

RAIN BARREL – BACKGROUNDER

EVERYTHING OLD IS NEW AGAIN...

OLD-FASHIONED TECHNOLOGY HAS MODERN-DAY APPLICATION

Contraptions to catch and harvest rainwater have been around since ancient times, when underground rainwater collection cisterns were commonplace. In fact, rainwater harvesting can be traced back to the Roman Empire and the great Egyptian dynasties, when access to stored water was an advantage to conquering armies. Ancient cisterns can be found beneath the city of Istanbul (formerly Constantinople) and in Morocco, Portugal and Italy.

But cisterns are not a thing of the past. At the Wychwood Barns in Toronto, buried beneath the floor of a barn, is a 90 cubic metre cistern that captures rainwater from the building's roof. The water collected is used for flushing toilets and for park irrigation.

On a smaller scale, as individuals have become more environmentally conscious, a rain barrel is usually the receptacle of choice for homeowners. The collected water is most often used to water gardens, keep pets hydrated or wash the car on a warm summer day. Collecting rainwater has, for the most part, been employed as a means to conserve water for future use. And while some people may think the lowly rain barrel is old-fashioned technology, when multiplied it can play a significant role in dealing with a modern-day problem.

THE PROBLEM

Extreme weather events linked to climate change are happening more frequently and with ever more severity. These weather events have led to an increase in sewer backup, urban flooding and water damage throughout Canada to the point where water-related damage accounts for 40% of all personal property insurance claims, at a cost of \$1.7 billion annually.

Much of the problem lies in the fact that a vast expanse of Canada's municipal storm and sanitary sewer infrastructure is aging and, for the most part, was not designed to handle the increased frequency of the intense rainstorms that have become the norm. Consequently, sewer system overloads are happening with more regularity.

THE SOLUTIONS

While governments at all levels must make the appropriate investments to upgrade sewer and wastewater infrastructure, small steps at the community and homeowner levels can have a tremendously positive impact on reducing the damage caused by excess precipitation.

Homeowners can employ simple techniques like installing sewer backflow valves, sloping the grading away from the foundation and disconnecting downspouts to help keep water out of basements.

And while not an alternative to infrastructure upgrades, rain barrel programs, when deployed to a significant number of homes, can have a positive impact on the overall performance of a town's sewer system. And installing a rain barrel requires the homeowner to disconnect the downspout from the sewer system. This simple move can prevent localized flooding by diverting rainfall away from the house and onto lawns and gardens. More importantly it reduces the amount of water flowing directly into the sanitary system.

IT TAKES A COMMUNITY

One rain barrel on its own will not have much impact on efforts to stem the flow of water that has been wreaking havoc across the country. But a whole community of 1,000 households using rain barrels can make a significant difference in helping to improve the sewer system's capacity, thus keeping basements, and everything in them, dry.

