

WATER CONSERVATION

Your At-Home Guide





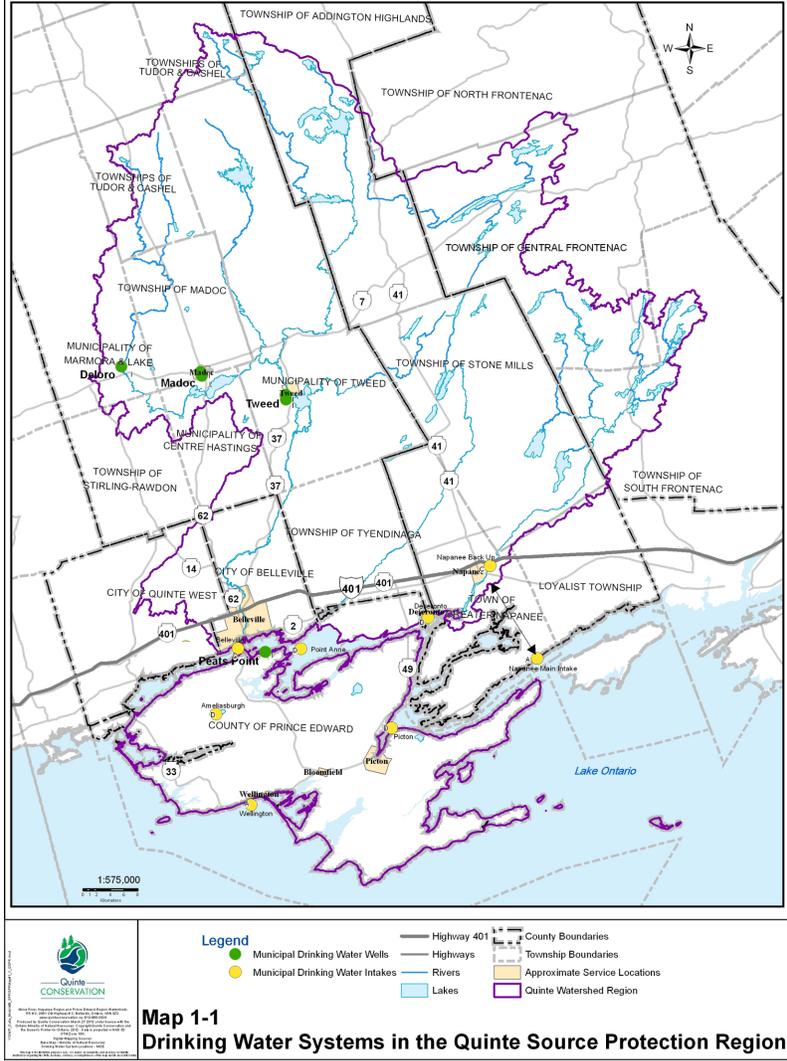
TABLE OF CONTENTS

Page 1 | About Quinte Conservation
Page 2 | Did you know?
Page 2 | Why is Water Conservation Important?
Page 3 | The 3 Rs of Water Conservation
Page 4 | In the Home
Page 5 | Toilets
Page 6 | Showers
Page 7 | Faucets
Page 8 | Dishwashers
Page 9 | Laundry Machines
Page 10 | Humidifiers & Dehumidifiers
Page 11 | Outdoors
Page 12 | In the Garden
Page 13 | In the Yard
Page 14 | Cisterns
Page 16 | Drought Conditions
Page 17 | Well Water Management
Page 18 | References



Visit our website to learn
more about protecting
sources of drinking water
QuinteSourceWater.ca

ABOUT QUINTE CONSERVATION



Quinte Conservation (QC) is one of Ontario's 36 conservation authorities.

QC is a local watershed-based, nonprofit environmental protection agency that delivers science-based programs and services to residents and municipalities within our watershed.

QC provides cost-effective environmental expertise and leadership that develops and delivers programs to ensure the healthy coexistence between the community, its environment and its economy.

It's 6,000-square-kilometre area spreads across 18 municipalities and includes the drainage basins of the Moira, Napanee and Salmon Rivers, and Prince Edward County.

QC owns over 30,000 acres of land ranging from small parcels to large tracts of over 1,000 acres with many significant natural features.

QC's success is based on local initiative, watershed jurisdiction and partnerships in resource management.

DID YOU KNOW?

Ontarians are one of the most efficient users of water in Canada with 343 litres of potable water used daily per capita of the population served (Statistics Canada, 2023). Although Ontarians are fairly efficient with water consumption, Canadians as a group are among the highest users of water; using more water per person than most other industrialized nations. Where the average person in Canada uses 411 litres of water a day, Germans only use 120 litres per day. Conserving water is in the best interest of you, your family, the environment and the community.

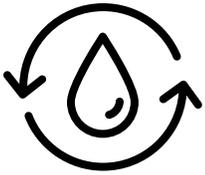


WHY IS WATER CONSERVATION IMPORTANT?

In the Quinte Conservation Watershed, 50% of the residents rely on private wells and water supplies. Depending on the climate in any given year, we may use fresh water faster than it can naturally be replenished. In periods of drought or particularly warm weather, water resources are diminished and have fewer opportunities to be refilled, which can lead to water shortages.

Water conservation practices can save thousands of litres of water per person per year. There are many ways to efficiently reduce water use without sacrificing our quality of life. These simple changes will also contribute to healthier water bodies and provide future generations with clean drinking water sources. The best way to conserve water is to be aware of how you are using it.

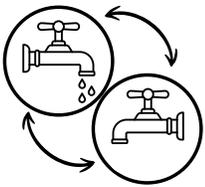
The 3 Rs of Water Conservation



Reduce water usage as much as possible. Consider recycling water for gardening.



Repair broken and leaky fixtures to prevent excess water waste.



Retrofit plumbing with more recent and efficient fixtures.



IN THE HOME

In Canada, approximately 90% of water is used for bathing, flushing toilets, and cleaning. Only 10% of water is used for drinking and cooking purposes (Danamark). Simple changes can significantly reduce water consumption.

ACTIVITY	% OF DAILY WATER USAGE
Bathing	35%
Flushing Toilets	30%
Laundry & Cleaning	25%
Cooking & Drinking	10%

This guide will help residents better understand how to implement practices to conserve water in the house without compromising your living standards.



TOILETS

Toilet technology has progressed greatly since the late 1900s. In the last 40 years, toilets have improved their water conservation from using 20 to 26 litres to 3 to 6 litres of water per flush.

20-26 L

13-20 L

3-6 L



Pre 1985



1985-1995



Today

Reduce

Only flush human waste down the toilet. Dispose of household garbage using green bins or a garbage can.

Repair

A leaky toilet can waste up to 200,000 litres of water per year (Natural Resources Canada, Environment Canada). To check if your toilet tank is leaking, put a drop of food colouring into the tank. If the coloured water becomes visible in the bowl after 15 minutes without flushing, then there is a leak. Fix the leak promptly or consult a professional to fix it.

Retrofit

Replace high-volume toilets with a high-efficiency toilet, or a dual-flush toilet. These toilets have the same flush power while using less water. This change can result in a savings of approximately 30-50 litres per person per day.

SHOWERS

A standard showerhead can use approximately 10 to 20 litres of water per minute, while a low-flow showerhead uses 6 to 10 litres per minute.

Making a simple showerhead change can result in saving approximately 63,000 litres annually per person. (Econation)

Reduce

Determine your shower's flow by collecting water from your showerhead with a bucket for 10 seconds. Measure the volume and multiply by six to determine how much water your shower uses per minute. If the volume you calculate is over 9.5 litres, consider replacing your showerhead with a low-flow showerhead.

Other water conservation tips include: taking showers instead of baths, reduce the amount of time spent in the shower, and collecting water in a bucket while you wait for the temperature to rise for your shower and use it for other household purposes (i.e. watering plants).

Repair

Leaking showerheads and bathtub faucets can result in wasted water and money. Repair all leaky fixtures promptly by consulting a reputable repair guide or contact a professional.

Retrofit

Approximately 52% of Canadian households report using low-flow shower heads. As a result of these changes, residential water use per person per day fell 14% from 2011- 2019 (Statistics Canada, 2022).

FAUCETS

Reduce

- Turn the tap off while brushing your teeth, shaving, or washing your face.
- Soak dishes in soapy water before washing by hand.
- When washing dishes use the least amount of detergent possible to minimize the water needed to rinse the dishes.
- Fill a bowl with water to wash fruits and vegetables.
- Do not use running water to thaw frozen foods. Instead defrost food overnight in the refrigerator, or use the microwave's defrost setting.
- Use the spray option of an aerator for rinsing dishes and washing hands.
- Keep a cold jug of water or add ice to cool your water instead of waiting for cold water to come out of the tap.

Repair

Check for leaks. A leaky faucet can waste approximately 11,350 litres annually (US EPA, 2023). In a dry sink, place a paper towel under the faucet and leave it for an hour. If the paper towel is wet when you return, then your faucet is leaking. Consult a reputable repair guide or contact a professional to repair your faucet.

Retrofit

Check your faucet's flow rate to determine if a replacement should be considered. Measure the amount of water that comes out of your faucet in 10 seconds, then multiply by six to determine the amount of water used per minute. If your faucet uses more than nine litres of water per minute, consider retrofitting with a low-flow faucet. Low-flow faucets can reduce water consumption by 30% without sacrificing performance (US EPA, 2023).





DISHWASHERS

Reduce

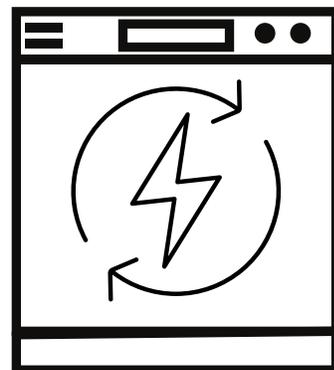
- Do not pre-rinse dishes. Scrap the food and grease into the garbage or compost bins before placing in the dishwashers.
- Only run full loads in the dishwasher.
- Avoid overfilling the dishwasher because some dishes may not get cleaned and you may have to rewash them. If handwashing is preferred, fill the second sink or a bowl with water for rinsing.

Repair

If your dishwasher is leaking or overflowing you may need to clean your dishwasher. Consult your owner's manual to perform this maintenance. If the problem persists, contact a professional to fix your dishwasher.

Retrofit

If you are replacing your dishwasher, look for an ENERGY STAR® model because they require 30% less water and 12% less energy per cycle (Natural Resources Canada, 2023).



Did you know?

Running water to rinse dishes or wash fruits and vegetables can waste up to nine litres of water per minute?

LAUNDRY MACHINE

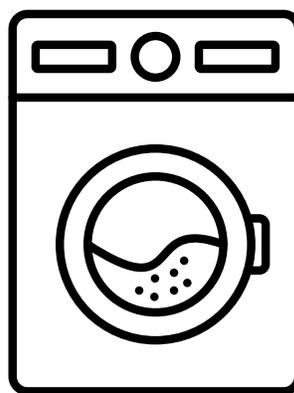
Reduce

- Only wash full loads of laundry.
- Use the correct settings for your laundry loads.
- Pre-treat stains to avoid the need to rewash items.
- When possible, wash your clothes in cold water instead of hot water.

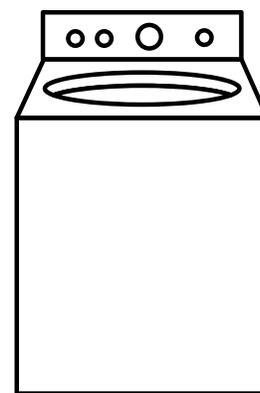
Repair

If you're experiencing issues with your laundry machine consult the owner's manual(s), or contact a professional.

Retrofit



Front Loader



Top Loader

If you are in the market for a new laundry machine consider an ENERGY STAR® certified front load washers. These washers use approximately 45% less energy and 50% less water than a top load agitator washer, and 25% less energy and water than top load impeller washers (Energy Star).



HUMIDIFIERS & DEHUMIDIFIERS

Humidifiers and dehumidifiers are used to help regulate water moisture in your home. Be sure to follow the three Rs when using these appliances.

Reduce

- Turn off your humidifier when leaving the room, or when the dry season is over.
- Use the water collected from your dehumidifier for other household uses like:

Watering plants



Cleaning



Steam ironing



Washing your car



Repair

If you're experiencing problems with your humidifiers or dehumidifiers consult the owner's manual(s), or contact a professional.

Retrofit

If you are replacing or installing a new humidifier, consider choosing a model that sends 50 litres of water or less to drain each day to ensure it is a water efficient model.

Did you know?

According to Health Canada, your home should be at 30-50% humidity to maintain a healthier air supply.

OUTDOORS

Backyards and outdoor spaces are a great way to increase living spaces and enjoy your property. Due to outdoor water use, municipal water consumption can increase significantly during the summer months.

However, there are many simple actions that you can take to reduce your outdoor water consumptions.



IN THE GARDEN

Reduce

- Water gardens in the morning near the roots and by hand to reduce evaporation.
- Install rain barrels to collect water that can be used to water your gardens.
- To improve water retention, add compost or peat to your gardens. You can also add mulch near trees and shrubs.
- Only water trees and shrubs once a week if there is no natural rainfall.
- Use native grasses and plants in your garden as they require less water.
- Pull planters into the shade to avoid hot afternoon sun.
- Improve your soil with compost and autumn leaves.
- Install a shut-off valve on your hose so it only runs when in use.
- Consider xeriscaping or zeroscaping to reduce or eliminate the need for irrigation.



IN THE YARD

Reduce

- Only water your lawn if it needs it. If you step on your grass and it springs back up, it does not need to be watered.
- To reduce water evaporation, cut your grass to a longer length (approximately 5-8 cm).
- Do not let children play in running water. Instead consider buying a kiddy pool or water toys.
- Use a pool cover to reduce evaporation.
- Only water fresh sod, and consider planting drought tolerant grasses.
- Check your sprinklers or irrigation systems regularly for any leaks and fix them.
- Wash your pets outdoors in an area of your yard that needs water.
- Use a broom instead of a hose to clean your driveway.

Planning your Landscaping

Plants thrive in different conditions and planning your landscaping ahead of time will help reduce the need for watering and tending to these areas if you select the right plant for the location's conditions.

When you're landscaping ask yourself these questions:

- What are your plans for your yard? Who will be using it?
- What type of soil is in your yard?
- What are the natural conditions of your property?
- How much time are you ready to commit to maintaining your yard?

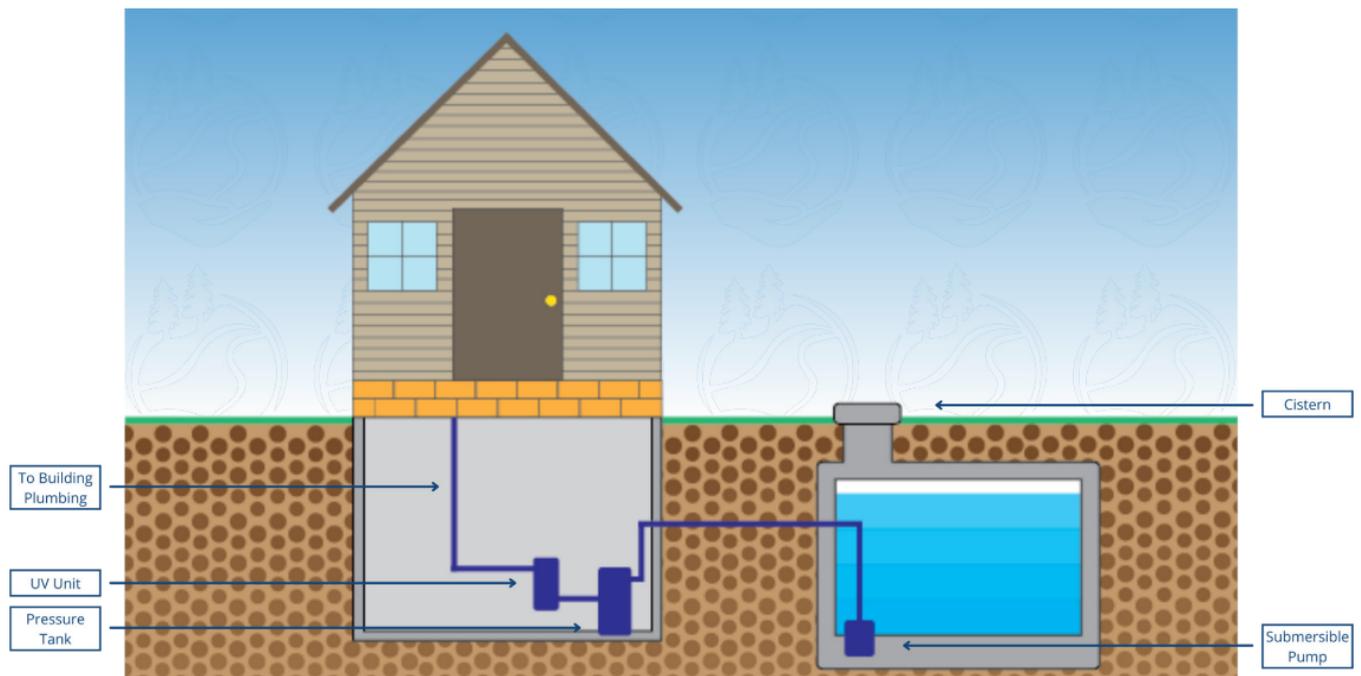


CISTERNS

Cisterns for Residential Water Supply

In areas that do not have an adequate water supply to support its residents, cisterns or reservoirs are effective ways to safely store hauled municipally-treated water or private groundwater to meet the household demand.

If you are hauling water into your cistern, ensure it is always filled with municipally-treated water and provided by an approved water hauler.



Trickle Systems

In some cases cisterns with a trickle system are installed for wells with low yields. These systems can provide relief during periods of high water usage. Cisterns will pump water from the well into a large holding tank and when water is required, it will be delivered by a second pump. As water is removed from the tank, fresh water is replenished by the trickle system in the well.

Cistern Containers

Cistern containers must be constructed with materials that do not contain any impurities that could cause contamination of the water. Additionally, the system should have regular maintenance performed to prevent contamination from surface water or other foreign materials. To reduce the risk of contamination, ensure that your cistern has a watertight lid, a vented overflow pipe, and that it is not connected to the rainwater drain system.

Caring for your Cistern

- Inspect your cistern annually for sediment, bio-film, debris, cracks and seepage, ill-fitting lids, and broken vent screens.
- Never enter a cistern to do your own maintenance.
- Hire a qualified professional to perform regular maintenance.
- Ensure that the ground around the cistern slopes away from the hatch and any vents.
- Test the water after any repairs, if the water has not been used for an extended period of time, after flooding, if changes are made to the use of surrounding land, and if there is a change in water clarity, colour, odour or taste.
- Stop drinking the water immediately if results from testing determine that the water is unsafe.
- Maintain cisterns in a state that will prevent the entrance of insects, rodents and surface water runoff.
- Empty and clean cisterns regularly to remove the collection of sediment and biofilms that have accumulated over time.
- Never direct rainwater into the cistern or other drinking water storage systems as it may be contaminated by bacteria from animal feces, dust, leaves, and residue from roofing materials.
- Use treatment equipment to ensure a safe water supply.
- Ensure that an approved hauler is providing your cistern with municipally treated water.



Did you know?

A poorly or improperly maintained cistern is more susceptible to contamination. Cisterns require regular maintenance and cleaning to prevent contamination and should be completed by a qualified professional.





DROUGHT CONDITIONS

Planning for drought in Ontario has become of increasing concern due to the recurrence of droughts, increased development pressure, and anticipated impacts from climate change.

Quinte Region Droughts

Residents in the Quinte Region who rely on private wells may experience water shortages during a drought and may require municipally treated water to be hulled to their cisterns. The groundwater resources in our region are typically not favorable for drilling deeper wells into less drought prone aquifers because these aquifers typically yield poor water quality.

Private well owners often use the following methods of dealing with drought during times of natural water shortages:

- Importing water from a drought resilient source, or trucking water in from a municipal source into a cistern.
- Implementing water conservation and efficiency measures.
- Water recycling by using rain barrels and grey water.

Stay Up-To-Date

For more information visit Quinte Conservation's website for:

- Low water alerts and view news releases.
- The Quinte Region Drought Plan to learn more about water levels, drought management, and water level warnings
- Best practices for protecting rural drinking water sources.

WELL WATER MANAGEMENT

Managing rural drinking water in a drought period can be difficult. Implement the following actions to be prepared for drought conditions.

Implement Water Conservation

- Review and assess the components of your pressure and plumbing systems to inspect for more water efficient improvements.
- Place your pump or your pump intake deeper in your well because it may increase the efficiency of your equipment.
- Upgrade your pump if it is no longer able to reach the recommended pumping rate.
- Increase your pressure tank to allow for additional water storage.
- Rehabilitate your well if it is exhibiting decreased yield while maintaining its water level.
- Install a trickle system to support the increased water needs during periods of drought.
- Consult a licensed well contractor to discuss deepening your well, or about constructing a new well if remedial action does not improve you water quality/quantity.

Important information

All work to construct or install pumps into wells must be done in accordance with Ontario Regulation 903.

Always consult a licensed well contractor, qualified pump supplier, or the Water Well Help Desk before performing alterations to your well or its equipment.

*To find a licensed well contractor in your area, visit the Ministry of the Environment, Conservation and Parks website at:
www.ontario.ca/page/find-licenced-well-contractors*



REFERENCES

Econation
 Energy Star
 Environment Canada
 Danmark
 Health Canada
 Natural Resources Canada
 United States Environmental Protection Agency
 Statistics Canada

www.econation.one
www.energystar.gov
www.ec.gc.ca
www.danmark.com
www.canada.ca/en.html
www.nrcan.gc.ca
www.epa.gov
www.statcan.gc.ca



Learn more about water conservation and the work being done by Quinte Conservation to protect drinking water sources at **QuinteSourceWater.ca**.