



## TOWN OF MINTO

**DATE:** September 11, 2018  
**REPORT TO:** Mayor and Council  
**FROM:** Mark Robertson, Wastewater Foreman  
**SUBJECT:** Results of Sanitary Sewer CCTV Inspection, Harriston

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### STRATEGIC PLAN

- 5.7 Adopt and maintain fair and transparent procurement policies and by-laws to ensure the Town receives competitive pricing on tenders and proposals, and that business has equal opportunity to submit bids.

### BACKGROUND

At the April 10 Council meeting Council passed the following resolution regarding camera work for the sanitary sewer system in Harriston:

#### **MOTION: COW 2018-99**

**THAT Council receives the April 10, 2018 report from the Wastewater Foreman regarding Tender 6629-18 Sanitary Sewer CCTV Inspection, Harriston and awards the tender to DM Robichaud Associates Ltd at a price not to exceed \$126,750.00 excluding HST funded from the 2018 capital budget, and that staff report back with results of the inspections.**

This report describes results of the work implementing recommendation five outlined in the 2007 Harriston Sewage Collection System Infiltration and Inflow Study. The following summarizes progress on these recommendations:

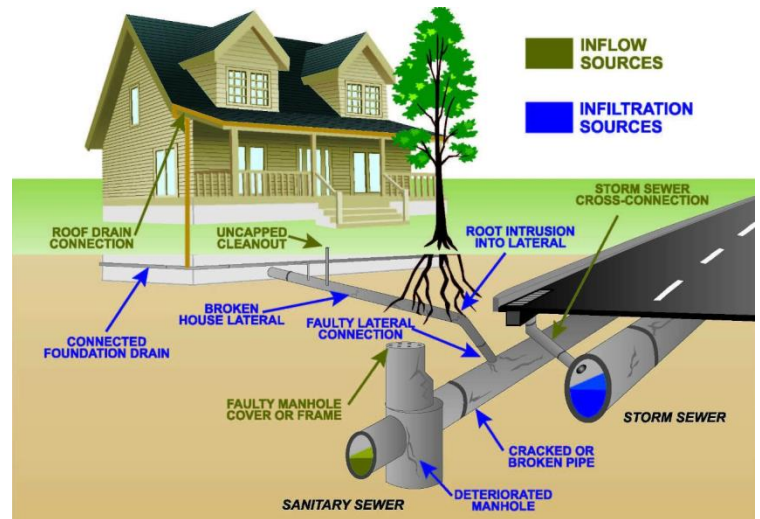
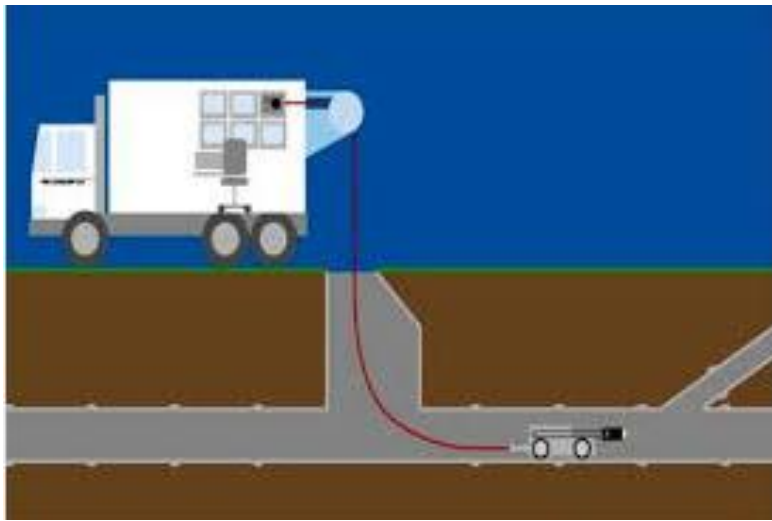
1. Monitor flows in the field during peak events to identify sources of Inflow. **(In Progress)**
2. Upgrade William St., Young St. SPS, force mains and gravity sewers downstream. **(Complete)**
3. Update Municipal Bylaw to help protect the sanitary system from extraneous flows. **(Complete)**
4. Repair major defects on the Main line sewer allowing significant I&I. **(Complete)**
5. Conduct additional video inspections of the service lateral in the spring when the ground is saturated to determine if the lateral service connections from the sewer main to buildings are the primary source of extraneous flows as suspected. **(Proposed)**

DM Robichaud with assistance of Triton Engineering flushed and camera inspected about 15 000 meters of main sewer line and about 900 lateral services. This identifies main sources of inflow and infiltration within the system. Information from the analysis was submitted to the Town in a format that is easily transferable into our CITYWIDE asset management program. This includes attaching a “quality based assessment” to the sanitary sewer for each road segment to assist with capital planning for the system. A final report from the engineer outlining a program to reduce inflow and infiltration is pending.

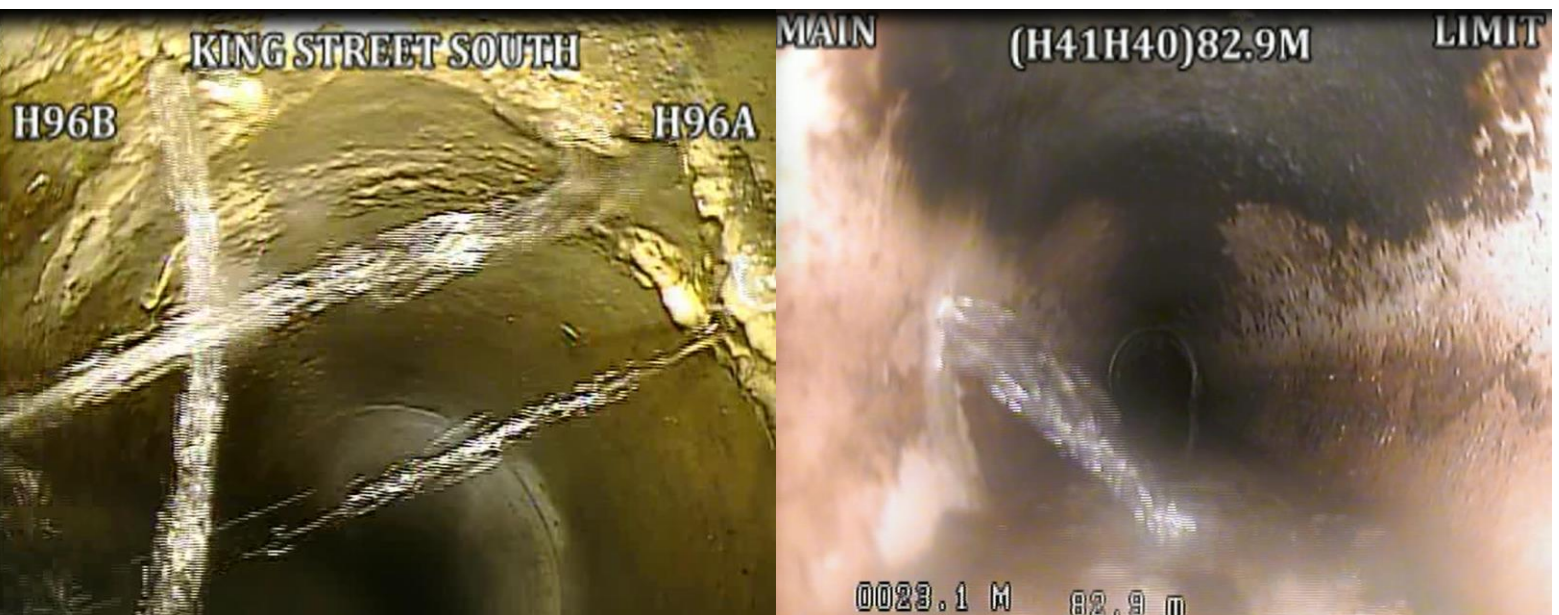
Preliminary results show 80 sources of infiltration, 30 in the mainline sewer and 50 in the lateral sewers. The severity of infiltration ranges from Gushers as shown in the two images

below to Drippers. 20 of the 80 identified infiltration location are classified as gushers and should be addressed in future capital projects through lining, grouting or open trench repairs.

The following pictures illustrate how the work was completed.



Staff will present some short videos showing interesting areas in the system where problems were identified.



Structural assessments have been completed on the 15 km network of sanitary mainline and submitted to the Towns asset management program. 15 significant structural deficiencies were identified and should be addressed through future Capital projects. A number of service laterals were found to be in disrepair on the homeowner portion of the pipe. This will be useful information when conducting future road reconstruction.

## COMMENTS:

The Harriston Waste Water Treatment Lagoon System Environmental Compliance Approval is for a design capacity of 2,378 cubic metres per day. In October 2017 Triton reported hydraulic reserve capacity of 786 cubic metres based on average usage of 1,592 cubic metres per day. At the end of 2016 there were 907 units connected serving a population of about 2095 persons.

Based on average flow per person of 0.76 cubic metres per day and 2.31 persons per household it is estimate that another 448 units can be services by the system. According to the 2016 growth projection by the County an estimated 400 new units will be required in Harriston in the next 25 years. This does not recognize the amount of non-residential development that may occur in Harriston. Council will recall the Class EA for the Harriston Industrial Park identifies a program to service a first phase of 11 acres of industrial land followed by further improvements to service an additional 55 acres.

	2016	2036	2041
<b>CLIFFORD</b>			
Total Population <sup>1</sup>	875	1,270	1,350
Households	355	490	520
<b>HARRISTON</b>			
Total Population <sup>1</sup>	2,095	3,260	3,240
Households	795	1,195	1,195
<b>PALMERSTON</b>			
Total Population <sup>1</sup>	2,875	4,310	4,660
Households	1,080	1,590	1,715
<b>OUTSIDE URBAN CENTRES</b>			
Total Population <sup>1</sup>	3,220	3,530	3,560
Households	1,050	1,160	1,180

While there is sewage capacity in the system, the Town must continue to reduce inflow and infiltration in the system to ensure capacity remains available in the long term. The Town continues to work with the Ministry of Environment regarding the quality of system output post treatment allowed in the Environmental Compliance Approval. While the lagoons are meeting current ECA requirements, Federal requirement are reducing the levels of un-ionized ammonia concentrations allowed to be discharged to the environment.

The Ministry is suggesting the Town increase treatment options in the facility to address more stringent criteria for water quality leaving the plant. Staff and Triton Engineering are working with the Ministry on programs to increase capacity and improve the plant. The Town will be conducting extra sampling and increased monitoring at the Lagoon compiling a detailed data set to help determine if increased treatment is needed now or in the near future. More information will follow as the work program for the lagoon system is developed.

## FINANCIAL CONSIDERATIONS

2018 Capital Budget identifies \$170,000 for inflow and infiltration. The intent was to complete the camera work identified with \$50,000 remaining for maintenance hole rehabilitation. Council received a separate report on the request for quotation at the September 18<sup>th</sup> meeting. The rehabilitation on 11 structures in Harriston was confirmed by the camera work and Town staff as a priority will be completed for \$25,000. Six years ago the Town sole sourced this work. The request for quotation prepared by Triton Engineering allowed qualified contractors to bid on specific work at specific locations to ensure competitive pricing, improved quality control and guarantees on work completed

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## **RECOMMENDATION**

That Council receives the October 2<sup>nd</sup>, 2018 report from the Wastewater Foreman regarding Results Sanitary Sewer CCTV Inspection, Harriston.

Mark Robertson  
Wastewater Foreman