

Pelham – the Town At the Top of the Twelve

Discovering our many waterfalls draws thousands of visitors to Pelham and the Niagara Region in the spring and fall. Back in the day there were many water courses draining from the escarpment year-round. But sadly development, deforestation and population growth has caused these streams to dry up during the summer. The cold, spring fed Upper Twelve Mile Creek may be one of Pelham residents' favourite environmental features, but it's also one of only a few Niagara streams that still flow year-round and support native cold-water fish species like Brook Trout. Yet as our town grows so are we degrading this valuable resource.

Urban development like what we see up and down Hwy20 in Fonthill brings about a fundamental shift in the natural water balance. As vegetated land is replaced with hard surfaces like buildings, roads, and parking lots, surface runoff becomes the primary drainage mechanism. As water runs off paved surfaces it picks up sediment, road salts, metals, oils, pesticides, and other harmful pollutants, which are conveyed directly from above the watershed into Twelve Mile Creek. Before these vegetated lands were urbanized, most storm water falling on the Fonthill Kame Moraine either evaporated with the help of the vegetation or percolated into the leaky glacial soils. As we paved these areas and put impervious roof tops over our structures, we diverted most of this evapotranspiration and percolation into a much larger volume of fast-moving surface runoff to very fragile stream channels. These large runoff volumes have contributed to increased erosion, higher risk of flooding, property damage and the destruction of the natural biodiversity of Twelve Mile Creek. You can easily observe the excessive water flows and the corresponding damage to the properties of Pelham Cares and the Lions Club at the outlet of the pond below the Community Centre on the north side of Hwy20 or at the outlet of the stormwater pond at the north end of Station St.

Conventional approaches to the management of urban runoff include structural practices such as wet ponds and detention chambers, focused on detaining stormwater and controlling the rate at which water is discharged into receiving waters. In recent years, unique flood events attributed to Climate Change have shown that these approaches are not enough. Urban water runoff management must become more holistic, and we must have a greater emphasis on green infrastructure and low impact development (LID) if we are to preserve Twelve Mile Creek for the next generation to enjoy.

The good news is that existing conventional stormwater management approaches can be successfully adapted to incorporate more of these practices in order to promote widespread adoption of the water balance approach by engineers, planners and other practitioners in the development industry. The water balance approach seeks to recreate the original pre-urbanization balance of evapotranspiration (from vegetation), percolation back into the cooling and cleaning soils of the Fonthill Kame Moraine and runoff in stream channels. We can start to return to a more natural state as it was before the massive changes precipitated by intense human land development.

More good news, the Town of Pelham is considering taking an important and bold step to preserve the precious natural heritage that is Twelve Mile Creek. Councillors and the mayors are working in partnership with town engineers and planners to engrain Green Infrastructure and LID as policy in the Town's design manual. Rather than hoping for an arbitrary or haphazard adoption of these principles, a green infrastructure and LID policy will ensure that developers, builders, and town planners adopt natural or built systems at the design stage. This policy will yield huge ecological benefits and help to maintain pre-development water flows.

Pelham can pride itself on being the 'Town At the Top of the Twelve' only if there is a Twelve to be proud of. By taking a holistic approach to storm water management, we will join a growing list of progressive municipalities that have taken the important step to ensure our grandchildren and their grandchildren will enjoy natural resources like Twelve Mile Creek.

Dennis Edell

Chair, Niagara Chapter Trout Unlimited Canada

We, the undersigned residents of Pelham, endorse this letter from the Niagara Chapter of Trout Unlimited Canada and request that the Town of Pelham proceed to imbed LIDS and Green Infrastructure policies in Town policy and design manuals. We also suggest that as part of this initiative, the Town consider a "Homeowners' Manual" to be given to all residents, especially residents in new developments, that would encourage the proper use of green infrastructure applications such as rain barrels, swales, soakaway pits, rain gardens, tree and shrub planting, permeable driveways, etc.

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