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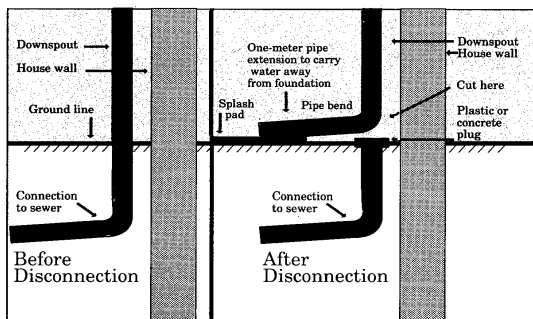
## What can you do?

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- Make sure your downspout is not connected to the sanitary/combined sewer system. If it is, then disconnect it as soon as possible.

To do this, cut the downspout off above ground, then attach an elbow and a one-metre length of drain pipe directed to your lawn or garden, preferably, in an area where the land slopes away from the house walls. Provide a splash pad at the end of the downspout to avoid damage to your lawn. This can be a small concrete slab or some large stones. Materials are available from building supply companies. Cut off the bottom part of the original downspout and cap it, so that rain water cannot enter into the sewer system. Be a good neighbour, watch where you've redirected the water so it doesn't cause drainage problems for others.

- Let us know about problem areas. We need the participation of each homeowner and business in identifying and correcting improper sewer uses.
- Help spread the word to make 'downspout disconnection' and 'combined sewer overflows' (CSO's) common environmental terms.



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## Consider the benefits.

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If you voluntarily disconnect your downspout from below ground, the results will include:

- Cleaner watercourses and beaches
- Less basement flooding
- Water Pollution Control Plants which can operate at improved efficiency
- Reduced burden on our municipal taxes

Although we would like to count on our citizens' cooperation and natural concern for the environment, there is a legal aspect to this situation as well. City of St. Catharines By-law 91-364, to regulate sanitary and storm sewer drainage, includes a \$53 fine for homeowners with downspouts (rain water leaders) connected to the sanitary/combined sewer system. This bylaw will be actively enforced and will continue to be until this problem is solved.

Our staff is available to answer questions or provide advice on dealing with downspout disconnections. For more information contact:



Pollution Control Section  
City of St. Catharines  
(905) 688-5601 ext. 1987



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# What's the connection between downspouts and St. Catharines' beach closings?

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## It's the sewer connection and there shouldn't be one.

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Downspouts, also known as rain water leaders, which are connected directly to the sanitary/combined sewer system, contribute to a major pollution problem at our beaches and in our creeks. We're letting good water go down the drain and it's forcing the bad water out where it shouldn't be going.

But, cleaning up our local environment is not the only reason to disconnect downspouts from the sanitary/combined sewer system. Basement flooding would be reduced and there would be less pressure on the area's Water Pollution Control facilities. This would help decrease the burden on our municipal taxes because taxpayers would not pay for the treatment of rainwater as if it was sewage. It would help put a lid on the cost to rejuvenate our existing overworked sewer system, as well as allow the sewer system to work more efficiently.

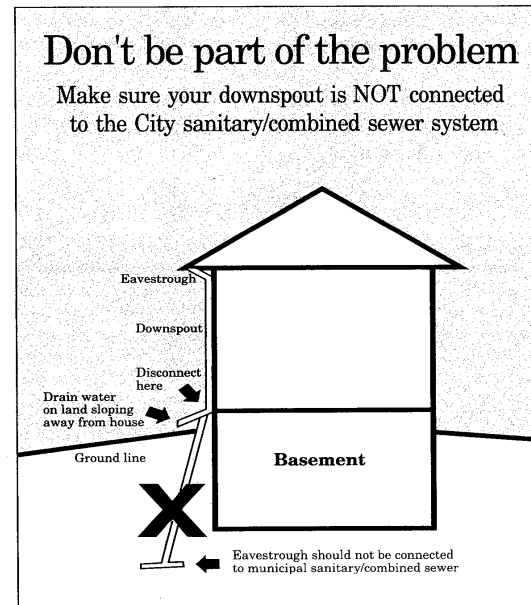
The major problems are in the older part of the City where downspouts often are connected directly into the sanitary/combined sewer system. The combined sewers carry both the sewage from household drainage systems and stormwater. During storms, rain water falling on house roofs flows from the downspouts towards the area's two Water Pollution Control Plants for treatment, along with household wastewater.

In older areas, the sewers are undersized for this wet weather situation. At certain locations an overflow point exists where excess diluted sewage is allowed

to spill into a nearby drainage ditch, watercourse or into Lake Ontario directly. These points are called combined sewer overflows (CSO's). Basement flooding is also a problem in these areas because of the sewer overloading.

There are many CSO's in St. Catharines, of which more than 30 were identified as requiring control in the St. Catharines Area Pollution Control Strategy, endorsed by City Council, June 18, 1990. This is one of the major reasons that the cost of the Strategy recommendations has been estimated at about \$100 million over a 20-year implementation period to solve sewer system problems.

If downspouts are removed in all of the sanitary/combined sewer areas, the frequency of CSO's could be reduced dramatically.



The Water Pollution Control Plants use controlled biological processes to treat sewage. The system works well when dealing with the sewage they were designed to handle. The problems begin when combined sewer systems, prevalent in the older areas of the City, carry not only sewage but also rain water through the Plants. This misuses the Plants' basic function to treat sanitary sewage. It can also create a situation where the Plants are overloaded and untreated sewage bypasses treatment and is diverted to Port Dalhousie harbour and the Welland Ship Canal near Lake Ontario.

CSO's and bypasses are two of the major reasons why permanent signs have been posted at St. Catharines' beaches warning of high bacterial counts. According to the Ministry of the Environment and Niagara Regional Health Services' recreational use guideline, an acceptable bacterial count for a beach is 100 fecal coliforms per 100 millilitres of water. Beaches are closed at counts higher than that. The presence of fecal coliforms indicates a risk of minor skin, eye, ear, nose, throat and gastrointestinal infections.

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Just the simple act of disconnecting a downspout from the sanitary/combined sewer system can help solve this major environmental concern.

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