

Urban Trees Can Help Improve Water Quality

Peter Duinker, Halifax Tree Project

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Happy Valentine's Day! The account I want to give in this article is perhaps unique to Halifax but there may be other cities that have the same issues as do we. Of the several ways in which trees in the city can be helpful in terms of water quality, I will address only one here.

To begin, I remind readers that much of Halifax has combined sewers which means that the sanitary sewers are one and the same as the storm sewers. Until just over a decade ago, sewer water generated on the Halifax peninsula went straight into the ocean. The Harbour Solutions Project brought an end to that with the wastewater treatment plant between Barrington and Upper Water Streets.

The treatment plant, using so-called advanced primary treatment technology, has a finite flow-through capacity. When we get a large rainfall in the city – a rather common occurrence in Halifax - there is a good chance that the flow-through capacity will be exceeded. That means that the wastewater coming to the plant will need to bypass most of the treatment process and head more or less straight to the ocean. In sum, periodically the Halifax Harbour gets a substantial dose of raw wastewater.

There are two ways to address this problem. One would be to have a wastewater treatment plant with a higher flow-through capacity. That approach is beyond us now with a fairly new plant. The other approach is to figure out how to store the wastewater and let it out of storage slowly enough that the treatment plant is not overwhelmed. You could do this with engineering works such as ponds or tanks, or, as described by Kate Thompson in her article dated 2021-01-19 and entitled “Urban Trees Slow Down Stormwater Flow”, with trees.

Since Kate described the process of stormwater attenuation by trees in detail, I don't need to recount that here. The point of my story is that the more trees we have in the canopy of Halifax, the greater the chance that the wastewater flush from a rainstorm will not overwhelm the treatment plant. At worst, the holdback of rainwater by trees should at least make the pollution load on the Harbour smaller.

This benefit of trees in the cityscape – improving seawater quality in the Harbour – is seldom discussed. It struck me some years ago as rather interesting that the trees in my neighbourhood – in the middle of the peninsula (see photos) – could influence (i.e., reduce) the number and length of swimming closures at Black Rock Beach in Point Pleasant Park. I recall vividly that then-Mayor Peter Kelly held a rather wet media event at that beach on the first day of September 2010 (see photo). He gathered the media for a strange celebration of the culmination of the Harbour Solutions Project by going for a swim at Black Rock, apparently as a testament to the success of the Project in cleaning the harbour water. Needless to say, trees were not mentioned in that press event, but, in my view (as you might expect), should have been!





