

# Water Conservation Priorities

## Low Flow Toilets

For indoor water use, your toilet usually represents the largest use of water. There are also likely municipal incentives to support a decision to replace a toilet with an approved water-efficient one.

Toilet efficiency has come a long way in water-savings and performance. In the 1980s, residential toilets flushed with 20 litres of water, the 1990s saw the ‘water saver’ 13 L flush toilets that are still available today; in 1996, the Ontario Building Code mandated that new homes have 6 L toilets. While the first generation of 6 L toilets were not high performers, they have since improved to be better than their 13 L equivalents. A “Maximum Performance Testing of Popular Water-Efficient Toilet Models” is available at: [www.cwwa.ca](http://www.cwwa.ca)

Common types of 6 litre toilets

1. Gravity: 99 percent of residential toilets you see are this type. These use less water since they have a redesigned bowl to strengthen the siphon action produced with gravity.
2. Vacuum-assist: in the tank, a small vacuum in the STET of the tank aids a normal flush.
3. Pressure-assist: This type is found typically in institutional and commercial uses; it uses pressure instead of gravity to push with compressed air rather than pull with siphoning action.
4. Tip Bucket: This model has a bucket at the top of the toilet tank that fills when the lever is activated. It then tips water into the bowl to drain. No flapper is used which resolves flapper leakage or replacement.
5. Dual Flush: The first level of flush in this model uses 3 L to remove liquid waste and the second level uses 6 L for solid wastes. A study by the Canadian Mortgage and Housing Corporation shows that dual-flush toilets save approximately 26 percent more water than conventional 6 L toilets when used to replace existing non-efficient toilets (in this study, non-

efficient toilets averaged 14.1 L).

## Reducing Toilet ‘Sweat’

Toilet tanks may seem to ‘sweat’, often leaving a puddle of water behind it. This may often occur in hot and humid weather but should not be confused with a leak. In this case, the cool water in the tank causes air to condense leaving moisture on the tank shell. This occurs less if there is air conditioning, however, there are other helpful aids. Some tanks are insulated to prevent sweating, nonetheless a 6 L toilet has less chance of sweating since they discharge only half of the water in the tank. Fresh, cool water that fills it will be diluted by the warm water that remains in the tank.

## Toilet Prices

According to the Canadian Mortgage and Housing Corporation: Toilets come in a range of prices, from less than \$100 to more than \$1,000. The average two-piece toilet costs between \$150 and \$200. Toilet seats are generally sold separately, and the price can range from \$10 to \$30. One-piece or “designer” toilets tend to cost more than the standard two-piece close-coupled type models found in most homes. Dual flush toilets cost between \$280 and \$500. It is important to note that more expensive toilets do not necessarily perform better than some of the bargains out there.

## Rain Barrels

Rain barrels can catch storm water run-off from your building’s roof. They will reduce the storm water sewage management needs since many pollutants are carried with rain into rivers, lakes and streams and will also provide you with a free source of water for your garden and building landscape.

RiverSides in Toronto supplies a tough recycled 500-litre (132 US Gallons) rain barrel that fits snugly into the outside corner of a building near the downspout. The easy-to-use diverter valve means winter maintenance is

a simple turn of a dial. It is available in 4 colours. This rain barrel model fits any size downspout, doesn't breed mosquitoes and is child-safe.

### **Rainwater Harvesting**

Rain harvesting systems capture, store, treat and deliver rainwater in both residential and commercial buildings. However, rainwater harvesting is currently not permitted in Canada or Ontario due to public health regulations (the Ontario Building Code does not permit dual plumbing systems inside a building). The Canadian Mortgage and Housing Corporation study, *Regulatory Barriers to Onsite Water Reuse*, outlines the current situation of rain harvesting on residential properties.