Chedoke Creek Environmental Assessments - PIC #1 – Q&As

(During the Presentation)

1. **Is it my imagination, or have we had fewer CSO bypass events recently, and are the measures you referenced responsible?**

The exact number of Combined Sewer Overflows (CSO) bypass events in 2025 to date, or as compared to previous years, is not readily available [during the presentation]. Annual reporting is however completed by the City for the Ministry of the Environment, Conservation and Parks. It should be noted that it is not just the rainfall intensity, it is the duration (and depth\volume) of the storms that can drive CSO events.

The City has observed a general positive trend over time, with decreasing CSO frequencies, durations and volumes since 2013 when annual reporting began. In 2024, the estimated overall system-wide annual wet weather flow volume capture rate was 87.4% with an estimated annual CSO volume release of 3.17 million m^3. Note the City does track and publicly report CSO bypass information at: Monitoring Wastewater Overflows and Bypasses | City of Hamilton. That indicates the most recent CSO bypass was July 13, which occurred for both the Wellington and Wentworth CSOs.

2. **Is daylighting Chedoke Creek an option being considered?**

Daylighting means uncovering portion of the watercourse that was previously buried. Note there is a book available regarding this ("Daylighting Chedoke" by John Terpstra) which is available through the Hamilton Public Library. In general, daylighting is not feasible because of the amount of development along the historic path of the creek above the escarpment, the depth of current storm sewer, and the associated cost to daylight (where feasible). We can consider localized opportunities for daylighting through the Chedoke Creek Watershed Stormwater Retrofits Environmental Assessment (EA) study where appropriate. There has been a motion from Councilor M. Wilson to assess daylighting for the Chedoke Golf Course and potentially convert a portion of the area into parkland.

3. **Please don't let historically 'manicured' conditions prevent you from proposing naturalizing projects!**

Noted – we were simply stating that many of the existing available park spaces are "manicured" but agreed that there is potential to naturalize portions of these and other areas through the Chedoke Creek Watershed Stormwater Retrofits EA study.

The City has also undertaken a biodiversity action plan (BAP) together with many community partners. Both Project Managers attend partner meetings for the BAP and look to support the goals of this plan with the alternative solutions that are supported through the EA.

4. **Is standing water a concern in wet ponds?**

Wet pond stormwater management facilities (SWMFs) are common features for new developments. If you review aerial photos around new subdivisions in Hamilton, you will typically see them in these areas.

Normally, the concern with standing water is West Nile Virus (found in mosquitos). Typically, wet ponds are relatively deep (1 to 1.5 m) and have a degree of water circulation as well as natural vegetation, which makes them a lesser concern for mosquito reproduction. The City's requirement is to design ponds in a way that there is a reasonably consistent flow of water.

The City's focus for standing water and West Nile virus is typically storm sewer catch basins (roadside drains) as these are smaller and can have poorer circulation. These features are what the City typically targets for application of larvicide where required. Further information is available on the City's webpage, including measures residents can take to reduce standing water with respect to West Nile Virus (see https://www.hamilton.ca/people-programs/public-health/environmental-health-hazards/animal-insect-related-diseases/west-nile)

5. **Great to hear about possible natural stream channels through the golf course but have you discussed continuation of this treatment with McMaster through the Innovation Park?**

This has not yet been considered as part of the current study, as the McMaster Innovation Park lands are private lands. While this would not be the focus of the Chedoke Creek Watershed Stormwater Retrofits Study, this can be assessed further as part of the next phase of this study.

6. **Question related to Source Control measures. Much is said about public and residential lands. Both areas should try to place more controls or enhanced policies for redevelopments projects through Site Plan Control measures and requirements for LID measures to ensure controlled disbursements into the drainage systems.**

The City has defined requirements for any re-developments that are subject to the Site Plan Control process. The City's recently implemented Green Standards and Guidelines will assist in this regard (see: https://www.hamilton.ca/build-invest-grow/planning-development/planning-policies-guidelines/green-standards-and-guidelines).

As noted in the presentation, the City is also evaluating a road retrofit policy that would require a greater implementation of Low Impact Development (LID) measures when City roadways are reconstructed.

7. **An excellent presentation, but regarding the Chedoke Creek Delta reconstruction, the reference to slowing the flow of water raises a question. Many stream reconstruction plans across North America are designed to increase the flow, not to slow it down. Slowing the water would seem to pose the risk of a stagnant, high-temperature body of water --- not as desirable as a faster stream flow with lower water temperature.**

The potential modifications discussed will be assessed further in collaboration with RBG, but we note that this was a key feature of RBG's 25-year master plan given ecological benefits. The delta helps provide habitat and shading among other features. The preliminary\conceptual design shown also did include a low flow diversion (towards the delta) and high flow diversion (directly out towards Cootes Paradise) to address differing flow conditions. It should be noted that the delta area is not a typical open flow channel further upstream but is located directly at the interface of Chedoke Creek with Cootes Paradise. As such, conditions are controlled much more by backwater\tailwater from Cootes Paradise\Hamilton Harbour\Lake Ontario.

8. **No question. Thank you, great presentation!**

9. **Which department can provide information/help in building rain gardens?**

Green Venture, which is an environmental organization in Hamilton and is an excellent resource. The City teamed up with Green Venture with the Rain Ready Hamilton Rebate program that is funded by the City and provides funding to residents who install approved Low Impact Development (LID) projects, such as rain gardens and permeable surfaces on their property. Information is available at: https://www.greenventure.ca/rain_ready_rebate

Other resources include the Sustainable Technology Evaluation Program (STEP) which is organized by Credit Valley Conservation (CVC) and Toronto Region Conservation Authority (TRCA). Further information is available at https://sustainabletechnologies.ca/ and https://wiki.sustainabletechnologies.ca/wiki/Main_Page.

10. **Are there ongoing efforts to find and fix cross-connections in Chedoke?**

A complete cross-connection happens when a home's sanitary pipe is mistakenly tied into the storm sewer main and the stormwater pipe is mistakenly connected to the sanitary sewer main. This usually happens at the time of the home's initial construction. A partial cross-connection happens when some of a home's internal plumbing is mistakenly tied into the stormwater pipe that leads to the storm sewer main. This usually happens during renovations or additions and most commonly when a bathroom is added to a basement. The City has a defined cross-connection program, which includes actively testing stormwater discharge to identify potential indicators of sewage, such as testing for caffeine (which is not found naturally). The Chedoke Creek watershed was one of the earliest areas that was targeted for this assessment and remediation of any identified cross-connections. Any remaining cross-connections are likely minor, such as partial cross-connections (i.e. only one fixture in the home is connected to the wrong sewer system) and indirect cross-connections (i.e. both storm and sanitary service pipes are damaged, and wastewater infiltrates the storm service pipe); but still a cause for concern that the City continues to pursue. There is further information available at: https://www.hamilton.ca/home-neighbourhood/water-wastewater-stormwater/wastewater-collection-treatment/sewer-lateral-cross

11. **To what degree do you think the corrosion control program (adding orthophosphate to drinking water) adds phosphate to Chedoke Creek? I know there are quite a few leaks in the drinking water infrastructure. Might fixing leaks, or reducing P in drinking water improve water quality with respect to P?**

The City does have a proactive leak detection program that identifies leaks so that they can be addressed. The City has been quite active in this regard and has actually won an award for its efforts (see: https://www.hamilton.ca/city-council/news-notices/news-releases/hamilton-water-receives-owwa-award-proactive-leak-detection).

The goal of the Corrosion Control Program is to reduce the amount of lead in tap water. This will help protect Hamilton citizens from the potential health impacts of lead. Corrosion control is required by the Ministry of the Environment, Conservation and Parks (MECP) Safe Drinking Water Act. Phosphoric acid is applied to the drinking water system to support a protective coating of orthophosphate inside pipes and household plumbing fixtures. This coating reduces the release of metals, such as lead and

copper from household plumbing into drinking water. A maximum dose of phosphoric acid was initially applied in late 2018 when the program began to ensure a suitable coating throughout the distribution system, and now doses have decreased towards a maintenance dose. Through our surface water quality program that monitors conditions along City-owned creeks, streams, and rivers, we continue to monitor for total phosphorus.

12. **I second support for daylighting and naturalized approach to the extent possible to support other City goals related to biodiversity and climate change. Also increased naturalized buffer of existing open reaches through the golf course.**

Thank you for the feedback. Channel naturalization will be considered in the Chedoke Golf Course as part of the next phase of the study.

13. **Can we ensure that the new Light Rail Transit (LRT) project will addressed and include LID measures?**

That's a separate project. It is a question for Metrolinx and the City's LRT team (see: https://www.hamilton.ca/city-council/plans-strategies/light-rail-transit-lrt) . It should be noted that the LRT construction area is a constrained corridor due to existing properties and utilities, and as such opportunities may be more limited in that case.

14. **Does water quality sampling data from Hamilton Conservation Authority or Redeemer College suggest that cross-connections are no longer an issue?**

No, water quality sampling has indicated that there is still more work to do. The City believes that its efforts have been successful in reducing cross connections and associated environmental impacts; however, the City and its partners need to continue to work to monitor and address all types of cross-connections where identified (see response #10).

15. **What measures will be implemented to monitor the success of these projects?**

The City and its partners will continue to monitor the water quality in Chedoke Creek; this likely remains the most effective means to monitor the success of any proposed projects.

With respect to ecology, HCA is doing a natural area inventory. Alongside, the City is getting involved more in natural asset management to identify and inventory them and develop policies to protect them. Hamilton Water is also identifying invasive species on City owned lands and removing them when they are identified.