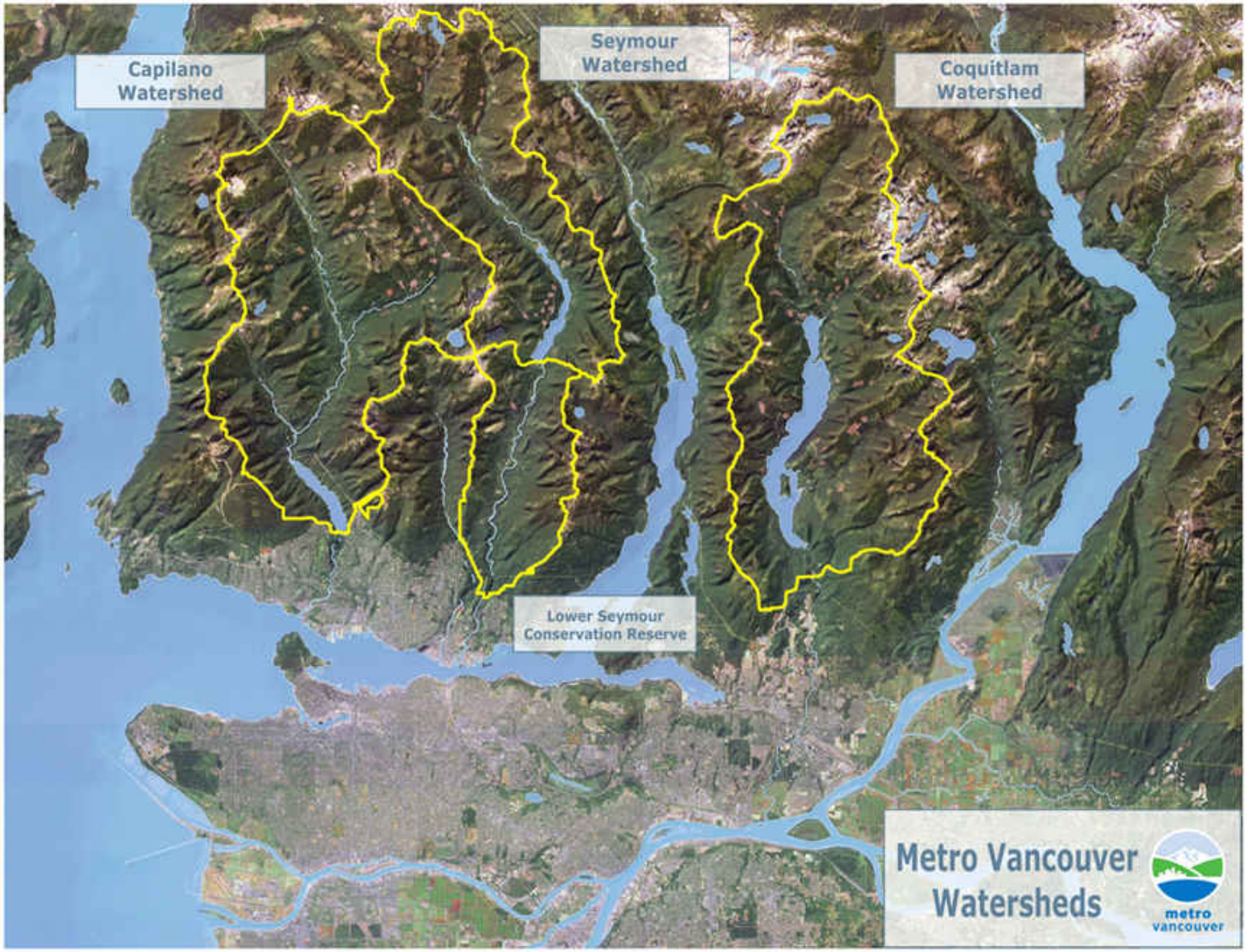
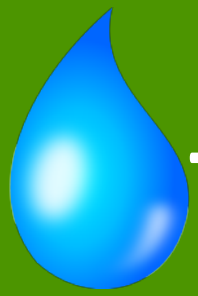
Water Conservation in Rainy Vancouver? Really?

Society Promoting Environmental Conservation

Yes really!

There are over 2.4 million individuals in the Lower Mainland, and Metro Vancouver expects about 35,000 new residents every year, with an estimation of about 1 million new residents by 2040. Everyday, over 1 billion litres of water flows collectively through our taps in Metro Vancouver. On the most water-consumptive day per year, about 2 billion litres of water is collectively used. In the summer and early fall, Vancouver's water intake is around double of the average daily water intake for the rest of the year because of watering lawns, filling swimming pools, maintaining sports fields, and growing food (agricultural crops and personal gardens). In the summer of 2015, Metro Vancouver experienced stage 3 water restrictions as our reservoirs were experiencing high demand coupled with lack of fresh water input.


Capilano Watershed
Seymour Watershed
Coquitlam Watershed
Lower Seymour Conservation Reserve
Metro Vancouver Watersheds
metro vancouver

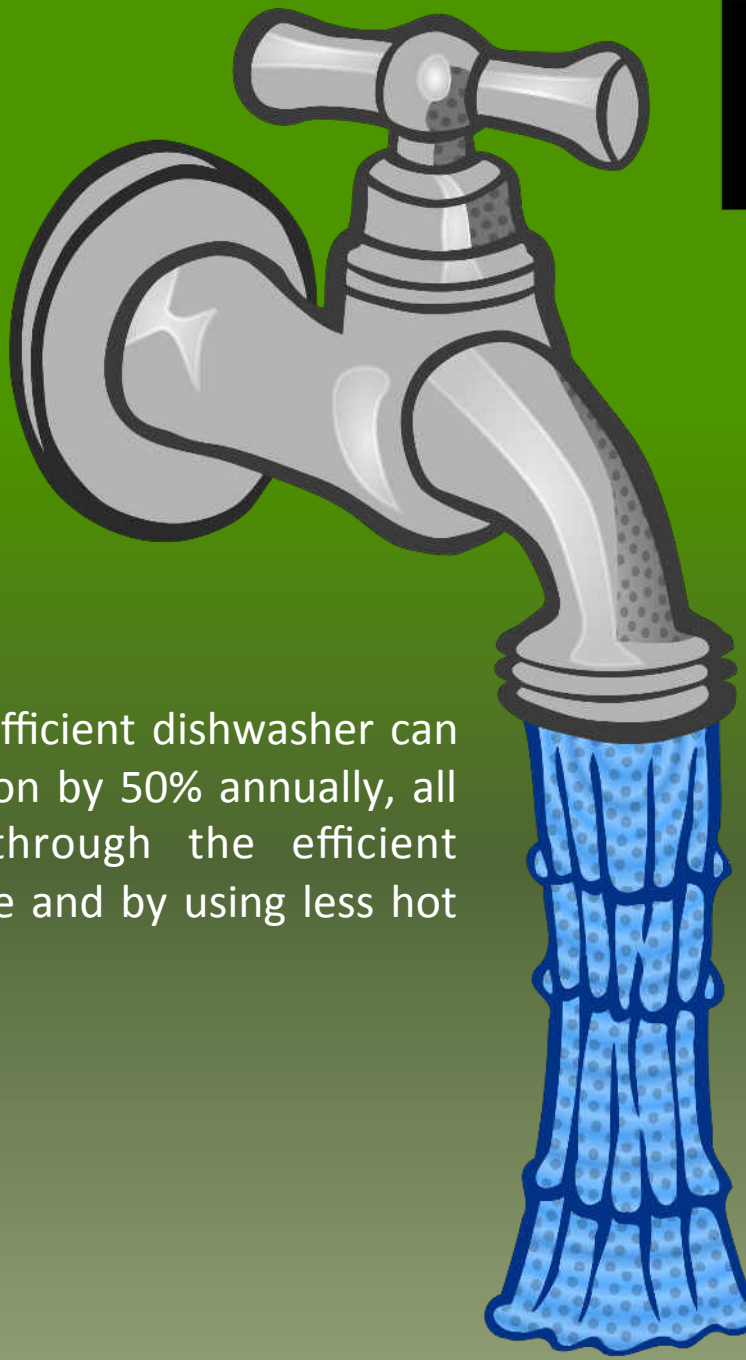


The Source of our Water

- Vancouver's watersheds span over 600 square kilometres which is about 150 times the size of Stanley Park.
- Our three water reservoirs are: Capilano, Seymour and Coquitlam.
- The Seymour-Capilano Filtration Plant (SCFP) and Coquitlam Water Treatment Plant (CWTP) both use UV radiation and chlorine to disinfect the water (source treatment)
- If you live far from the water source, your water may be additionally treated (secondary treatment) in which chlorine is added again into the water to keep bacteria from growing because chlorine gradually breaks down as it travels to your home
- In total, Vancouver has over 500 km of water mains, 15 water pumping stations to help water to get up hills, 8 rechlorination stations for secondary water treatment, and 22 in-system reservoirs for having water during peak-demand times

Waste Water Treatment

- Metro Vancouver residents produce about 440 billion litres of sewage each year. Some liquid waste products are human waste, oil, soap, and food scraps
- To avoid wastewater flowing into our water bodies, which would threaten public health, recreation, habitats, and fisheries, we have two types of waste water treatment:
  - The primary treatment uses mechanical processes to take away 50-60% of sinking or floating materials
  - The secondary treatment uses bacteria to consume particles and 95% of dissolved organic materials in the wastewater, which takes place at Lulu Island, Annacis Island, and Northwest Langley wastewater treatment plants



- Replacing an old and inefficient dishwasher can reduce water consumption by 50% annually, all while saving energy through the efficient operation of the machine and by using less hot water

Tips to Conserve in the Kitchen

- ✓ Run full loads of dishes only. Fix all faucet and pipe leaks to prevent unnecessary use of water.
- ✓ Replace older model dishwashers with a newer, high-efficiency model to save water and energy.
- ✓ Avoid pre-rinsing the dishes, as is not required with many new dishwashers. Read the instruction manual for your machine to determine if you can minimize rinse water usage.

DID YOU KNOW?

- An Ultra Low Flush toilet flushes at a maximum of 6 litres per flush
- A High Efficiency Toilet (HET) flushes at maximum of 5 litres per flush
- Dual-Flush toilets are a type of HET with a full flush and a half flush capability. The average flush volume of a modern dual flush toilet is 4 litres or less
- The average adult individual in Metro Vancouver spends about 8 minutes in the shower, which equates to 71 litres of water consumed

Tips to Conserve in the Bathroom

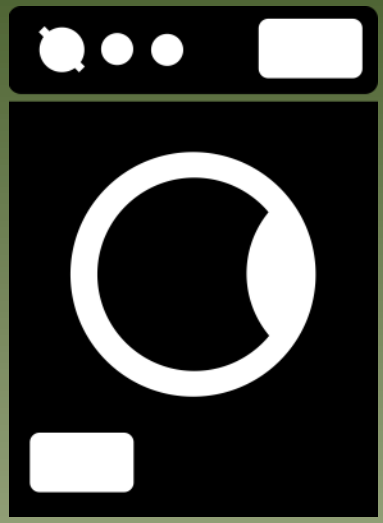
- ✓ Reducing your shower by 2 minutes will save approximately 18 litres of water per shower, which after 3 showers is equivalent to the amount of gas required to fill the tank of your car.
- ✓ If you reduce your shower by 2 minutes and shower only 5 times a week, you will save a total of 4680L of water annually (12 trillion litres collectively for Metro Vancouver).
- ✓ A showerhead with a flow rate of less than 0.158L/s is considered "Low-Flow." Be mindful shower heads often have multiple settings, ensure yours in set to the lowest setting for optimal water use.

- ✓ Replace older model toilets with a newer, high efficiency model to save water.
- ✓ Do not flush garbage or unnecessary items down the toilet.
- ✓ If you hear the water running in the toilet tank for an unusual length of time, a simple adjustment can return it to normal operation.
- ✓ Use the low volume flush mode on your toilet as much as possible, if you have a dual flush toilet.

- Washing laundry accounts for 15-40% of total household water consumption
- Most washers require about 150 litres of water per load, high-efficiency washers require less than 100 litres of water per load
- Replacing old and inefficient washers can save 23 000 litres of water

Tips to Conserve in the Laundry Room

- ✓ Run full loads only, even if the washer has an adjustable load setting. A full load is the most efficient way to wash clothes.
- ✓ Replace the old inefficient clothes washer with a new high-efficiency model to save water and energy.
- ✓ Fix all faucet and pipe leaks immediately to prevent unnecessary use of water.



Water Use in the Yard

- Anything that enters a storm drain is directly discharged untreated into nearby rivers and the ocean
- This includes runoff from pesticides, debris and dirt and can have negative impacts on marine ecosystems
- Stormwater often contains motor oil, gasoline, sediment and fertilizers

Tips to Conserve Outdoors

- ✓ Keep your storm drain clear from debris such as sediment, leaves and small branches.
- ✓ Never pour anything down the storm drain aside from rain water.
- ✓ Wash your vehicle only when necessary at an appropriate car wash depot
- ✓ Abide by Metro Vancouver's storm drain bylaws to ensure that fish habitat is protected.
- ✓ One hour of lawn watering is equivalent to 25 flushes in the bathroom
- ✓ Execute "WATER WISE GARDENING" by avoiding watering lawn as fertilizer runoff can be detrimental to marine ecosystems and planting drop-tolerant plants

References

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