

To the Editor:

This is an article form a series of monthly columns by Environmental Law Specialist Dianne Saxe, one of the top 25 environmental lawyers in the world, and Ms. Jackie Campbell. These articles are available for publishing at no charge, provided Dr. Saxe and Ms. Campbell are cited as the authors. Dr. Saxe can be contacted at (416) 962-5882 or admin@envirolaw.com. For more information, visit <http://envirolaw.com>.



News Article

Downspout disconnection – What’s the point?

A dinner guest recently grumbled about municipal requirements that he disconnect his downspouts. Why are they making us do such a stupid thing, he complained. What's the point? Do we really have to do it?

Yes, we told him, and it's about time! But why?

Most downspouts move stormwater from roofs and other hard surfaces directly into municipal sewer systems (storm, combined, or sanitary sewers). This puts huge volumes of water into sewer systems that, generally, were not designed to handle them. Those old pipes simply don't have the capacity to deal with the volume of wastewater that now courses through them.

In combined sewer areas, such as the older parts of Toronto, stormwater so overwhelms the sewers that huge amounts of raw sanitary sewage (including toilet wastes) are washed directly into rivers and lakes. This is the major reason for beach closings, and also causes substantial pollution of fish and other wildlife. The Department of Fisheries and Oceans is pressing municipalities across the country to get serious about eliminating sewer overflows. This would likely be impossible without widespread downspout disconnections.

Sewer overload is also a frequent cause of basement flooding, which is hugely expensive and disruptive for those affected. In addition to the initial filth and stink, basement flooding can trigger mould growth, and can interfere with owners' and tenants' ability to obtain future insurance. Several factors contribute to increased flood risk, but one of the worst is rapidly moving stormwater from large areas of hard surfaces into aging sewers.

Climate change is making storms, and flooding, much worse. The expected frequency of a storm, known as the return period, is an indication of storm intensity. For example, a 100 year storm is a big storm that is expected to occur no more than once every 100 years. From 2000 to 2005, Ontario had [10 severe storms](#) greater than the “100-year storm”, causing hundreds of millions in damages. Experts predict that today’s 50-year storms will become 20-year storms by mid-century.

Municipal attempts to prevent flooding and sewer overflows can be enormously expensive. One of our municipal clients is looking at \$100 million in capital costs to reduce flooding in a single low-lying area, work that could take 20 years. Downspout disconnection, in comparison, is inexpensive, helps immediately, and even reduces operating costs for wastewater treatment plants. The Canada Mortgage and Housing Corporation calculates that disconnecting a downspout on an average Toronto home with a 140 square metres (1500 square feet) roof would divert [close to 100,000 litres](#) of stormwater from the sewer system every year. In one pilot area of Markham, downspout disconnection reduced the volume of wastewater requiring expensive treatment by almost 50%. This should help keep taxes down too.

For all these reasons, many municipalities ban downspouts from connecting to municipal sewers. Toronto has made it [mandatory](#) to disconnect existing downspouts, starting in the central, combined sewer area. Other areas will follow over the next five years.

In a typical downspout process, the downspout is cut off around 9 to 12 inches above the ground; an elbow and pipe extension are added to divert water onto soft ground. A splash pad may also be added to prevent soil erosion and assist in directing water flow. The sewer pipe is capped so that no more water (or debris) can enter the sewer system. [Downspouts can also drain into soakaway pits](#) or other devices that direct water underground, where it can infiltrate into the soil. This will help to keep local trees healthier.

Most municipalities allow property owners to apply for an exemption, where disconnection is technically difficult, and/or would create a hazard. Owners must first make reasonable efforts to disconnect the downspouts, for example by relocating or regrading them.

Toronto’s Mandatory Downspout Disconnection [Exemption Application](#) form requires information about *each* downspout the property owner wishes to have considered for exemption. This includes proximity of the downspout to the grass and garden, walkways, parking pads, the City sidewalk, depressions, and the neighbour’s property. As well, they want details about whether any corrective measures can be taken to avoid or lessen any hazard the disconnected downspout presents.

Homeowners who intend to apply for an exemption should do sooner rather than later. Once an exemption application is submitted to the City, a homeowner are not subject to a fine for breaching the by-law. However, if the City rejects the exemption application, it has been put on notice that the property has a downspout that is out of compliance – and you can expect an inspection.

Some tips when you disconnect your downspout:

- Direct the water onto a permeable area of your property (e.g., soil, grass or your garden), not onto a sidewalk or driveway, where it can pool and freeze.
- Don't direct the water on to your neighbour's property, or the road.
- Rain barrels are wonderful for garden use during warm weather, but have to have an alternative during the winter, when they could freeze and break.
- Keep the water away from the foundation of your house- you don't want it in the basement!

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