

**OLD DUNDAS ROAD SEWAGE PUMPING STATION (HC005)
EMERGENCY OVERFLOW
SCHEDULE 'C'
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT (EA)**

Agency Meeting #1

Meeting Minutes

Location: 77 James Street North, Suite 400, Meeting Room F

Time: 1:00 pm – 3:30 pm

Date: May 2, 2017

In Attendance:

Name	Email Address
Sharon MacPherson-Nemeth (Hamilton Water)	sharon.macpherson-nemeth@hamilton.ca
Esther De La Cruz (Hamilton Water)	esther.delacruz@hamilton.ca
Alex Nizharadze (Hamilton CA)	alex.nizharadze@conservationhamilton.ca
Mike Stone (Hamilton CA)	mike.stone@conservationhamilton.ca
Blair Kidney (MOECC)	blair.kidney@ontario.ca
Barb Slattery (MOECC)	barbara.slattery@ontario.ca
Nancy Mott (Niagara Escarpment Commission)	nancy.mott@ontario.ca
Dave Maunder (Aquafor Beech)	maunder.d@aquaforbeech.com
Peter Hebert (Aquafor Beech)	hebert.p@aquaforbeech.com

No. Item

1. Introductions

Each meeting attendee introduced themselves.

2. Presentation

Dave presented a PowerPoint slideshow on the project. The presentation focused on the 2014 Wet Weather Relief Master Plan and Class EA then presented alternatives to provide a level of service greater than the 1:100-year return period event. A PDF copy of the presentation is included as **Appendix A** to these meeting minutes. A summary of the Presentation is presented below.

Slides 1-2: Dave introduced the 2014 Old Dundas Sewage Pumping Station Wet Weather Relief Master Plan and Class Environmental Assessment. A general overview of the catchment for the Old Dundas Road Sewage Pumping Station is shown showing flow direction of pipes to the pumping station and forcemain out from the pumping station to the City's pipe network external to the catchment area/study area.

Slide 3: A schematic of residential drainage is shown. The concepts of sanitary sewer contributors are introduced. Sewer network components are discussed (sanitary sewers, laterals, manholes, etc.).

Slide 4-5: The concepts of inflow and infiltration are introduced. Sources of inflow such as roof drains and private catch basins connected to the sanitary (against building code and the City's Sewer Use By-law) are depicted. Sources of infiltration such as root intrusion, broken pipes, and leaky manholes are depicted.

Slide 6-7: The purpose and technical components of the 2014 Old Dundas Sewage Pumping Station Wet Weather Relief Master Plan and Class Environmental Assessment are discussed. Technical components of the study are:

- Field work was undertaken to define potential sources of infiltration/inflow. This included smoke testing and scoping (camera) into the pipes.
- Flow monitoring identified the magnitude of infiltration/inflow.
- Computer modelling was undertaken to define the extent of the problems.

Slide 8: Causes of inflow and infiltration are shown. The ratio of inflow and infiltration to domestic sewage is too high (in the range of 6:1 during extreme events). Smoke testing indicated that 18 properties had roof drains that were directly or indirectly connected to the sanitary sewer.

Slide 9: Properties that have possible stormwater drainage connections to the sanitary sewer are shown on the study area map.

Slides 10-11: Slide 10 shows a flooded basement from the study area and the construction of a sanitary sewage storage tank. Slide 11 shows the profile of a sanitary storage tank. A similar tank was recommended during the 2014 study. This has been tendered and construction will start in May 2017.

Slides 12-13: These slides show a simplified diagram of the level of water in the sanitary sewer during different return period flows. Slide 12 shows this under existing conditions while Slide 13 shows this with the storage tank in place. Computer modelling has indicated that the tank will hypothetically eliminate the surcharging of sanitary sewage into basements.

Slides 14: The City has been sealing manholes to prevent infiltration. This was the third recommendation of the 2014 study.

Slides 15: Removing private property inflow was the second recommendation of the 2014 study. This slide illustrates a driveway catchbasin as well as downspout disconnection.

Slide 16: A 1:100-year level of flood protection against basement flooding for the study area will be provided by the new inline storage tank. This plus private and public works forms the core of 2014 study recommendations.

Slides 17-19: These slides introduce the Schedule 'C' EA Study that is currently being undertaken. The purpose is to provide alternatives for storms greater than the 1:100-year return period event.

Slide 20: This figure shows the existing sanitary sewer network and the flow monitoring stations (these locations will also serve as the new water quality monitoring stations). Dave brought up the point that creek restoration projects may need to be added to the recommendations to offset project impacts and produce creek conditions that are better than or equal to existing conditions depending on the water quality results.

Slide 21: Five different alternatives were presented.

Note: Alternative 1 is “do nothing” (i.e. just construct the inline storage tank and do not provide level-of-service for events greater than 1:100-year)

Slide 22: Illustrates Alternative 2. For this option sewage from the storage tank is released into Ancaster Creek via the 750 mm storm sewer during events that exceed the 1:100-year design storm. It is noted that the flood level extends to an elevation that is higher than the proposed storage tank invert and storm sewer. It is likely that this will cause creek water to fill the sanitary storage tank. The alternative is likely technically unfeasible.

Slide 23: Illustrates Alternative 3. For this option sewage is conveyed along the Old Dundas Road roadside ditch. A series of wetland cells will be constructed in the ditches to provide water quality polishing. Like other options, the technical feasibility of this approach needs to be confirmed.

Slide 24: Illustrates Alternative 4. For this option the pumping station and forcemain capacity are upgraded. One potential issue with this alternative is that the downstream sewershed (downstream of the forcemain) may not have capacity to accept increased flows.

Slide 25: This shows a plan and profile of the originally proposed sanitary sewer replacement. Note that the tank was moved from Old Dundas Road to Montgomery Road.

3. **Post-Presentation Discussion and Questions**

Outreach & Education Programs: Sharon shared that the City is currently undertaking education programs for residents to disconnect downspouts. Private-Public partnerships are also being considered for educational outreach. Grants for backwater valves are available from the City. The issue of private connections of catch basins that were installed without City consent can be dealt with via enforcement as they are contriving the Sewer Use By-law.

Downspout Disconnections: In responding to questions about the downspouts, Sharon mentioned that some of the downspouts are connected to the sanitary system but it is likely that some are connected to the storm sewer. Connections to the sanitary were confirmed with smoke and dye testing.

Subsurface Sanitary Storage Tank: Blair inquired whether the new inline storage tank will be active or passive.

Answer: The tank will be gravity fed and needs to be flushed after large events. It has a low flow channel build into the design. The City's O&M crews are aware of this and were consulted during design.

Sanitary Sealing: Sharon discussed that the sanitary manhole sealing was conducted along Massey Drive. This system is working well and is intended to target the areas of most significant infiltration. The SpectraShield liner is guaranteed for 10 years. The cost per manhole is quite high and precludes doing the entire system.

Floodplain Mapping: It was confirmed that the regulatory floodplain mapping shown on slides 22 through 24 is up to date from the 1990 McLaren report.

Alternative #3 - Overland Flow to Creek with Treatment: Blair noted that Alternative #3 which was presented as a linear wetland treatment system would not meet the definition of sewage treatment by the MOECC because there is no upfront screening, or solids removal process.

Alternative #4 – Upgraded Forcemain Capacity: It was discussed that the previous study eliminated this alternative due to prohibitive costs. If the pumping station was upgraded, the forcemain is not large enough to handle the flows and would need to be upgraded.

Alternative #5 – Increased Inline Storage: Though not specifically listed as an alternative in the presentation, Dave brought up the alternative of adding capacity to the inline storage system. The original concept for the inline storage facility was under Old Dundas Road and was modified to Montgomery Drive after concerns with construction phase road closures were raised. An additional storage tank under Old Dundas Road or another location may be considered as an option for this project. The parking area under the Old Mill was suggested by Blair. Sharon mentioned that the City did look at this location initially but construction would be difficult with traffic and private functions.

Compensation – Nancy mentioned that at the NEC, as a result of their policy, compensation is not considered a viable approach. They would prefer avoiding overflowing to the Ancaster Creek. Any presentation to the NEC would need to discuss policy (not just technical/engineering aspects). Nancy also mentioned that the New Provincial Plans are imminent in the spring of 2017.

Back-up Power at Pumping Station – Alex asked about backup power at the pumping station. Sharon mentioned that standby power is available onsite from a standby diesel generator. The Pumping Station will be upgraded next year and these upgrades will include a new generator.

Dundas Sewage Treatment Plant – This WWTP currently does not have capacity for additional flow. When capacity is exceeded, excess flows are diverted to the Woodward Avenue WWTP. The Woodward Plant has a CSO issue.

Technical Components of 2017 Study: Several points were made concerning collecting baseline data for the 2017 study, these are summarized below:

- A key issue is quantifying the incremental impact of the 1:100-year discharge (i.e. pollutant concentrations and quantity of the sanitary overflow to that of the creek)
- HCA has a long-term water quality monitoring location at Wilson Street East and Rousseaux Street. This data may be useful for comparison. At the time of the meeting it was unclear if water quantity data was also collected at this location.
- The existing stormwater outlet was suggested as a potential site of flow monitoring.
- City of Hamilton Public Health should be brought into the discussions regarding overflow monitoring options especially considering the prevalence of homes and public areas such as schools that back onto the creek. Blair mentioned that CSOs are a rising concern with Public Health and that the more data that is collected the better.
- HCA has a fish monitoring station downstream. These monitoring locations are typically on a 3-year rotation. At the time of the meeting it was not known if this location is on the roster for 2017. It was noted that there are trout in the system.
- Blair mentioned that City's Asset Management Section may have information on inflow and infiltration progress in this area. Sharon mentioned that Asset Management has a rehabilitation program in place whereby they line pipes and manholes each year throughout the City. Rehabilitation work has already been completed and continues to be performed in Ancaster to address the Inflow and Infiltration issues. Blair also mentioned that work may have also been done through the City's Water Distribution and Wastewater Collection Section with identifying cross-connections. Sharon mentioned that she would follow up with this item.
- There was a general consensus that additional monitoring of flow rates and water quality is a good idea.

4. Next Steps

It was agreed that monitoring is needed before the Class EA is officially kicked-off. The first step in a Class EA is typically a Notice of Study Commencement and Invitation to the first Public Information Centre which is advertised in the newspaper. At this time the City, Aquafor and Agencies agreed that this should wait until options are properly defined (via baseline data collection). Four-season monitoring should be conducted and analyzed before going to the public. Aquafor will begin the 4-season monitoring program as discussed.