is no longer (or is minimally) pumped. However, this fix will proportionally reduce the overall capacity of the well, and will likely work best when the well is (1) equipped with an operating timer and (2) combined with cistern storage; this setup provides sufficient time for the well water level to recover after pumping, and for sediment to resettle if agitated during pumping.

#### H. 'Shocking' the Well

Well disinfection is used to inactivate or control microorganism populations in a well and its water distribution system. A household well can be disinfected with a chlorination procedure referred to as 'shocking' the well - a treatment that should be used only when necessary (the chlorine will end up in the groundwater). Conversely, ongoing water treatment is always needed (filters and UV).

Link to information on disinfecting or 'shocking' a well:

BC Government, *Well Water Disinfection, Using the Simple Chlorination System*  
[https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/bc\\_gov\\_5402\\_water\\_well\\_disinfection\\_webbrochure.pdf](https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/bc_gov_5402_water_well_disinfection_webbrochure.pdf)

#### I. Dry Wells

If your well runs dry you will want to know about:

- causes
- what to do
- what not to do

Link to information on dry wells:

BC Government,  
*Best Practices for Groundwater Wells Going Dry and Drought Preparation*  
[https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/bc\\_gov\\_drywellbrochure.pdf](https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/bc_gov_drywellbrochure.pdf)

## **J. Well Closure**

In accordance with local and/or provincial regulations, wells that are no longer active or abandoned must be closed.

Links to information on well closure:

BC Government,  
*Groundwater Protection, Information for Well Owners*  
[https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/gwpr\\_info\\_for\\_well\\_owners\\_brochure.pdf](https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/gwpr_info_for_well_owners_brochure.pdf)

BC Government,  
*Best Management Practices for Well Closure*  
<https://www.rdn.bc.ca/cms/wpattachments/wpID3142atID5836.pdf>

Regional District of Nanaimo,  
*Drinking Water & Watershed Protection, FAQs Why should a well be closed?*  
<https://www.rdn.bc.ca/well-upgrades-faq#9>

Regional District of Nanaimo,  
*Environmental Rebates - Water Stewardship*  
<https://rdn.bc.ca/rdn-rebates>

Regional District of Nanaimo,  
*Environmental Rebates - Wellhead Upgrades*  
<https://rdn.bc.ca/well-protection-upgrades-rebate>

## **K. Well Registration: Links**

Regional District of Nanaimo,  
*Drinking Water & Watershed Protection,*  
*Submitting Well records to BC Wells Database*  
<https://www.rdn.bc.ca/submitting-well-records>

BC Government,  
*Well Records and Registration*  
<https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/groundwater-wells-aquifers/groundwater-wells/information-for-property-owners/well-records-registration>

## L. Additional Information

Links to information on groundwater and wells:

Regional District of Nanaimo,  
*Drinking Water and Watershed Protection, Frequently Asked Questions*  
<https://www.rdn.bc.ca/well-upgrades-faq>

Regional District of Nanaimo,  
*Groundwater Connections, Reporting on the State of our Aquifers 2025 magazine:*  
<https://www.getinvolved.rdn.ca/43661/widgets/191374/documents/149813>

BC Groundwater Association  
*Groundwater Protection Regulation Handbook,*  
[https://www.bcgwa.org/wp-content/uploads/2017-GWPR-Handbook\\_BCGWA\\_v1.pdf](https://www.bcgwa.org/wp-content/uploads/2017-GWPR-Handbook_BCGWA_v1.pdf)

BC Government, Ministry of Forests  
*Groundwater and Wells, An Overview for a Well Owner or Well Operator*  
[https://smallwatersystemsbc.ca/sites/default/files/webinars/Well%20Owner%20Overview\\_2023-02-28.pdf](https://smallwatersystemsbc.ca/sites/default/files/webinars/Well%20Owner%20Overview_2023-02-28.pdf)

BC Government,  
*Care for and maintain your water supply well*  
<https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/groundwater-wells-aquifers/groundwater-wells/information-for-property-owners/care-for-and-maintain-your-water-supply-well>

BC Government,  
*Groundwater Protection, Information for Well Owners*  
[https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/gwpr\\_info\\_for\\_well\\_owners\\_brochure.pdf](https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/gwpr_info_for_well_owners_brochure.pdf)

BC Government,  
*Groundwater Wells and Aquifers*  
<https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/groundwater-wells-aquifers/groundwater-wells>

Link to BC groundwater well map (use the *Well Search* tool to locate a registered well):

BC Government,  
*Groundwater Wells and Aquifers*  
<https://apps.nrs.gov.bc.ca/gwells/>

## **PART 5) Rainwater Harvesting (Catchment System)**

### **A. Definition and Introduction**

Rainwater harvesting refers to collecting and storing rainwater for reuse on-site, rather than allowing it to runoff and become groundwater. Rainwater can be harvested for domestic, agricultural or commercial uses. Catchment systems are suitable for areas with an annual average rainfall of more than 400 mm per year; Gabriola averages more than twice this amount per year. Modern rainwater harvesting systems that are adequately managed and maintained yield safe, good quality water.

**Benefits.** Rainwater harvesting can:

- be the primary (or sole) source of household water
- be an additional or alternative source of water (where a well is used)
- be an alternate source for clean water during drought
- alleviate water shortages
- reduce dependence on groundwater (aquifers) and water delivery
- reduce storm water runoff
- reduce erosion and mitigate urban flooding
- reduce climate change vulnerability

**Rainwater: Treated or Untreated.** When treated properly, harvested rainwater provides a sustainable source of potable freshwater suitable for general household use: including drinking, cooking, dishwashing, showering, etc. Alternatively, when *not* treated, harvested rainwater can provide a sustainable source of non-potable freshwater, used commonly for toilet flushing, garden irrigation, car washing, etc. (see also 'greywater', upcoming)

### **B. Rainwater Collection: Basic Components**

Rainwater harvesting requires:

1. a suitably sized catchment area - such as a roof top
2. a means of transferring captured water (gutters, pipes, plumbing)

3. a storage cistern (any number of cisterns can be incorporated)
4. a means of pumping (or draining) water from the storage cistern

## IMPORTANT

- Rainwater intended for potable use must undergo treatment (filters and UV).
- Cisterns used for catchment should be fitted with an initial screen or filtering device.
- The roofing material itself must be safe for rainwater harvesting.
- Site contaminants must be addressed: bird droppings, gutter debris, pollen, etc.

### C. Outdoor Cisterns - Things to Know

- **Options.** Both household water storage requirements and available cistern space can vary; a range of outdoor cistern types and sizes are available.
- **Opacity.** Dark or non-transparent cisterns should be used; sunlight passing into the cistern will encourage organic growth (algae, etc.)
- **Maintenance.** Cisterns must be inspected, cleaned and disinfected regularly.
- **Freezing Winter Temperatures.** Outdoor cisterns are subject to freezing, and Gabriola winter temperatures occasionally go below the freezing mark:
  - exposed plumbing must be insulated
  - underground plumbing must be positioned at a sufficient, protective depth
  - where possible, the base of the cistern should be insulated
  - if surface freezing occurs, break ice that has formed around the float switch

NOTE: an exposed wellhead and/or any outdoor water system equipment located in an outdoor pump-shed are also subject to freezing; appropriate steps must be taken.

- **Hot Summer Temperatures.** Outdoor cisterns can warm up in direct or prolonged sunlight, and this might encourage organic growth (algae, etc.) Wherever possible, cisterns should be positioned in shaded areas.
- **Pollen Season.** Occurring every Spring, pollen can be a real problem as it can clog and contaminate rainwater catchment systems. The most direct means of dealing with pollen is to divert it before it enters the cistern or water system. (Different methods of diversion are possible - be informed about the options.) Plan ahead: the

upcoming months immediately following pollen season could see little rainfall (dry or even drought conditions); the cisterns should therefore be filled as much as possible *before* water is diverted during pollen season.

- **Overflow and Diverter.** All outdoor cisterns should be equipped with both overflow and diverter plumbing (or piping)
- **How long can rainwater be stored?** Storage time is variable depending on the water system, treatment, and the intended use (potable or irrigation). In other words, assessment and research is needed: know your catchment system and water use; storage times can be calculated accordingly.

#### **D. Dual Water Systems: Well and Catchment**

It is not uncommon for households to have both well and rainwater systems. This dual setup is especially advantageous during dry or drought stretches when conservation becomes necessary, or when different water sources (or alternating between different water sources) becomes necessary. Consider the following possibilities:

1) With its uses limited as mentioned, untreated catchment water can be configured as a separate system; one that is not merged with the household well water system. Demand on the well is therefore limited to supplying only potable household water.

2) Catchment water itself can also be configured into two separate systems: catchment water stored in one cistern could be used for untreated water uses. Conversely, catchment water stored in a different cistern could be used for treated, potable water use only. The plumbing and pumping for each of these cisterns should be independent systems. For households without well water, these separate catchment water systems can be advantageous.

#### **E. Hard Water and Soft Water**

Whether simultaneously or in alternation, if *both* well water and catchment water are intended for household, potable use, it is important to know that these two water types are different. Well water (groundwater) is hard water, meaning it has a relatively high mineral content; whereas rainwater is normally soft water, meaning it has a relatively low mineral content. Be aware that these two water types could have different, adverse

effects on a household water system. Various types of water treatment are however possible: for example, hard water can be treated with reverse osmosis (RO).

Link to information on hard water:

Regional District of Nanaimo,  
*FAQ's - What is Water Hardness?*  
<https://rdn.bc.ca/faqs-water-quality#question4>

Regional District of Nanaimo,  
*Hardness in Groundwater*  
<https://rdn.bc.ca/cms/wpattachments/wpID2284atID3802.pdf>

## **F. Rainwater Harvesting - Essential Information**

Although it might seem straightforward, rainwater harvesting is a large and complex topic. It is strongly recommended that research and/or consultation be the first step taken when considering a new, or updating an existing, rainwater system. Review the links provided below to learn about catchment systems and best practices.

The Regional District of Nanaimo's guide on rainwater harvesting is extraordinarily broad and comprehensive:

Regional District of Nanaimo,  
*Rainwater Harvesting, Best Practices Guidebook*  
*Developed for the Homeowners of the Regional District of Nanaimo*  
*British Columbia, Canada*  
<https://www.rdn.bc.ca/cms/wpattachments/wpID2430atID5059.pdf>

Links to Islands Trust and BC Government sites on rainwater harvesting:

The Islands Trust, Salt Spring Island  
*Non-Potable Rainwater Harvesting Best Practices Guide*  
[https://islandstrust.bc.ca/wp-content/uploads/2024/03/SSIWPA\\_rainwaterHarvesting\\_FinalSeptember2020\\_Web-1.pdf](https://islandstrust.bc.ca/wp-content/uploads/2024/03/SSIWPA_rainwaterHarvesting_FinalSeptember2020_Web-1.pdf)

The Islands Trust  
Rainwater Harvesting Webinar (Sept. 29. 2020)  
<https://islandstrust.bc.ca/document/rainwater-harvesting-webinar-qa/>

BC Government (Ministry of Health, August 2020),  
*Guidance for Treatment of Rainwater Harvested for Potable Use*  
[https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/how-drinking-water-is-protected-in-bc/dwog\\_part\\_b\\_-\\_14\\_rainwater\\_harvested\\_for\\_potable\\_use.pdf](https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/how-drinking-water-is-protected-in-bc/dwog_part_b_-_14_rainwater_harvested_for_potable_use.pdf)

#### **G. Looking Ahead: More Storing = Less Drilling**

Changing climate patterns, decreasing aquifer levels, changing water quality, and the increasing, overall demand for water is, along with other contributing factors, a truly troubling combination and forecast; and this could mean (or, depending on your view, will *certainly* mean) that a shift away from well water reliance needs to happen. But there is good news here. On average, it could be the case that Gabriola receives enough annual rainfall to meet its overall domestic water needs; that is, if catchment water is stored and managed effectively. So, and to put it as bluntly as possible, do the math and plan your water system accordingly!

#### **PART 6) Septic System**

Your septic system (or onsite sewage system), is a key component in your overall water system. Because it is integrated directly into the groundwater cycle, it is vitally important that you understand the components of your septic system and how it all works. Regular maintenance is a must! (Note: see link below for **ROWP: Registered Onsite Wastewater Practitioners**)

Links to information on septic systems and ROWP:

Regional District of Nanaimo,  
*SepticSmart* (see *SepticSmart FAQs*)  
<https://www.rdn.bc.ca/septicmart>

Regional District of Nanaimo,  
*Septic Systems*  
<https://www.rdn.bc.ca/septic-systems>

Regional District of Nanaimo,  
*Septic System Rebate*  
<https://rdn.bc.ca/septicmart-rebate>

BC Government,  
*Onsite Sewage System Management*  
<https://www2.gov.bc.ca/gov/content/environment/waste-management/sewage/onsite-sewage-systems/onsite-sewage-system-management>

Island Health,  
*Sewerage and Subdivision - Land Use FAQ's*  
<https://www.islandhealth.ca/learn-about-health/environment/sewerage-subdivision>

ASTTBC  
*Registered Onsite Wastewater Practitioner (ROWP)*  
<https://asttbc.org/applicants/rowps/>

## **PART 7) Greywater**

### **A. Introduction (or, Please, do not make assumptions!)**

Like many Gulf Islanders, Gabriolans are conscious of the increasing need to conserve water, and are considering ways to make the most of the water we consume. The possibility of re-using household wastewater (specifically greywater) is now receiving greater attention. The use of greywater is, however, limited and regulated. The essential first step for anyone considering greywater is to become fully informed; if mishandled or misunderstood, greywater is potentially hazardous to both personal health and the environment. It is critically important to ensure no assumptions are being made when it comes to knowing what grey water is and how it can be used safely.

Let's take this introductory warning a little further. Given your current state of awareness on greywater, are you able to answer the following questions:

- Can you assume, independent of guidelines, what greywater is and is not?
- Can you freely use untreated greywater for growing your vegetables or fruits?
- Can you install a greywater system independent of regulations?
- Can you indefinitely store untreated greywater?
- Can you freely discharge greywater into the environment?

Not surprisingly, there is but one answer to all the above: *no, you cannot.*

**So, you want to know more about greywater? Read on.**

**B. Definitions: Wastewater, Greywater and Blackwater**

Uncertainty might arise with the terms ‘wastewater’ and ‘greywater’. Normally, wastewater refers to all used water discharged from all household drains and toilets. Greywater is therefore also wastewater, but can only be designated as greywater if it originates with certain, but not all, household uses. ‘Blackwater’ is wastewater that has high levels of contamination, associated commonly with toilets, dishwashers and kitchen sinks.

**So, what exactly is greywater?**

**Two Definitions:**

The BC Government:

*... greywater is waterborne waste from the preparation of food and drink, dishwashing, bathing, showering and general household cleaning and laundry. It does not include toilet, kitchen sink, or dishwasher waste.”*

BC Government,

*Health Information: Greywater Reuse*

[https://www2.gov.bc.ca/assets/gov/environment/waste-management/sewage/onsite-sewerage-systems/what\\_is\\_grey\\_water.pdf](https://www2.gov.bc.ca/assets/gov/environment/waste-management/sewage/onsite-sewerage-systems/what_is_grey_water.pdf)

The RDN:

*“Greywater” means untreated household wastewater that has not come in contact with toilet waste, and includes wastewater from bathtubs, showers, clothes washers and laundry tubs, but excludes wastewater from toilets, urinals, bidets, kitchen sinks, and dishwashers.*

Regional District of Nanaimo,

*Bylaw No.1788 (page 4)*

[https://rdn.bc.ca/sites/default/files/inline-files/Bylaw%20No.%201788%20signed\\_0.pdf](https://rdn.bc.ca/sites/default/files/inline-files/Bylaw%20No.%201788%20signed_0.pdf)

**So, what exactly can greywater be used for? - and, perhaps more importantly, what can it not be used for?**

Turning again to the BC Government *Health Information: Greywater Reuse* document, here are a few samples of the information it provides, and these immediately put greywater use into clear perspective:

- *Technically under the Sewerage System Regulation, greywater is considered sewage, and discharging it onto land, into a source of drinking water, surface water, or tidal waters is considered a health hazard.*
- *Greywater may be reused for low-risk purposes such as irrigation of lawns, ornamental gardens, or toilet flushing. Runoff of grey water from the property must be avoided.*
- *Avoid watering fruits or vegetables intended for raw consumption with greywater.*

In light of the above, and bearing in mind that Gabriola is a groundwater sensitive area where water wells are prevalent, careful consideration must be given to the use of greywater. Think of it this way: if using (or considering using) greywater, are you certain about what will, and what will not, end up in the groundwater system? - in your garden? - in the environment long-term?

Link to additional information on greywater use:

Island Health, *Sewerage and Subdivision - Land Use FAQ's* (see the following)

Q: *Can I use my grey water to flush my toilets?*

Q: *Can I use my grey water to water my garden?*

<https://www.islandhealth.ca/learn-about-health/environment/sewerage-subdivision>

### **C. What is a greywater system? It all starts with diversion.**

Greywater systems vary according to intended uses, but every system has specialized plumbing that diverts greywater away from all other wastewater. Other components found in a greywater systems could include:

- treatment (optional - filters)
- storage or holding tank (short term or longer term)
- pump (or gravity feed)
- methods of final distribution

### **Greywater System - Considerations**

- Greywater diversion and household reuse (toilet flushing) requires separate plumbing to ensure there is no possibility of cross contamination with the potable household water supply.

- Greywater can never be used as a source of potable water, or come into contact with potable water.
- Greywater can be either treated or untreated; untreated greywater cannot be stored beyond 24 hours (recommended); if regulations allow for it, untreated greywater *could* be used - say directly from laundry to garden – but this may not be a good idea in groundwater sensitive locations.
- Greywater is diverted from other wastewater, which also means greywater is diverted from the septic system.
- Greywater diversion could benefit a septic system by reducing both the tank level and the overall filtering and drainage load; but, conversely, could greywater diversion adversely affect a septic system by reducing the amount of wastewater normally required for optimal functioning?
- Greywater systems have potential to affect the environment; for example, damaging or impacting chemicals found in some laundry detergents and household cleaners can make their way into the soil and groundwater. (This situation could be minimized, or avoided altogether, by using only environmentally safe products in the household.)

**D. I want to use greywater, but do I really need a greywater system?**

Let's begin by reviewing two Islands Trust statements on greywater, and with the understanding that they apply consistently to the entire Trust Area:

- 1. Trust Council encourages government agencies, corporations, property owners and residents to use innovative technologies that promote efficient use of freshwater resources, including cisterns, alternative sewage disposal systems, reuse of water, the treatment and use of grey water, and the use of water saving devices.\**
- 2. Greywater from laundry, showers and baths can be filtered and treated and used to flush toilets or water gardens. Commercial systems are approved for use in BC.\*\**

\* The Islands Trust

*Islands Trust Policy Statement (consolidated - April, 2003)*

P. 14 / 4.4.7 (Freshwater Resources)

<https://islandstrust.bc.ca/document/islands-trust-policy-statement-consolidated-2023/>

\*\* The Islands Trust

*Building Sustainability, Water Conservation Tips*

<https://islandstrust.bc.ca/document/building-sustainably-a-guide-for-howe-sound-the-northern-gulf-islands/>

A responsible interpretation of the two Trust statements makes it clear that:

1. you - the homeowner or resident - are encouraged to use greywater, but
2. the appropriate use of greywater includes filtration and treatment, and
3. a BC-approved, commercial system is appropriate for greywater treatment

Let's now turn one last time to the BC Government *Health Information: Greywater Reuse* document (link provided earlier):

*All greywater diversion and greywater treatment systems must be approved by the local health authority and must be installed by a licensed plumber.*

#### **E. Rainwater or Greywater?**

When it comes to assessing the need for a greywater system, it might be a good idea to do so by simultaneously considering a rainwater system, or expanding an existing rainwater system, as the alternative. Rational:

- when treated appropriately, rainwater can be used for all household requirements
- when treated appropriately, greywater is only safe for limited applications
- with few (if any) exceptions, untreated rainwater can be used anywhere that treated greywater can be used

A few concluding questions might help with decision-making:

- Potable water aside, will a greywater system be enough to meet water requirements where rainwater is not used as an additional source?
- Could, or should, a new greywater system be installed instead of a new, or an additional, or an expanded rainwater system? (For example, there might be enough space for a greywater system but not enough for a rainwater system - or *vice versa*)
- Given your specific circumstances, would both a rainwater and greywater system actually be needed?

## **PART 8) Assessment - Your Water System**

What is the status of your current, household water system?

Professional consultation is recommended when it comes to (1) assessing the operational status of an existing water system, and (2) determining the optimal setup, or changes needed, for a given situation.

### **A. Foreground Topics: what do you have / what do you need?**

1. Assessment should begin with water source(s) and the quality of this water before it undergoes treatment. For example, is the water supply sufficient and reliable? - what forms of treatment will be required for potable use?

2. The design, effectiveness and condition of:

- the water treatment system
- the well and its pumping setup
- the catchment system
- water storage - cisterns
- water system configurations - e.g. dual systems
- electrical and plumbing

3. The septic system - both tank and field.

4. Does the water system conform to current codes, regulations and bylaws?

5. Are best practices known and being implemented?

### **B. Background Topics: what do you know / what should you know?**

- What is the regular maintenance plan?
- Does the system(s) facilitate water conservation?
- Is there a plan for an alternative water supply during drought or dry season?
- What, if any, are the system's environmental impacts?
- Is there an understanding of, and means for, water source protection?
- For problem-fixing, repairs or advice, what are the local resources?
- Could the current system provide emergency, outdoor fire suppression?

### C. Codes, Regulations and Bylaws

- Is your current water system compliant?
- Will upgrades to your current system be compliant?
- Will the new water system you plan to instal be compliant?

IMPORTANT: Because *domestic* household water on Gabriola is privately sourced and managed, it is categorized differently from *commercial* or community water use; applicable codes, regulations and bylaws therefore can and do vary.

So, whether you are installing, upgrading or maintaining a well, a rainwater catchment system, a cistern storage system, a grey water system, or some combination of the preceding, it is your responsibility as homeowner to be aware of, and to ensure compliance with, all applicable codes regulations and bylaws.

The links that follow provide an introductory sampling of regulations and practices that are applicable to water system installations or upgrades. (Note: These links do not represent a complete list of relevant sites; as homeowner, you will need to find all information that is directly relevant to your particular water situation.)

Links to information that includes codes, regulations and bylaws:

Regional District of Nanaimo (BC Government),  
*Water Stewardship Information Series, B.C.'s Groundwater Protection Regulation, What Private Well Owners Should Know*  
<https://www.rdn.bc.ca/cms/wpattachments/wplD3142atID5835.pdf>

Regional District of Nanaimo,  
*Rainwater Harvesting, Best Practices Guidebook*  
*Developed for the Homeowners of the Regional District of Nanaimo*  
*British Columbia, Canada*  
See: 1.6.2 Compliance with Building Codes, Local Regulations and Bylaws  
<https://www.rdn.bc.ca/cms/wpattachments/wplD2430atID5059.pdf>

Regional District of Nanaimo,  
*Drinking Water & Watershed Protection*  
See: *Do I Need a Permit to install a Rainwater Harvesting System?*  
<https://www.rdn.bc.ca/rainwater-harvesting-faq>

BC Government,  
*Groundwater Protection, Information for Well Owners*  
[https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/gwpr\\_info\\_for\\_well\\_owners\\_brochure.pdf](https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/gwpr_info_for_well_owners_brochure.pdf)

BC Government,  
*Groundwater Wells*  
<https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/groundwater-wells-aquifers/groundwater-wells>

#### **D. Outdoor Fire Suppression**

Being FireSmart within the home is essential (fire extinguishers, smoke alarms, an evacuation plan, etc.); is being FireSmart outside of the home any less essential? While outdoor firesmartering incorporates a number of precautionary measures, let's focus here on water: could your existing water system be used for effective outdoor fire suppression? - *especially during those first critical minutes before help arrives.*

Related:

- Does your water system have the ability to immediately pump outdoor water both at a relatively high volume and to considerable distances?
- If fire occurs in a prolonged dry or drought stretch when water availability is typically low or scarce, do you have a plan for storing or accessing water that is reserved specifically for emergency use?

Links to information on FireSmart and fire protection:

Regional District of Nanaimo,  
*RDN FireSmart*  
<https://www.getinvolved.rdn.ca/rdn-firesmart>

Gabriola Fire and Rescue  
<https://www.gabriolafire.ca/fire-smart>

The RDN also has the following brochure available:

*FireSmart and WaterSmart Landscaping Guide*  
[https://rdn.bc.ca/sites/default/files/inline-files/Proof5\\_RDN%20FireSmart%20and%20WaterSmart%20Brochure%20for%20Digital%20%281%29.pdf](https://rdn.bc.ca/sites/default/files/inline-files/Proof5_RDN%20FireSmart%20and%20WaterSmart%20Brochure%20for%20Digital%20%281%29.pdf)

## **PART 9) Water Conservancy and Stewardship**

*Much of what will make the difference will not necessarily come from regulations, but from the community and its water use practices.\**

\* The Islands Trust,  
*Gulf Islands Groundwater Protection, A Regulatory Toolkit* (p. 3)  
<https://islandstrust.bc.ca/document/gulf-islands-groundwater-protection-2023/>

### **A. Tips for using less water:**

- shorten your showers
- flush your toilet less frequently
- use a low water toilet (or consider a composting toilet)
- water your garden minimally
- grow native and/or drought resistant plants, or waterwise groundcover
- avoid watering your garden during the hottest part of the day
- harvest rainwater to reduce groundwater use
- consider greywater reuse

Links to RDN information on conserving water use - indoor and outdoor:

Regional District of Nanaimo,  
*Indoor Water Conservation*  
<https://www.rdn.bc.ca/indoor>

Regional District of Nanaimo,  
*Outdoor Water Conservation*  
<https://www.rdn.bc.ca/outdoor>

Link to information on composting toilet:

BC Government,  
*Health Information: Greywater Reuse*, provides link to:  
*Manual of Composting Toilet and Greywater Practice (2016):*  
<https://www2.gov.bc.ca/assets/gov/environment/waste-management/sewage/provincial-composting-toilet-manual.pdf>

See A-5 (pages 19-22) for *Introduction to Compositing Toilet Systems*  
See D-3 (pages 123-124)) for *In House Greywater Reuse for Toilet Flushing*

## **B. Stewardship and Environment**

Protecting water sources is part of protecting the environment, and this is everyone's responsibility. *Please get involved!*

Links to information on stewardship and environment:

The Islands Trust,

*Stewardship Education*

<https://islandstrust.bc.ca/programs/stewardship-education/>

The Islands Trust,

*Stewardship Tips*

<https://islandstrust.bc.ca/document/trust-area-stewardship-tips-guide-2023/>

The Islands Trust,

Gulf Islands Groundwater Protection, A Regulatory Toolkit

<https://islandstrust.bc.ca/document/gulf-islands-groundwater-protection-2023/>

BC Government Water Stewardship Information Series,

*B.C.'s Groundwater Protection Regulation, What Private Well Owners Should Know*

<https://www.rdn.bc.ca/cms/wpattachments/wpID3142atID5835.pdf>

Regional District of Nanaimo,

*Drinking Water and Watershed Protection Program*

<https://www.rdn.bc.ca/drinking-water-and-watershed-protection>

## **C. Water Conservancy - Galiano Island**

As one example, consider the remarkable conservancy work being done on nearby Galiano Island. Water conservation is one focus of The Galiano Conservancy Association, Millard Learning Centre:

Galiano Conservancy Association, Millard Learning Centre

*Climate Action, Water Conservation*

<https://galianoconservancy.ca/climate-action/water/>