

LISGAR DISTRICT BASEMENT WATER INFILTRATION INVESTIGATION JUNE 17TH PUBLIC MEETING QUESTION & ANSWER

QUESTION #1:

Were there any Ontario Municipal Board (OMB) hearings held during the development of the Lisgar community?

ANSWER:

Based on historical records from the Planning and Building Department, there are no records of Ontario Municipal Board (OMB) appeals for Rezoning or Draft Plan of Subdivision applications. There are records of appeals of Mississauga's Official Plans in the Lisgar area. Details specific to these appeals can be obtained from the Ontario Municipal Board (OMB).

QUESTION #2:

Who were the developers for the Lisgar community?

ANSWER:

The following is a list of developers of the Lisgar community:

- 996075 Ontario Inc.
 - 1408909 Ontario Inc.
 - Archway Builders
 - Archway Builders/Quinbury
 - Archway Builders/Cinderhill
 - Brooktown Developments Ltd.
 - Cinderhill Invest.
 - Cinderhill/Archway
 - Durbanpoint Development Ltd.
 - Fanshaw Estates
 - Fifth Terragar Holding Ltd.
 - First Terragar Holding Ltd.
 - Fourth Terragar Development Agreement
 - Gadan Properties Inc.
 - Gaspar Developments Ltd.
 - Jacan Investment Canada Inc.
 - Lamaje Developments Ltd.
 - Mattamy (Avonlea) Ltd.
 - Ninth Derry Developments Inc.
 - Paradise Homes North Inc.
 - Pebbles Properties Inc.
 - Pepperglen Estates Inc.
 - Quadruple Four Developments Ltd.
 - Secinar Investments Ltd.
 - Second Terragar Holding Ltd.
 - Steluk Developments Ltd.
 - Ventron Developments (Green Meadow) Inc.
 - York Wood Homes Trelawny
-

QUESTION #3:

Were Foundation Drain Collector (FDC) systems acceptable when the Lisgar community was developed?

ANSWER:

FDC systems were widely accepted prior to being introduced in the Lisgar community. The FDC system, or third pipe system, was first introduced in Ontario during the late 1970's/early 1980's approximately ten years prior to the development of the first phase of the Lisgar community. Paul Theil and Associates was one of the first engineering companies to propose an FDC system in Ontario (ref. Modern Sewer Design, American Iron and Steel Institute, 1980).

An FDC system is utilized in Lisgar as gravity drainage (of foundation drainage from the weepers) to the Sixteen Mile Creek Tributary is not possible since the creek is too shallow relative to the basement elevations. Alternatively, sump pumps could be used to discharge to the service via mechanical means however to operate the systems must always be maintained in good operating condition and also require a continuous supply of electricity or back-up power supplies. Alternatively, the development lands could have been raised resulting in millions of cubic meters of material which would have needed to be brought into the area to elevate the land on average by approximately 1.5 metres.

QUESTION #4:

Are subdivisions typically built with both FDC systems and sump pumps at the time of development?

ANSWER:

Typically subdivisions would be built with either an FDC system or sump pumps but not both.

QUESTION #5:

Would an engineering consultant build an FDC system in the Lisgar community similar to the current design based on the information gathered from the study to-date, new codes, regulations, acts, etc.?

ANSWER:

Our findings to date indicate that in general, an FDC system similar to the current design was an appropriate foundation drainage system for the Lisgar area.

QUESTION #6:

How does a resident know if they are connected to the FDC system? Are communities south of the Lisgar community utilizing an FDC system?

ANSWER:

A map has been prepared that shows the approximate extents of the FDC system in the Lisgar community and surrounding areas. The map is attached in the appendix of this document for reference.

It is recommended that homeowner's retain a private plumbing or drain contractor should they wish to determine if their home is connected to the FDC system.

QUESTION #7:

Have there been any changes historically to groundwater elevations in the Lisgar area?

ANSWER:

Based on historical groundwater records and current groundwater monitoring results from the study there is no evidence to suggest that the water levels have changed significantly since development.

QUESTION #8:

Were there any Environmental Assessments completed prior to development?

ANSWER:

At the time of development (1980's), comprehensive Class Environmental Assessments and companion subwatershed studies were not required as part of the development process however drainage servicing studies were required. These drainage studies focused primarily on managing surface water/runoff and not the influence of the ground water table or impacts related to the natural environment.

QUESTION #9:

Have there been any historical changes to the flood plain mapping?

ANSWER:

Conservation Halton is responsible for regulating the Sixteen Mile Creek flood plain through the Lisgar community. Any inquiries regarding flood plain mapping should be directed to Conservation Halton.

QUESTION #10:

It appears that the implementation of mitigation measures to address Cooksville Creek flooding issues has occurred more quickly than in Lisgar. Why? Is Cooksville Creek flooding being treated as a higher priority than Lisgar?

ANSWER:

The issues and potential causes of flooding in the communities of Cooksville and Lisgar are very different.

Flooding in the Cooksville community is largely riverine based. A large single storm event occurred in August 2009 and affected many homes that were located within the floodplain. Mitigation measures were identified in a study completed for the Cooksville Creek watershed and subsequently forecast into the City's storm drainage capital program as per the study's recommendations.

In comparison, the basement water infiltration issues in the Lisgar community are largely a local servicing matter and less a riverine problem and hence more complex. The events causing basement water infiltration have been occurring during select storm events under varying conditions as opposed to strictly large storm events. The Lisgar study has focused on developing an understanding of the operation of several systems, including the FDC system which is not present in the Cooksville community. The Lisgar study commenced in December 2011 and mitigation measures are anticipated to be recommended in 2015.

The City continues to treat the Lisgar study as a high priority and is committed to resolving basement water infiltration in the Lisgar community.

QUESTION #11:

What standards and criteria were the Lisgar community developed to?

ANSWER:

The Lisgar community was developed to several standards and regulated by different public agencies including:

- Planning, development (including stormwater drainage and roadway systems) and building standards administered by the City;
- Stormwater management regulated by Ontario Ministry of the Environment (MOE);
- Floodplain regulations administered by Conservation Halton;
- Sanitary infrastructure standards administered by the Region of Peel and MOE;

The role of the City is to administer land use planning and development as guided by the Official Plan and regulated by provincial legislation.

The role of the Conservation Authority (Conservation Halton) from a water resources management perspective is to protect communities from flooding and to ensure that environmental planning is incorporated into community development.

QUESTION #12:

Where in Brampton is the FDC system used? Was that system implemented prior to the development of the Lisgar community?

ANSWER:

We are aware of the use of FDC systems in Brampton. Should residents wish to find out further information regarding these systems they are suggested to contact the City of Brampton directly.

QUESTION #13:

How many times have the pumps been activated and pumped the FDC system? Have there been any reported occurrences of basement water infiltration since the pumping of the FDC system began?

ANSWER:

Pumps have been activated twice since the High Water Protocol was initiated in Spring 2013 and there have been no reported occurrences of basement water infiltration since this time. The consultant is continuing to investigate the level of effectiveness of pumping the FDC system as a mitigation measure. In the meantime, the City will continue to pump the FDC system in accordance with the High Water Protocol.

QUESTION #14:

Are there any proposed maintenance projects for the Osprey Marsh Stormwater Management (SWM) Facility and surrounding area, including dredging of the facility or trimming vegetation within the creek to the west of Ninth Line?

ANSWER:

At this time there is no proposed maintenance projects planned for the facility or the surrounding area as the study has demonstrated that water levels within the Osprey Marsh SWM Facility show no definitive connection to FDC levels. Any future maintenance and/or capital work needs in the Lisgar community will be determined based on the future study recommendations. The City will continue to remove debris and blockages as required from the facility and creek and recommend that residents contact the City to notify staff of any debris or blockages.

QUESTION #15:

Is the City aware that rocks are being placed at the outlet to the Osprey Marsh SWM Facility and potentially creating a blockage?

ANSWER:

The City is aware of this issue and will continue to send maintenance staff to remove these rocks accordingly. It should be noted that based on the study findings we do not believe there is a connection between water levels within the Osprey Marsh SWM Facility and the FDC system. However, residents are encouraged to contact the City should they notice any blockages at the facility outlet to ensure removal by City staff.

QUESTION #16:

Regarding the Ninth Line Lands Study, if development were to occur along Ninth Line could that impact the Lisgar community?

ANSWER:

Any development of these lands would not be expected to influence the current risk of basement water infiltration in the Lisgar community. The respective studies will inform each other in terms of technical outcomes and management considerations. Specifically, the sub-watershed study for the Ninth Line lands will investigate surface water, ground water, and the natural environment to ensure the Environmental Assessment Act and Planning Act are adhered to.

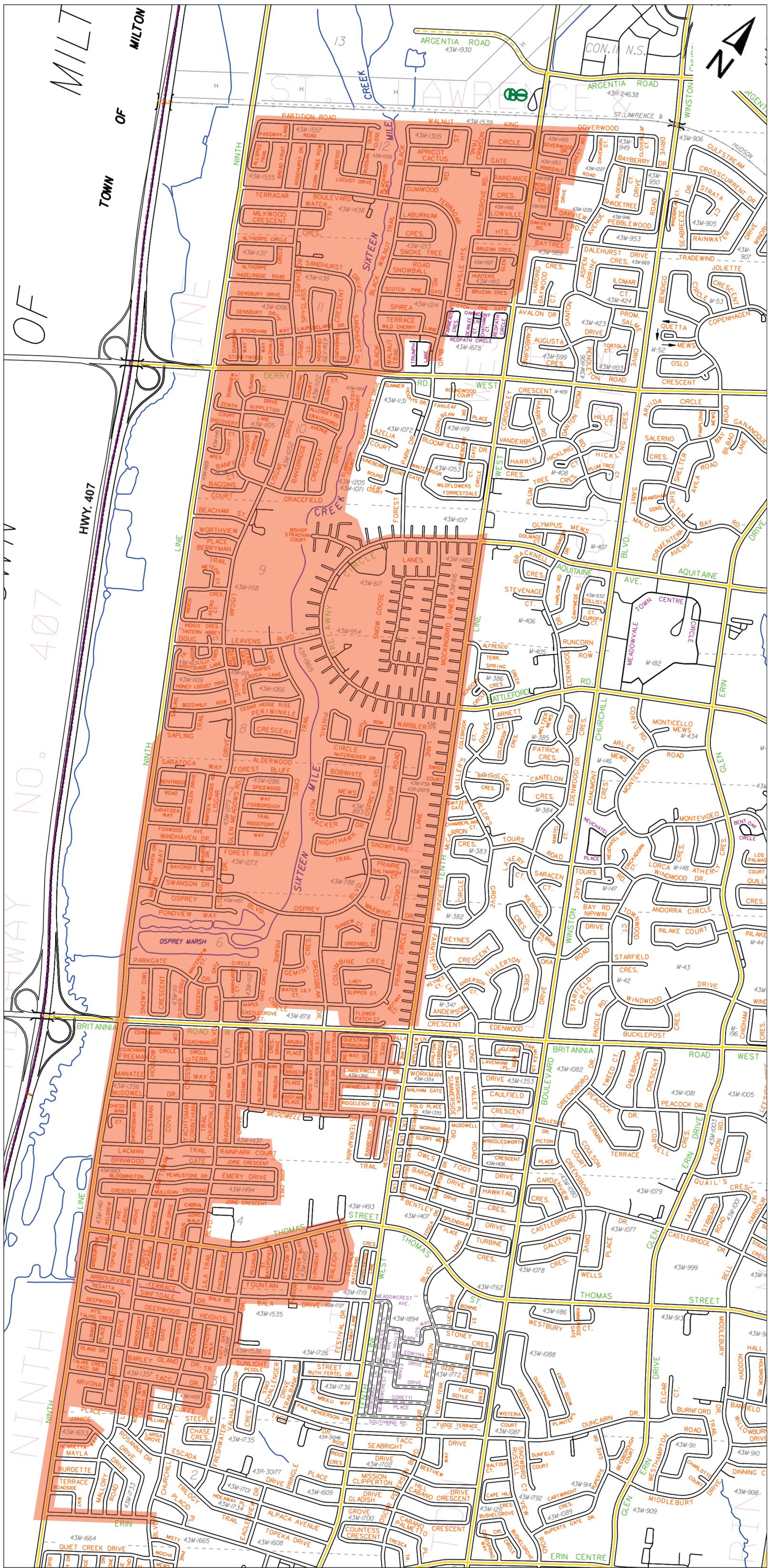
QUESTION #17:

In the overview document that was provided it states on page 2, "A review of sanitary sewer monitoring data from the Region of Peel indicates no surcharging during identified FDC surcharge events; results confirm that the sanitary sewer system is not a cause or contributor to basement infiltration".

This statement suggests the sanitary cannot be a cause or contributor of basement infiltration just because it's not observed to surcharge when the FDC does. However, there is no proof the sanitary didn't surcharge during the major flooding event that I am aware of. They are different systems so the metrics of one cannot justify the other. Needs rewording or reconsideration.

ANSWER:

In fact there is proof since the Region did monitor during periods that included occurrences of basement water infiltration and the findings are such that there is no surcharge of the sanitary system during these occurrences. In fact the monitoring data showed that the system is at less than 50% capacity.



Approximate Extents of Foundation Drainage Collector (FDC) System, City of Mississauga