



**STAFF REPORT
ACTION REQUIRED
with Confidential Attachment**

**Ombudsman's Report Follow-up Regarding Status of
Permanent Solution to Resident's Sewage Problems**

Date:	August 20, 2010
To:	City Council
From:	City Manager and General Manager, Toronto Water
Wards:	Ward 10
Reason for Confidential Information:	This report is about a matter that involves litigation or potential litigation that affects the City; and contains advice or communications that are subject to solicitor-client privilege.
Reference Number:	

SUMMARY

This report provides an update on the progress made on implementing a permanent solution to address the resident's sewage problems, noted in the Ombudsman's Report "No Time To Waste: Investigation into Toronto Water and Technical Services Handling of a Resident's Sewage Problems", June 2010; and seeks to obtain authority from City Council on a resolution to the noted issue, should the subject property owner decline the City's offer to cover all costs and provide compensation for the retrofit required on the subject property.

RECOMMENDATIONS

The City Manager recommends that:

1. Council adopt the confidential instructions to staff in Attachment 1; and
2. Council direct that the confidential attachment is to remain confidential at this time as it contains information subject to solicitor/client and litigation privilege and authorize the public release of the confidential information and

recommendations in Attachment 1, if any settlement is finalized to the satisfaction of the City Solicitor.

Financial Impact

Funding is available to support the instructions to staff contained in Attachment 1, through the Insurance Reserve Fund.

The Deputy City Manager and Chief Financial Officer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

City Council at its meeting of July 6, 7 and 8, 2010, in endorsing the finding of the Ombudsman's report (June 28 2010) "No Time to Waste: Investigation into Toronto Water and Technical Services Handling of a Resident's Sewage Problems, request the City Manager to report to City Council at its meeting on August 25, 2010, on the progress made to date to solve the complainant's basement flooding problem. A copy of the Council Decision Document can be found at:

<http://www.toronto.ca/legdocs/mmis/2010/cc/decisions/2010-07-06-cc51-dd.htm>;

and a copy of the Ombudsman's report can be found at:

<http://ombudstoronto.ca/sites/default/files/No%20Time%20to%20Waste.pdf>

ISSUE BACKGROUND

An investigation into a complaint of basement flooding, received June 2005, at the subject property located within the former municipality of North York showed that the sewers were in good condition, there were no blockages and the sewage flows were running satisfactory. However, the house sewer laterals which connect to the sanitary and storm sewers, respectively, were found to be cross-connected. Cross-connection of house laterals to the sanitary and storm sewers not only contravene the City's Sewer By-Law, but also contribute to basement flooding due to backup. The cross-connection problem was rectified in June 2005. When the cross-connection problem was corrected no other problems were found.

However, basement flooding continued to occur at the subject property during dry weather conditions. As the City's sewer system was operating properly the basement flooding problem was deemed a private property matter. Further investigations revealed that the elevation of basement floor drains relative to the sanitary sewer location did not provide adequate grade of the house lateral for the wastewater to flow freely to the sanitary sewer.

Due to the shallow elevations of the existing sewers on the street it was recognized that a permanent solution to the problem was complicated and would take some time to

implement. To prevent any further basement flooding, Toronto Water disconnected the house lateral from the sanitary sewer, connecting it to a new holding tank constructed within the street boulevard in December 2007 and pumped it out on a regular basis. As a result of higher than expected flows to the tank resulting in repeated incidences of flooding complaints, Toronto Water increased the frequency of pumping, where by April 2008, the tank was being pumped out on a twice weekly basis. Currently, the tank is inspected three times per week and pumped out as required. It's been estimated that Toronto Water has spent \$125,000 since the tank was installed, to provide the wastewater servicing needs of this one subject property, which includes \$47,000 for the tank installation.

The subject property is one of 15 properties constructed between 2001 and 2003 through the development of a parcel of land in the former City of North York. Of the 15 properties in the development, this property and one other immediately opposite the subject property experienced basement flooding. In both cases, the staff investigations concluded that the elevation of the basement drains in relation to the City sewer elevation did not provide adequate slope for drainage by gravity to the City sewer. In the other case, the property owner and original home builder rectified this problem by replacing the private side of the sanitary sewer lateral at the builders cost, and Toronto Water reconfigured the City side of the sewer lateral to achieve the required gravity flow. No further complaints of basement flooding have been received from this address.

COMMENTS

As noted in the Ombudsman's report, three options for a permanent solution were being pursued:

- Option A: The construction of a new sanitary sewer on Wilson Heights Boulevard;
- Option B: Conversion of the existing holding tank into a pumping station servicing the subject property; and
- Option C: Installation of a sewage ejection pump in the basement of the subject property.

An engineering assessment has been undertaken to determine the requirements and feasibility of each option. The three options are described below.

Option A - Construction of a New Sanitary Sewer

This option consists of constructing a new sanitary sewer at a lower elevation on Wilson Heights Boulevard to allow the house lateral to be reconstructed at the proper grade. This requires the construction of 180 metres of new sanitary sewer along Wilson Heights Boulevard, which would effectively replace an existing 450 millimetre diameter sanitary sewer constructed in 1964, and which, based on condition assessment undertaken in 2007, is in good service condition. This section of sewer currently services three other residential properties – but which have not experienced basement flooding. The sanitary

sewer service connection for the subject property would also have to be reconstructed at the appropriate grade. The construction of the new sanitary sewer essentially benefits only the subject property.

Unencumbered, the estimated cost to construct the new section of sanitary sewer and the house service connection is \$500,000. However, there is an existing storm sewer, and there may be other utilities, in conflict with the alignment of the new sanitary sewer, (i.e. positioned at similar elevations) and which would need to be relocated. The estimated cost to relocate these encumbrances is \$300,000.

The total estimated cost of this option is \$800,000 and it is expected to take approximately 12 months for design, approvals and construction based on an accelerated work schedule.

Option B - New Pumping Station

This option involves utilizing the holding tank, previously installed within the street boulevard to service the subject property, and converting it into a permanent automated wastewater pumping station, certified through the Ontario Ministry of the Environment. This would involve the installation of new pumps, piping, electrical and mechanical controls, backup power, alarms; and the reconstruction of the house lateral, for the subject property, to provide a proper grade.

The estimated cost of this retrofit is \$150,000 and it is expected to take approximately 12 months for design, approvals and construction based on an accelerated work schedule.

Although this pumping station would service only the one property, in accordance with Toronto Water's standard operating procedures, and complying with the Ontario Ministry of the Environment regulatory requirements, it will require the standard regular inspection, maintenance and replacement of equipment on an ongoing basis, in perpetuity. The annual operating and maintenance cost for this pumping station is estimated to be \$44,000. The resulting 25 year life cycle cost is \$1,100,000.

In total, this represents an estimated expenditure of \$1,250,000.

Option C - Installation of Sewage Ejection Pump within Subject Property

This option would require work on private property to correct the problem, using standard servicing approaches for dwellings where the elevation of the lowest drain fixture (e.g. basement floor drain) does not permit drainage by gravity to the sanitary sewer connection. This would require the reconstruction of the existing sanitary sewer connection to provide the proper grade and the installation of a sewage ejection pump installed in the basement of the subject property. Properly installed, with tight gasket covers on the pit housing the pumps, and vented outside, there will be no sewage odours; and because the pumps are submersible, they are virtually silent.

The wastewater plumbing in the basement would have to be modified resulting in damage to some walls and bulkheads that would have to be repaired. Only fixtures in the basement would drain to the pumping system. A separate drain from the upper floors would be connected to the new sewer connection, where the wastewater would drain by gravity to the existing sewer on Wilson Heights Boulevard. With the cooperation of the property owner, and through Toronto Water and Toronto Building, an engineering consultant was retained to inspect the subject property and detail a retrofit design for the necessary plumbing modifications and installation of a sewage ejection pump.

Based on this design and cost estimates provided, the estimated cost to make the noted modifications, supply and install the pump, complete with battery backup, and replace the private side of the sanitary sewer connection (estimated at \$5,000) is \$26,000. The pumps have a minimum 20 year service life and are maintenance free. The cost of replacing the pumps has been included in the total estimate of operating costs as follows:

- a) Pump replacement (supply and install in 20 years) - \$1,600; and
- b) Power consumption - \$120/year.

In total, the resulting 25 year life cycle cost is \$31,000. It is anticipated that all work including the replacement of the drain connection on the road allowance would take approximately three weeks to complete.

Summary

Given the above, it is Toronto Water's position that Option C (Installation of Sewage Ejection Pump within Subject Property) is the most practical permanent solution to the basement flooding problem at the subject property, and which would have been the normal servicing arrangement for any other dwelling whose basement elevation did not permit a properly graded sanitary sewer service connection. It is not the City's practice to relocate and/or reconfigure its infrastructure to accommodate the servicing requirements of a given development. Rather, the builder/developer is ultimately responsible to ensure sewer service connections, with proper grades, to permit gravity flow, are provided. This requires that the basement elevation either permits gravity flow to the City's sewer system, or the installation of a sewage ejection pump within the dwelling, operated and maintained by the property owner, for basement elevations that cannot provide for flow by gravity to the sanitary sewer.

The other two permanent solutions noted above, require significant retrofitting of existing City infrastructure, which only benefits the subject property. At an estimated 25 year life cycle cost to the City of \$800,000 and \$1,250,000, respectively, these options can not be justified, particularly given the City's current water and wastewater infrastructure deficit, and that neither option represents a state of good repair investment.

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SIGNATURE

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ATTACHMENTS

Attachment 1: Confidential Information