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2016 Capital Budget Briefing Note Basement Flooding Protection Program – Program Status Update

Issue:

City Council, through the creation of the City's Basement Flooding Protection Program, has directed staff to reduce the risk of basement flooding across the City through a combination of public drainage system improvements and through the use of policies, by-laws, and incentives to reduce flood risks on private and public properties.

This briefing note provides an update on Toronto Water's efforts to reduce the risk of basement flooding in the City. Specifically, ward by ward progress updates are provided to summarize the progress to date on Environmental Assessment studies, infrastructure upgrades, and private property flood protection device subsidies.

Background:

Basement Flooding Environmental Assessment (EA) Studies

Environment Assessment (EA) studies are used to assess the capacities of the existing storm, sanitary, and combined sewer drainage systems and to recommend upgrades to the existing drainage systems. These studies recommend improvements to the public drainage system infrastructure. Deficiencies in private drainage systems are not identified and not assessed through the City's EA studies.

The Basement Flooding Protection Program was expanded to be City wide following the storm event of July 8, 2013. This expansion resulted in the creation of new EA study areas, bringing the total to 67 study areas. City Council, at its meeting on March 10 and 11, 2015, requested the General Manager, Toronto Water, to initiate and expedite the completion of new Basement Flooding Protection Environmental Assessment studies for the remainder of the City, specifically identified as Study Areas 42 through 67 and in the order of priority as shown in Schedule A to the report (December 18, 2014) from the General Manager, Toronto Water. The Council decision can be viewed at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.EX3.1>

Of the 67 City Council approved Basement Flooding Protection Program study areas, Environmental Assessments for twenty six of the study areas have been completed as of September 2015, fifteen are underway with seven planned to be completed in early 2016 (Study areas 20, 21, 23-27) and eight planned for completion in late 2017 (Study areas 34 to 41).

The 26 completed Basement Flooding EA studies have recommended an estimated \$1.639 billion of infrastructure improvement projects.

Infrastructure Upgrade Implementation

Infrastructure upgrades to reduce the risk of basement flooding are prioritized and scheduled, as per Council approved criteria to protect the greatest number of properties as soon as possible, within approved budgets, and are coordinated with other capital projects.

A key criteria in the decision to proceed with the detailed design and construction of Basement Flooding Protection Program infrastructure upgrades is the need for projects to cost less than \$32,000 per benefitting property. This criteria was adopted by City Council at its meeting of September 21, 2011. The adopted staff report can be found at: <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2011.PW7.6>

Projects that meet the \$32,000 per benefitting property requirement, at the completion of preliminary design, are moved into detailed design and construction. Projected to the end of 2015, approximately \$237 million of infrastructure upgrades will have been constructed within the Basement Flooding Protection Program. This value of construction represents approximately 14% of the total value of the improvements that have been recommended by the EA studies so far.

While many projects meet the \$32,000 cost per benefitting property criteria, there are also many projects that do not meet the cost per benefitting property. Of the \$1.639 billion of recommended infrastructure improvement projects identified to date, approximately \$887 million or 54% of the total value did not meet the \$32,000 cost per benefitting property criteria. These projects are not being scheduled for implementation within the 5 year capital plan, in accordance with City Council direction.

The remaining \$515 million of recommended infrastructure projects are in various stages of implementation. These stages include being within the design process (i.e. preliminary design and/or detailed design stages), and being planned to begin the design process.

Basement Flooding Protection Subsidy Program

The City's Basement Flooding Protection Subsidy Program (BFPSP) offers property owners of single-family, duplex and triplex residential homes financial assistance of up to \$3,400 per property to install flood protection devices, including a backwater valve, sump pump, and pipe severance and capping of the home's storm sewer or external weeping tile.

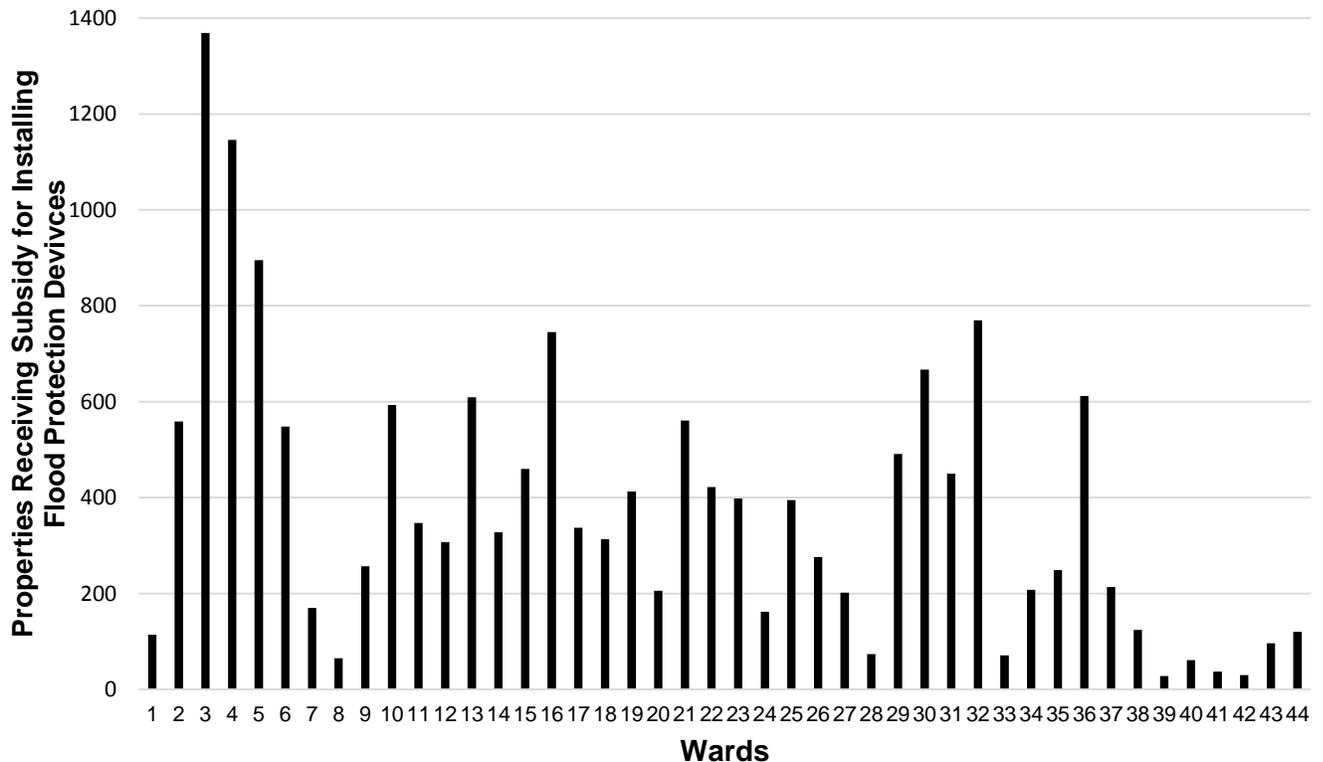
The Basement Flooding Protection Subsidy Program (BFPSP) was initially created for homeowners in response to the May 12, 2000 storm event, and was initially known as the "Voluntary Private Home Isolation from Public Sewer System Program". As a result of properties being impacted by subsequent storm events including the August 14,

2003, August 19, 2005 and May 17, 2006 storm events, the program was expanded City wide. City Council at its meeting in July 2006 adopted a report to expand the program City-wide and requested the General Manager of Toronto Water to incorporate funding to support the Program in its 2007 Capital Budget submission. The Council decision can be viewed at:

<http://www.toronto.ca/legdocs/2006/agendas/council/cc060725/pof6rpt/cl041.pdf>

Since the subsidy program was expanded City wide in 2006, over 16,500 applications have been approved with over \$27,300,000 in total subsidy payments issued to property owners by Toronto Water as of the end of September 2015. On average, the City currently issues approximately \$1,600 in subsidy payments to participating properties. The number of subsidy applications approved by the City have varied considerably from ward to ward as shown in Figure 1.

Figure 1: Number of Properties Receiving a Subsidy for Installing Flood Protection Devices by Ward



Key Points:

Progress in the Basement Flooding Protection Program varies considerably from ward to ward. This briefing note provides a ward by ward summary in Schedule A and highlights the accomplishments achieved to date. Specifically, the progress regarding EA studies, construction of infrastructure upgrades, and participation in the subsidy program is provided.

These summaries highlight that while significant effort has been expended on this program, there still remains a great deal of effort to achieve the elevated level of service to reduce the risk of basement flooding across the entire City.

The summary for each City ward includes:

- A map showing the limits of each ward, the private properties that have installed flood protection devices, and the boundaries for the EA studies along with different shading to identify the portions of each ward where EA studies have been completed, are ongoing, and still need to be started;
- A pie chart and table illustrating the proportion of each ward where an EA study has been completed, is ongoing, and is planned to begin in the future.
- A pie chart illustrating the status of the infrastructure improvement works that were recommended through the already completed EA studies. The chart is subdivided into five categories, namely 'Constructed', 'Under Construction', 'Design Process Initiated', 'Planned for Design Initiation', and 'Deferred Projects'. To align with the typical budgeting cycle, expected construction costs to the end of the 2015 calendar year have been estimated. The provided charts are representative of the portions of the ward where EA studies have been completed. Infrastructure improvement costs for the portions of the ward not yet studied are not estimated within the provided values.
- As projects move through the implementation process, cost estimates are updated and replaced with actual costs resulting in variations in the values from year to year.
- Bar charts are provided to illustrate the accomplishments of the City's Basement Flooding Protection Subsidy Program, which provides financial assistance to pay for some of the costs of installing flood protection devices. Both program participation and program expenditure summaries are provided.

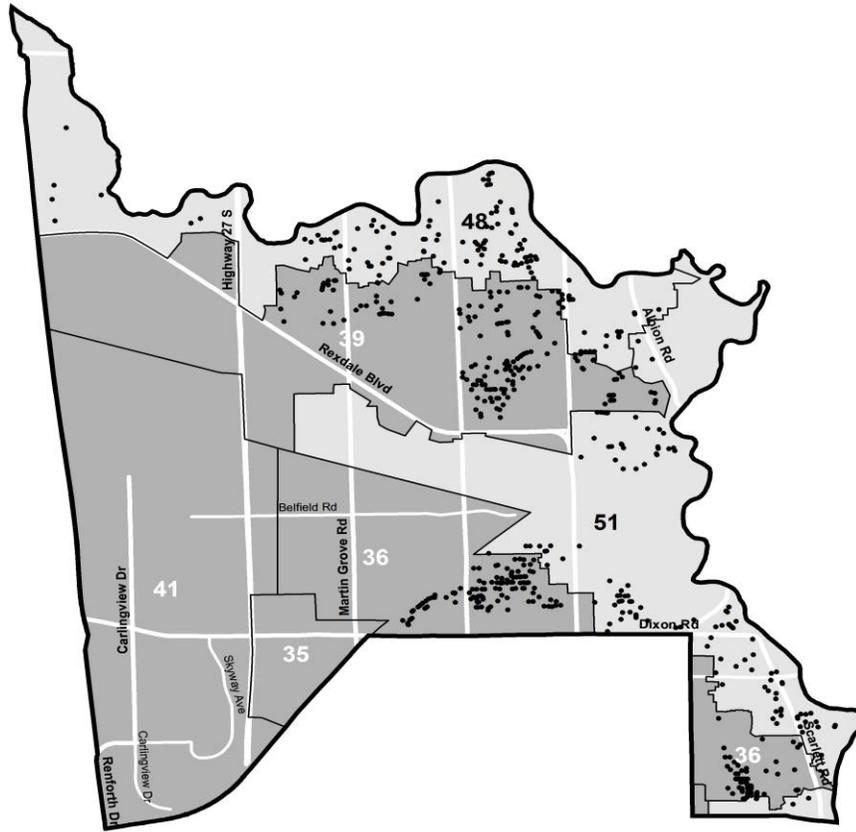
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Date: October 16, 2015

Basement Flooding Protection Program Summary

Ward 2 - Etobicoke North



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	●	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 35	Underway (began in 2015)	
Area 36	Underway (began in 2015)	
Area 39	Underway (began in 2015)	
Area 41	Underway (began in 2015)	
Area 48	To begin in 2018	
Area 51	To begin in 2020	

Basement Flooding Protection Program Implementation Summary - to end of 2015

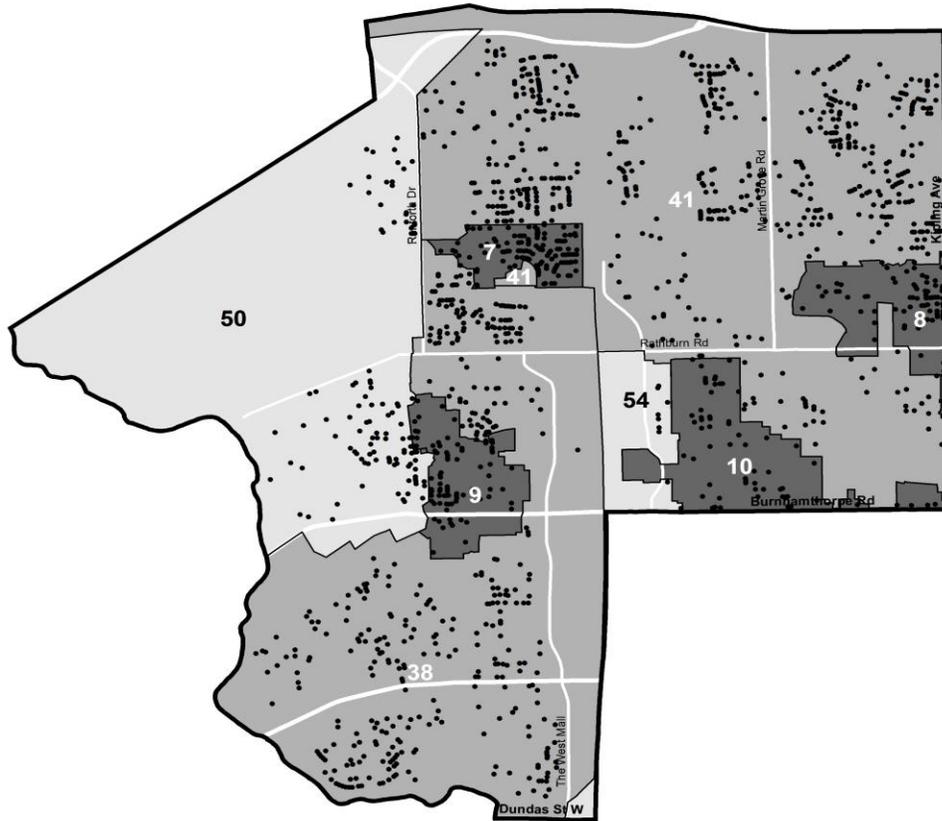
Project Implementation Progress	Project Highlights
<p>Implementation will proceed following completion of the first Environmental Assessment Study in this ward</p> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD 	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners
<p>559 3693</p>	<p>\$ 0.83 M \$ 0.61 M</p>

Basement Flooding Protection Program Summary

Ward 3 - Etobicoke Centre



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 7	Completed (2012)	<ul style="list-style-type: none"> Area Studied Study is Underway Area to be Studied
Area 8	Completed (2012)	
Area 9	Completed (2013)	
Area 10	Completed (2014)	
Area 38	Underway (began in 2015)	
Area 41	Underway (began in 2015)	
Area 50	To begin in 2020	
Area 54	To begin in 2022	

Basement Flooding Protection Program Implementation Summary - to end of 2015

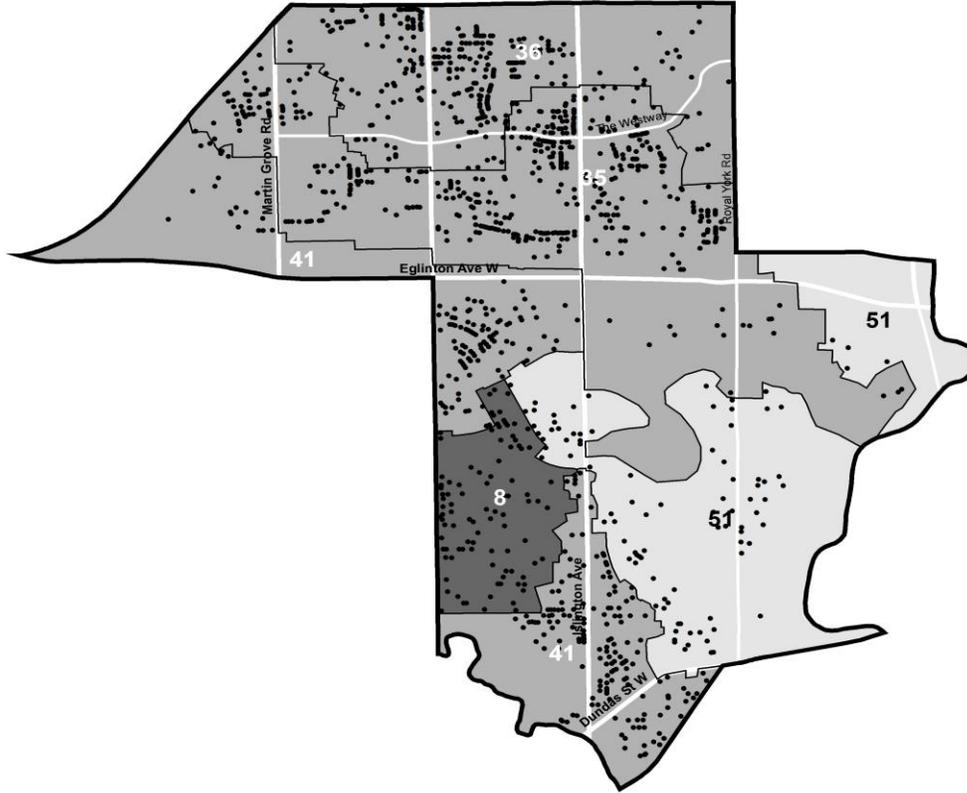
Project Implementation Progress	Project Highlights
<ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	<ul style="list-style-type: none"> • 2.9 km of storm sewer upgrades installed • 3.1 km of sanitary sewer upgrades installed

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD 	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners
<div style="display: flex; justify-content: space-around;"> <div style="background-color: #003366; color: white; padding: 5px; border: 1px solid #000;">1369</div> <div style="background-color: #333; color: white; padding: 5px; border: 1px solid #000;">4639</div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #003366; color: white; padding: 5px; border: 1px solid #000;">\$ 2.14 M</div> <div style="background-color: #cceeff; color: white; padding: 5px; border: 1px solid #000;">\$ 1.43 M</div> </div>

Basement Flooding Protection Program Summary

Ward 4 - Etobicoke Centre



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 8	Completed (2012)	<div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> Area Studied </div> <div style="text-align: center;"> Study is Underway </div> <div style="text-align: center;"> Area to be Studied </div> </div>
Area 35	Underway (began in 2015)	
Area 36	Underway (began in 2015)	
Area 41	Underway (began in 2015)	
Area 51	To begin in 2020	

Basement Flooding Protection Program Implementation Summary - to end of 2015

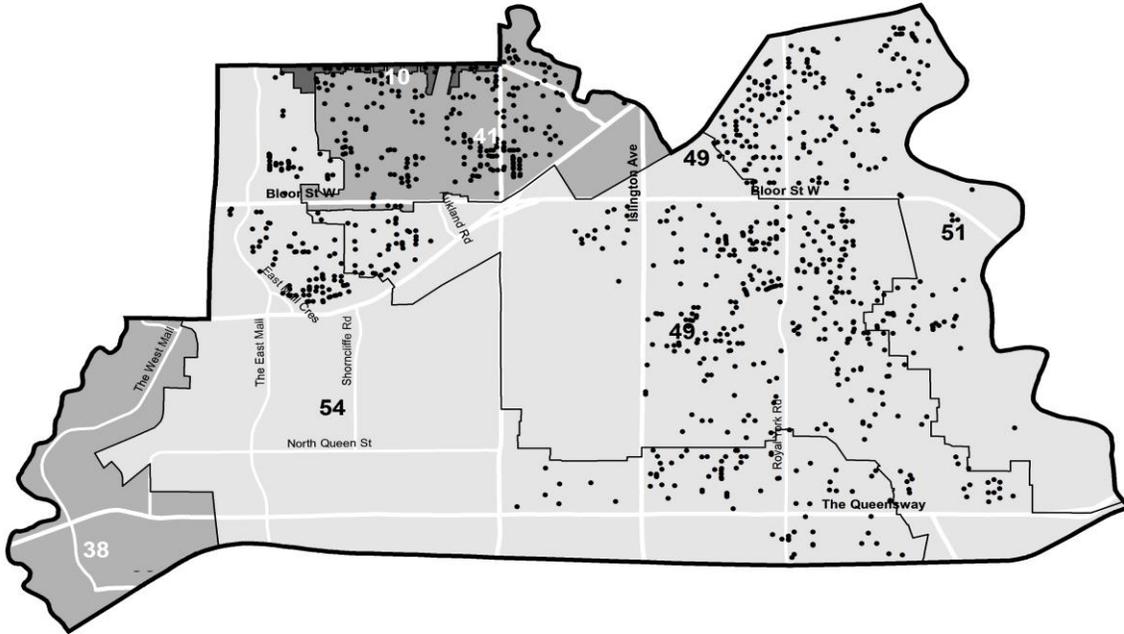
Project Implementation Progress	Project Highlights
<div style="display: flex; align-items: center;"> <div style="margin-left: 20px;"> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefiting property) </div> </div>	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> Properties with FPD 1146 </div> <div style="text-align: center;"> Properties without FPD 5957 </div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> Subsidized by City \$ 1.77 M </div> <div style="text-align: center;"> Cost to Property Owners \$ 1.22 M </div> </div>

Basement Flooding Protection Program Summary

Ward 5 - Etobicoke—Lakeshore



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 38	Underway (began in 2015)	<div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> Area Studied </div> <div style="text-align: center;"> Study is Underway </div> <div style="text-align: center;"> Area to be Studied </div> </div>
Area 41	Underway (began in 2015)	
Area 49	To begin in 2018	
Area 51	To begin in 2020	
Area 54	To begin in 2022	

Basement Flooding Protection Program Implementation Summary - to end of 2015

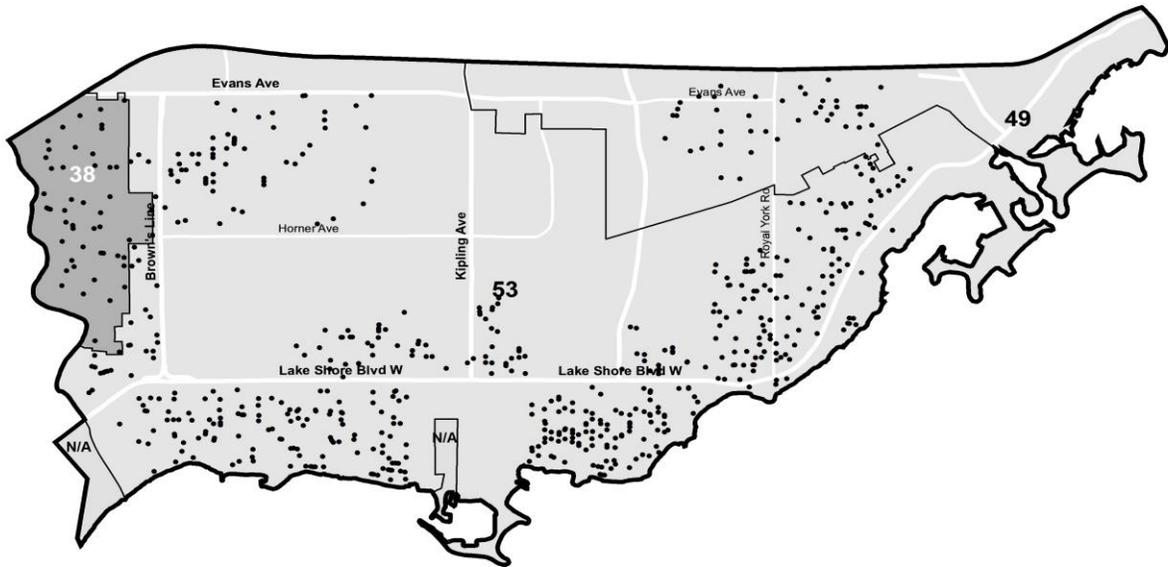
Project Implementation Progress	Project Highlights
<p>Implementation will proceed following completion of the first Environmental Assessment Study in this ward</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) </div>	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> Properties with FPD 895 </div> <div style="text-align: center;"> Properties without FPD 7148 </div> </div>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> Subsidized by City \$ 1.46 M </div> <div style="text-align: center;"> Cost to Property Owners \$ 1.06 M </div> </div>

Basement Flooding Protection Program Summary

Ward 6 - Etobicoke—Lakeshore



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 38	Underway (began in 2015)	<div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> Area Studied </div> <div style="text-align: center;"> Study is Underway </div> <div style="text-align: center;"> Area to be Studied </div> </div>
Area 49	To begin in 2018	
Area 53	To begin in 2020	

Basement Flooding Protection Program Implementation Summary - to end of 2015

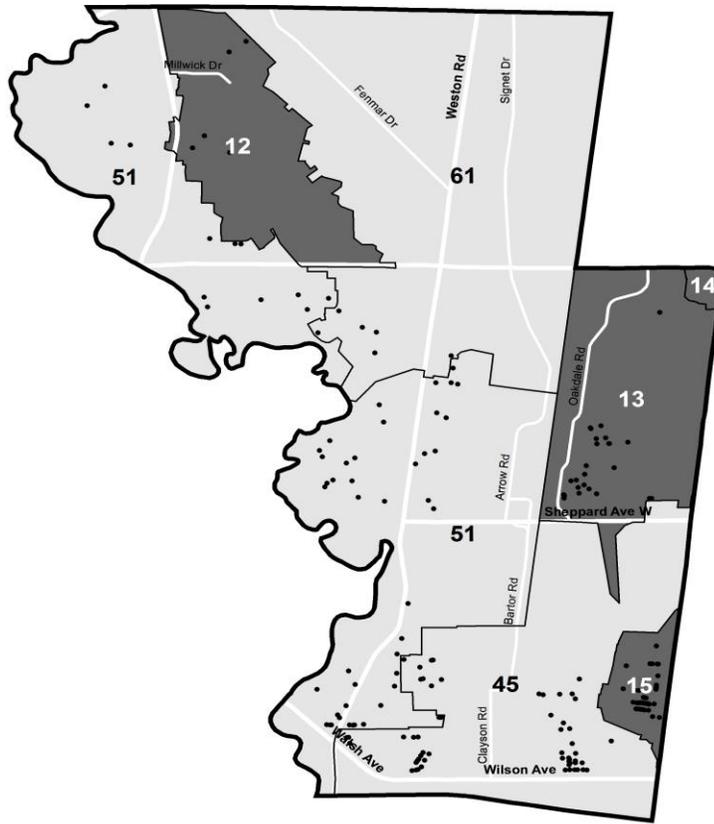
Project Implementation Progress	Project Highlights
<p>Implementation will proceed following completion of the first Environmental Assessment Study in this ward</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) </div>	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> Properties with FPD 548 </div> <div style="text-align: center;"> Properties without FPD 7466 </div> </div>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> Subsidized by City \$ 0.92 M </div> <div style="text-align: center;"> Cost to Property Owners \$ 0.66 M </div> </div>

Basement Flooding Protection Program Summary

Ward 7 - York West



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 12	Completed (2010)	<ul style="list-style-type: none"> Area Studied Study is Underway Area to be Studied
Area 13	Completed (2013)	
Area 14	Completed (2009)	
Area 15	Completed (2014)	
Area 45	To begin in 2018	
Area 51	To begin in 2020	
Area 61	To begin in 2024	

Basement Flooding Protection Program Implementation Summary - to end of 2015

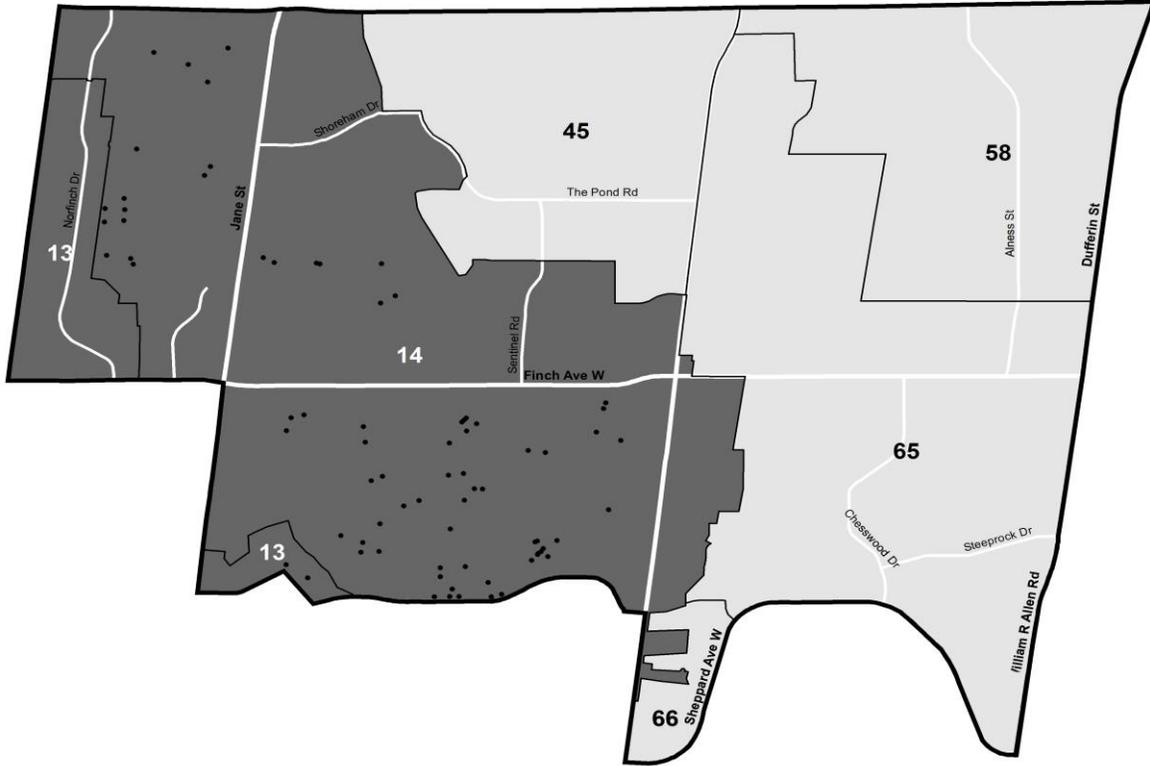
Project Implementation Progress	Project Highlights
<ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) <p>TOTAL \$ 47.09 M</p>	<ul style="list-style-type: none"> 1.7 km of storm sewer upgrades installed 2.4 km of sanitary sewer upgrades installed

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD: 170 Properties without FPD: 4222 	<ul style="list-style-type: none"> Subsidized by City: \$ 0.27 M Cost to Property Owners: \$ 0.21 M

Basement Flooding Protection Program Summary

Ward 8 - York West



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 13	Completed (2013)	<ul style="list-style-type: none"> Area Studied Study is Underway Area to be Studied
Area 14	Completed (2009)	
Area 45	To begin in 2018	
Area 58	To begin in 2022	
Area 65	To begin in 2025	
Area 66	To begin in 2025	

Basement Flooding Protection Program Implementation Summary - to end of 2015

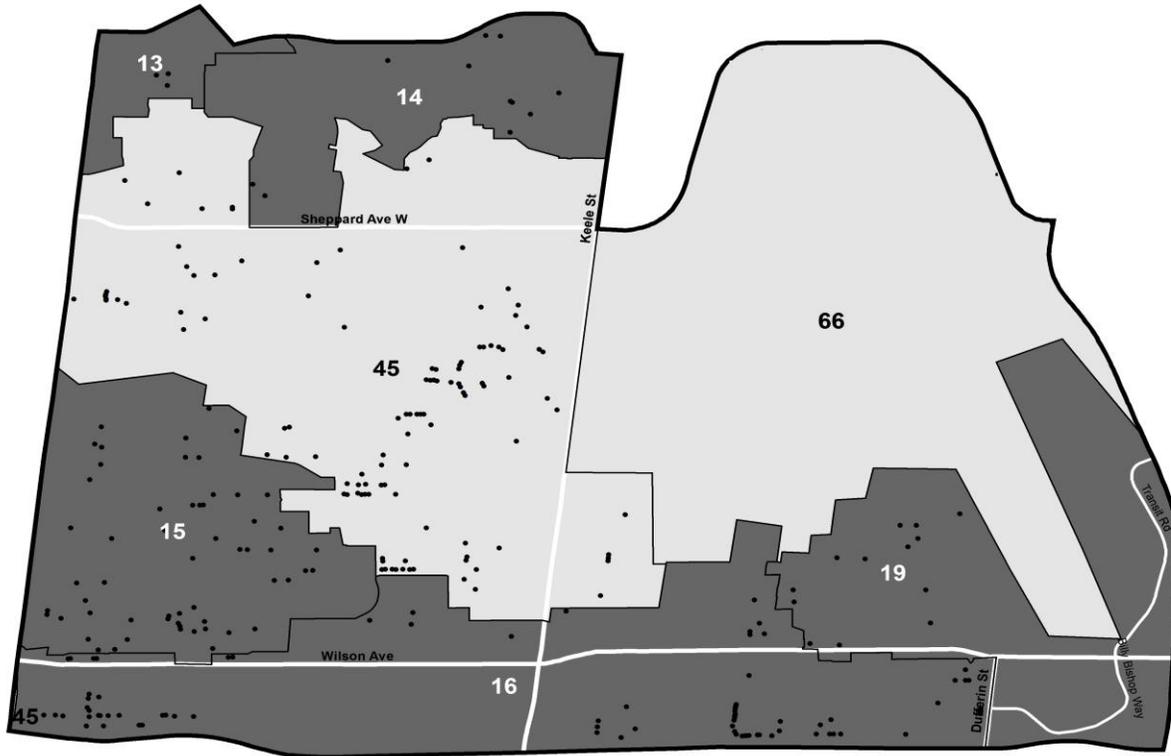
Project Implementation Progress	Project Highlights
<ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	<ul style="list-style-type: none"> • 4 km of storm sewer upgrades installed • 200 m of sanitary sewer upgrades installed

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation		Program Expenditures	
<ul style="list-style-type: none"> Properties with FPD Properties without FPD 	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners 	<div style="background-color: darkblue; width: 100px; height: 20px; margin-bottom: 5px;"></div> <div style="background-color: lightblue; width: 100px; height: 20px;"></div>	<div style="background-color: darkblue; width: 100px; height: 20px; margin-bottom: 5px;"></div> <div style="background-color: lightblue; width: 100px; height: 20px;"></div>
65	2690	\$ 0.11 M	\$ 0.07 M

Basement Flooding Protection Program Summary

Ward 9 - York Centre



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 13	Completed (2013)	<ul style="list-style-type: none"> Area Studied Study is Underway Area to be Studied
Area 14	Completed (2009)	
Area 15	Completed (2014)	
Area 16	Completed (2010)	
Area 19	Completed (2014)	
Area 45	To begin in 2018	
Area 66	To begin in 2025	

Basement Flooding Protection Program Implementation Summary - to end of 2015

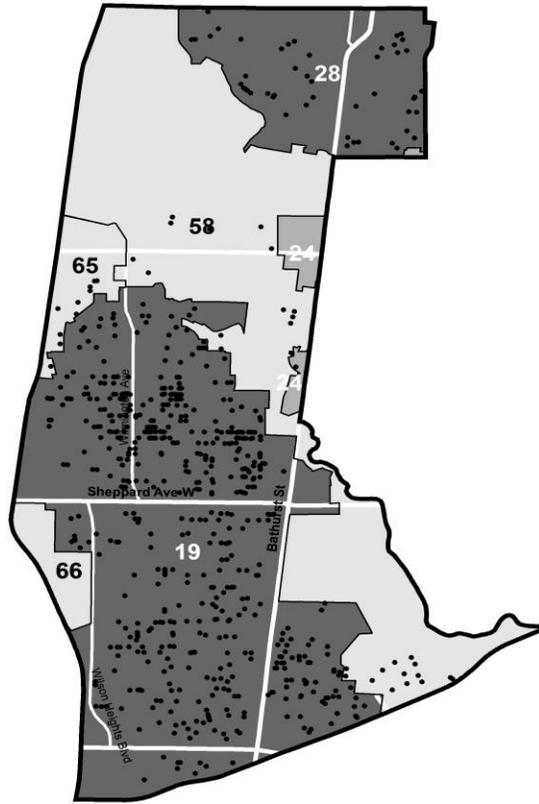
Project Implementation Progress	Project Highlights
<ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	<ul style="list-style-type: none"> 250 m of storm sewer upgrades installed

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD: 257 Properties without FPD: 5485 	<ul style="list-style-type: none"> Subsidized by City: \$ 0.42 M Cost to Property Owners: \$ 0.29 M

Basement Flooding Protection Program Summary

Ward 10 - York Centre



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 19	Completed (2014)	<ul style="list-style-type: none"> Area Studied Study is Underway Area to be Studied
Area 24	Underway (began in 2012)	
Area 28	Completed (2008)	
Area 58	To begin in 2022	
Area 65	To begin in 2025	
Area 66	To begin in 2025	

Basement Flooding Protection Program Implementation Summary - to end of 2015

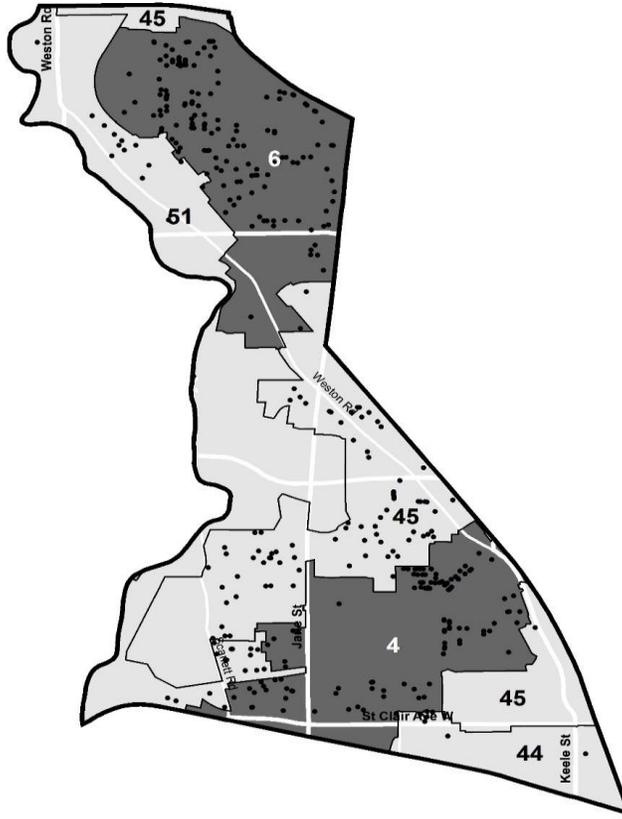
Project Implementation Progress	Project Highlights
<ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefiting property) 	• 2.5 km of storm sewer upgrades installed

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD 	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners
<div style="display: flex; justify-content: space-around; width: 100%;"> <div style="background-color: #003366; color: white; padding: 5px; width: 45%; text-align: center;">593</div> <div style="background-color: #336699; color: white; padding: 5px; width: 45%; text-align: center;">5019</div> </div>	<div style="display: flex; justify-content: space-around; width: 100%;"> <div style="background-color: #003366; color: white; padding: 5px; width: 45%; text-align: center;">\$ 1.09 M</div> <div style="background-color: #6699cc; color: white; padding: 5px; width: 45%; text-align: center;">\$ 0.72 M</div> </div>

Basement Flooding Protection Program Summary

Ward 11 - York South—Weston



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 4	Completed (2014)	
Area 6	Completed (2014)	
Area 44	To begin in 2016	
Area 45	To begin in 2018	
Area 51	To begin in 2020	

Basement Flooding Protection Program Implementation Summary - to end of 2015

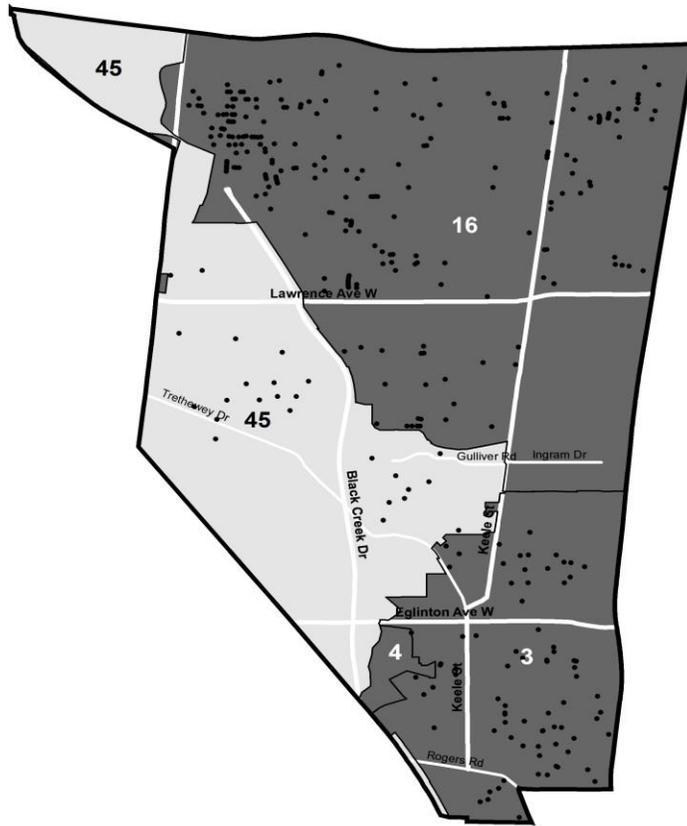
Project Implementation Progress	Project Highlights

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures								
<table style="width: 100%; text-align: center;"> <tr> <td style="width: 50%;">■ Properties with FPD</td> <td style="width: 50%;">■ Properties without FPD</td> </tr> <tr> <td style="font-size: 2em;">347</td> <td style="font-size: 2em;">5793</td> </tr> </table>	■ Properties with FPD	■ Properties without FPD	347	5793	<table style="width: 100%; text-align: center;"> <tr> <td style="width: 50%;">■ Subsidized by City</td> <td style="width: 50%;">■ Cost to Property Owners</td> </tr> <tr> <td style="font-size: 1.5em;">\$ 0.54 M</td> <td style="font-size: 1.5em;">\$ 0.41 M</td> </tr> </table>	■ Subsidized by City	■ Cost to Property Owners	\$ 0.54 M	\$ 0.41 M
■ Properties with FPD	■ Properties without FPD								
347	5793								
■ Subsidized by City	■ Cost to Property Owners								
\$ 0.54 M	\$ 0.41 M								

Basement Flooding Protection Program Summary

Ward 12 - York South—Weston



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 3	Completed (2011)	
Area 4	Completed (2014)	
Area 16	Completed (2010)	
Area 45	To begin in 2018	

Basement Flooding Protection Program Implementation Summary - to end of 2015

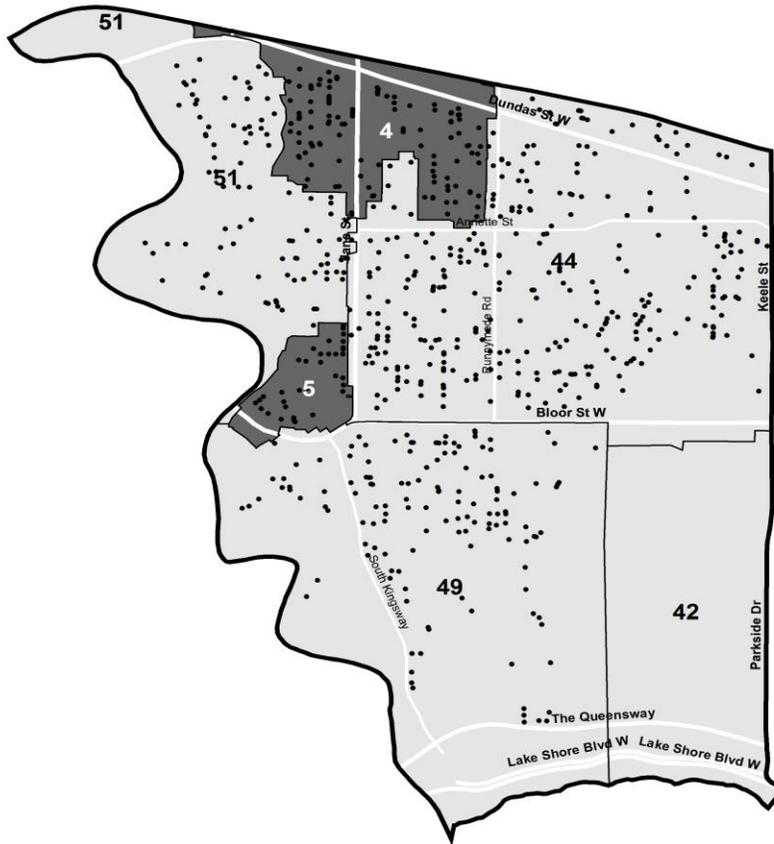
Project Implementation Progress	Project Highlights
<p>TOTAL \$ 224.58 M</p>	<ul style="list-style-type: none"> 2.4 km of storm sewer upgrades installed 400 m of sanitary sewer upgrades installed

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD: 307 Properties without FPD: 5146 	<ul style="list-style-type: none"> Subsidized by City: \$ 0.48 M Cost to Property Owners: \$ 0.36 M

Basement Flooding Protection Program Summary

Ward 13 - Parkdale—High Park



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 4	Completed (2014)	<ul style="list-style-type: none"> Area Studied Study is Underway Area to be Studied
Area 5	Completed (2014)	
Area 42	To begin in 2016	
Area 44	To begin in 2016	
Area 49	To begin in 2018	
Area 51	To begin in 2020	

Basement Flooding Protection Program Implementation Summary - to end of 2015

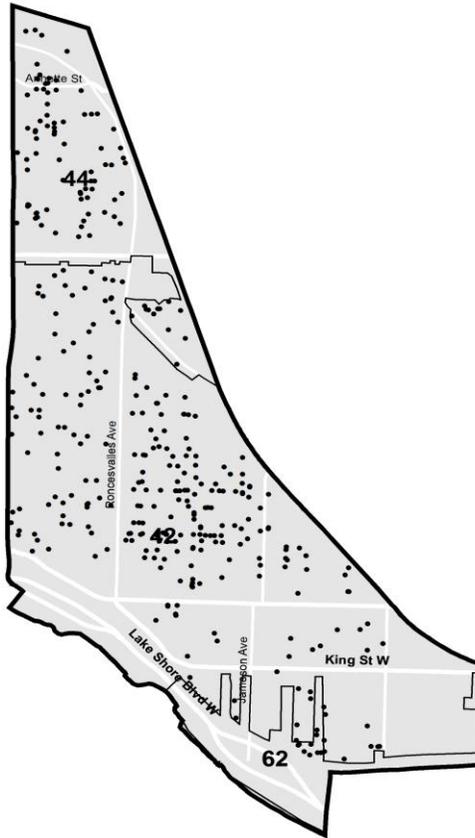
Project Implementation Progress	Project Highlights
<p style="text-align: center;">TOTAL \$ 2.11 M</p> <p>\$ 2.11 M, 100%</p> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation		Program Expenditures	
■ Properties with FPD	■ Properties without FPD	■ Subsidized by City	■ Cost to Property Owners
609	4681	\$ 0.95 M	\$ 0.78 M

Basement Flooding Protection Program Summary

Ward 14 - Parkdale—High Park



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	●	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 42	To begin in 2016	
Area 44	To begin in 2016	
Area 62	To begin in 2024	

Basement Flooding Protection Program Implementation Summary - to end of 2015

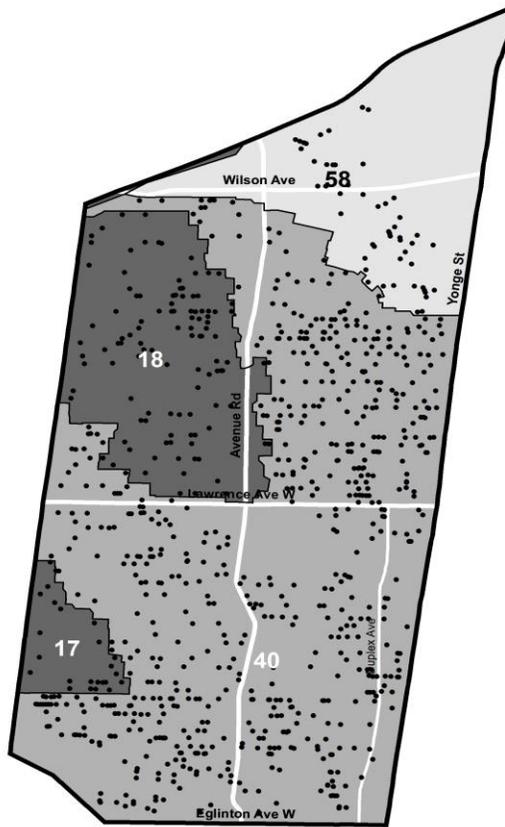
Project Implementation Progress	Project Highlights
<p>Implementation will proceed following completion of the first Environmental Assessment Study in this ward</p> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD 	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners
<div style="display: flex; justify-content: space-around;"> <div style="background-color: #003366; color: white; padding: 5px; border: 1px solid black;">328</div> <div style="background-color: #336699; color: white; padding: 5px; border: 1px solid black;">2278</div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #003366; color: white; padding: 5px; border: 1px solid black;">\$ 0.55 M</div> <div style="background-color: #ADD8E6; color: white; padding: 5px; border: 1px solid black;">\$ 0.42 M</div> </div>

Basement Flooding Protection Program Summary

Ward 16 - Eglinton—Lawrence



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	●	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 17	Completed (2014)	<ul style="list-style-type: none"> Area Studied Study is Underway Area to be Studied
Area 18	Completed (2014)	
Area 40	Underway (began in 2015)	
Area 58	To begin in 2022	

Basement Flooding Protection Program Implementation Summary - to end of 2015

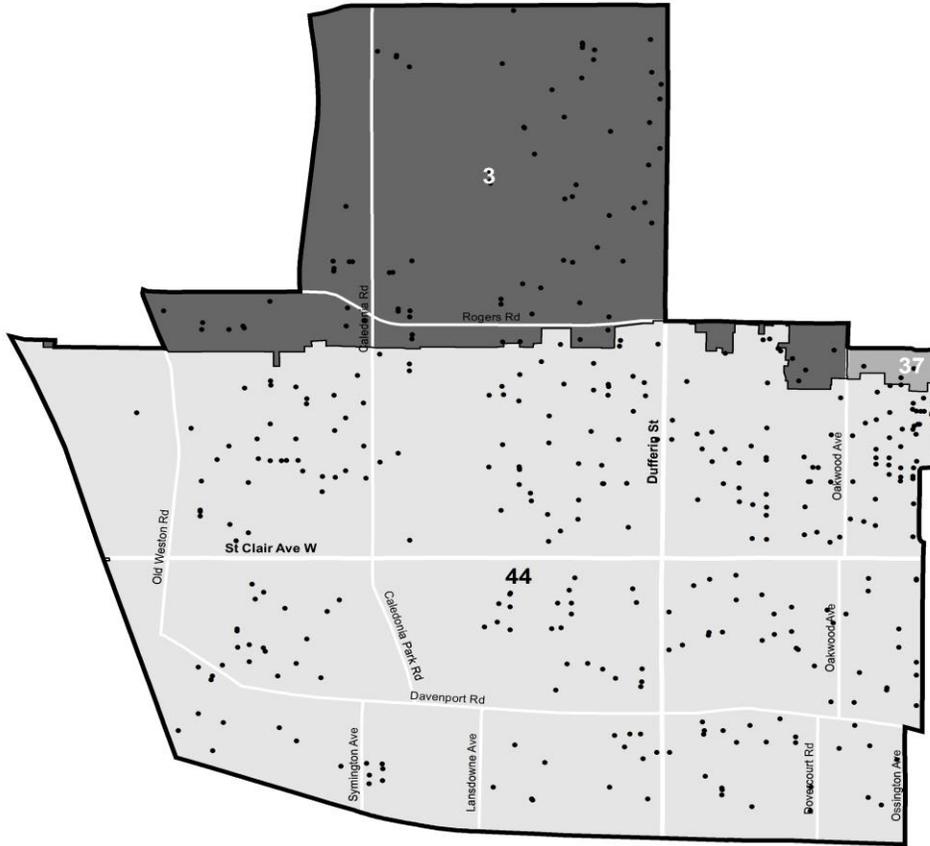
Project Implementation Progress	Project Highlights
<ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="background-color: #003366; color: white; padding: 5px; text-align: center;">745</div> <div style="background-color: #336699; color: white; padding: 5px; text-align: center;">8172</div> </div>	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="background-color: #003366; color: white; padding: 5px; text-align: center;">\$ 1.30 M</div> <div style="background-color: #add8e6; color: white; padding: 5px; text-align: center;">\$ 1.00 M</div> </div>

Basement Flooding Protection Program Summary

Ward 17 - Davenport



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	●	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 3	Completed (2011)	
Area 37	Underway (began in 2015)	
Area 44	To begin in 2016	

Basement Flooding Protection Program Implementation Summary - to end of 2015

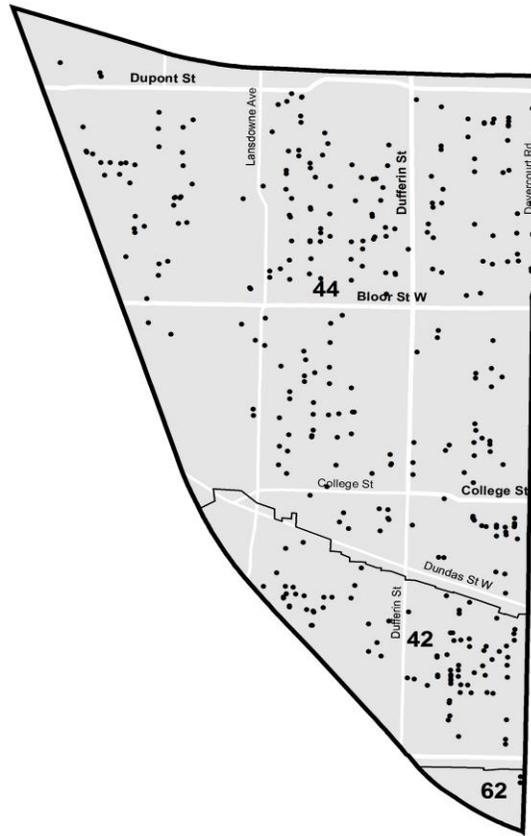
Project Implementation Progress	Project Highlights
<ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	<ul style="list-style-type: none"> • 800 m of storm sewer upgrades installed

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD 	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners
<div style="display: flex; justify-content: space-around;"> <div style="background-color: #003366; color: white; padding: 5px; border: 1px solid black;">337</div> <div style="background-color: #003366; color: white; padding: 5px; border: 1px solid black;">6120</div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #003366; color: white; padding: 5px; border: 1px solid black;">\$ 0.54 M</div> <div style="background-color: #ADD8E6; color: white; padding: 5px; border: 1px solid black;">\$ 0.42 M</div> </div>

Basement Flooding Protection Program Summary

Ward 18 - Davenport



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	●	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 42	To begin in 2016	
Area 44	To begin in 2016	
Area 62	To begin in 2024	

Basement Flooding Protection Program Implementation Summary - to end of 2015

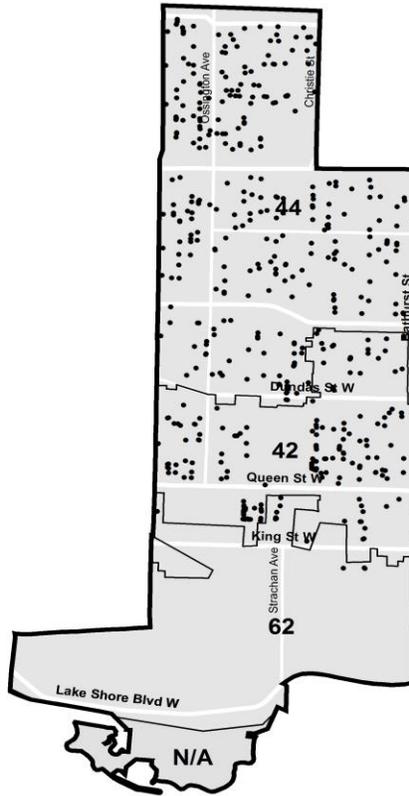
Project Implementation Progress	Project Highlights
<p>Implementation will proceed following completion of the first Environmental Assessment Study in this ward</p> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD 	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners
<div style="display: flex; justify-content: space-around;"> <div style="background-color: #003366; color: white; padding: 5px; border: 1px solid black;">313</div> <div style="background-color: #336699; color: white; padding: 5px; border: 1px solid black;">3000</div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #003366; color: white; padding: 5px; border: 1px solid black;">\$ 0.52 M</div> <div style="background-color: #99c2ff; color: white; padding: 5px; border: 1px solid black;">\$ 0.38 M</div> </div>

Basement Flooding Protection Program Summary

Ward 19 - Trinity—Spadina



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 42	To begin in 2016	<p style="text-align: center;">100%</p>
Area 44	To begin in 2016	
Area 62	To begin in 2024	

Basement Flooding Protection Program Implementation Summary - to end of 2015

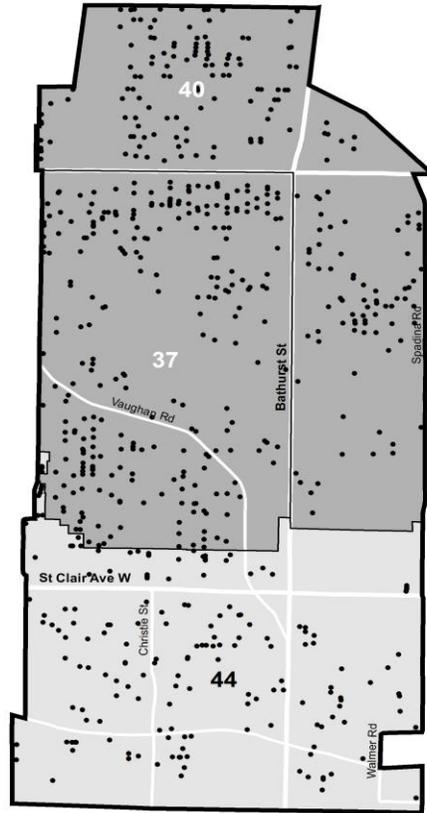
Project Implementation Progress	Project Highlights
<p>Implementation will proceed following completion of the first Environmental Assessment Study in this ward</p> <div style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) </div>	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> ■ Properties with FPD 413 </div> <div style="text-align: center;"> ■ Properties without FPD 4738 </div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> ■ Subsidized by City \$ 0.73 M </div> <div style="text-align: center;"> ■ Cost to Property Owners \$ 0.52 M </div> </div>

Basement Flooding Protection Program Summary

Ward 21 - St. Paul's



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	●	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 37	Underway (began in 2015)	<ul style="list-style-type: none"> Area Studied Study is Underway Area to be Studied
Area 40	Underway (began in 2015)	
Area 44	To begin in 2016	

Basement Flooding Protection Program Implementation Summary - to end of 2015

Project Implementation Progress	Project Highlights
<p>Implementation will proceed following completion of the first Environmental Assessment Study in this ward</p> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD 	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners
<div style="display: flex; justify-content: space-around;"> <div style="background-color: #003366; color: white; padding: 5px; width: 40%;">561</div> <div style="background-color: #333; color: white; padding: 5px; width: 60%;">4554</div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #003366; color: white; padding: 5px; width: 45%;">\$ 1.01 M</div> <div style="background-color: #999; color: white; padding: 5px; width: 55%;">\$ 0.69 M</div> </div>

Basement Flooding Protection Program Summary

Ward 22 - St. Paul's



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 40	Underway (began in 2015)	
Area 44	To begin in 2016	

Basement Flooding Protection Program Implementation Summary - to end of 2015

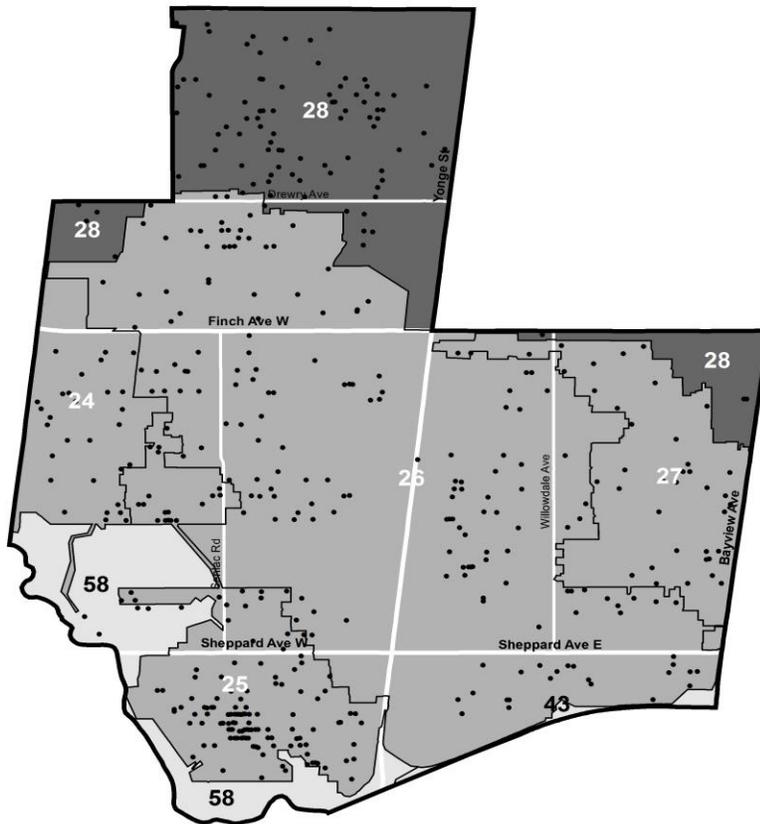
Project Implementation Progress	Project Highlights
<p>Implementation will proceed following completion of the first Environmental Assessment Study in this ward</p> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD 	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners
<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; width: 100px; height: 20px; display: flex; align-items: center; justify-content: center;">422</div> <div style="background-color: #003366; width: 100px; height: 20px; display: flex; align-items: center; justify-content: center;">4496</div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #003366; width: 100px; height: 20px; display: flex; align-items: center; justify-content: center;">\$ 0.72 M</div> <div style="background-color: #ADD8E6; width: 100px; height: 20px; display: flex; align-items: center; justify-content: center;">\$ 0.51 M</div> </div>

Basement Flooding Protection Program Summary

Ward 23 - Willowdale



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward						
Area 24	Underway (began in 2012)	<table border="1"> <tr> <td>Area Studied</td> <td>20%</td> </tr> <tr> <td>Study is Underway</td> <td>73%</td> </tr> <tr> <td>Area to be Studied</td> <td>8%</td> </tr> </table>	Area Studied	20%	Study is Underway	73%	Area to be Studied	8%
Area Studied	20%							
Study is Underway	73%							
Area to be Studied	8%							
Area 25	Underway (began in 2012)							
Area 26	Underway (began in 2012)							
Area 27	Underway (began in 2012)							
Area 28	Completed (2008)							
Area 58	To begin in 2022							

Basement Flooding Protection Program Implementation Summary - to end of 2015

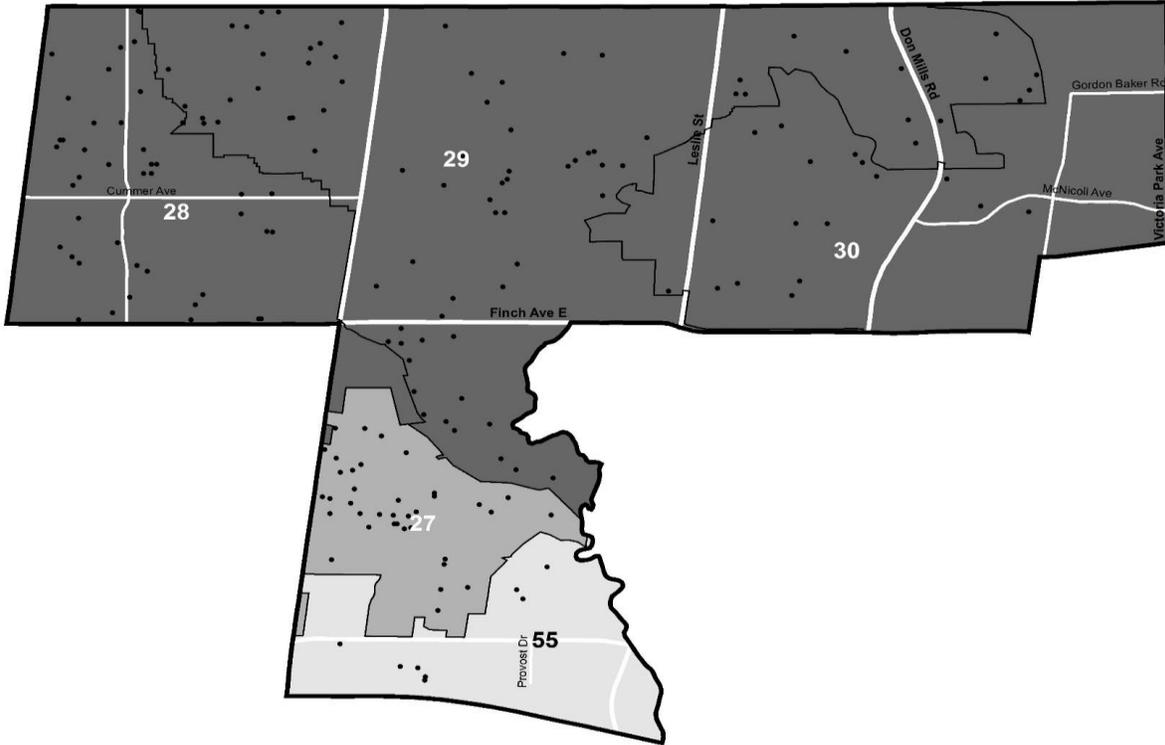
Project Implementation Progress	Project Highlights												
<table border="1"> <tr> <td>Constructed</td> <td>\$37.44 M, 79%</td> </tr> <tr> <td>Under Construction</td> <td>\$5.00 M, 11%</td> </tr> <tr> <td>Design Process Initiated</td> <td>\$4.83 M, 10%</td> </tr> <tr> <td>Planned for Design Initiation</td> <td></td> </tr> <tr> <td>Deferred (>\$32,000 per benefitting property)</td> <td></td> </tr> <tr> <td>TOTAL</td> <td>\$47.27 M</td> </tr> </table>	Constructed	\$37.44 M, 79%	Under Construction	\$5.00 M, 11%	Design Process Initiated	\$4.83 M, 10%	Planned for Design Initiation		Deferred (>\$32,000 per benefitting property)		TOTAL	\$47.27 M	<ul style="list-style-type: none"> •9.5 km of storm sewer upgrades installed •300 m of sanitary sewer upgrades installed •Installation of Moore Park Stormwater Management Pond
Constructed	\$37.44 M, 79%												
Under Construction	\$5.00 M, 11%												
Design Process Initiated	\$4.83 M, 10%												
Planned for Design Initiation													
Deferred (>\$32,000 per benefitting property)													
TOTAL	\$47.27 M												

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures								
<table border="1"> <tr> <td>Properties with FPD</td> <td>Properties without FPD</td> </tr> <tr> <td style="text-align: center;">398</td> <td style="text-align: center;">7953</td> </tr> </table>	Properties with FPD	Properties without FPD	398	7953	<table border="1"> <tr> <td>Subsidized by City</td> <td>Cost to Property Owners</td> </tr> <tr> <td style="text-align: center;">\$ 0.69 M</td> <td style="text-align: center;">\$ 0.51 M</td> </tr> </table>	Subsidized by City	Cost to Property Owners	\$ 0.69 M	\$ 0.51 M
Properties with FPD	Properties without FPD								
398	7953								
Subsidized by City	Cost to Property Owners								
\$ 0.69 M	\$ 0.51 M								

Basement Flooding Protection Program Summary

Ward 24 - Willowdale



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	●	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 27	Underway (began in 2012)	<ul style="list-style-type: none"> Area Studied Study is Underway Area to be Studied
Area 28	Completed (2008)	
Area 29	Completed (2008)	
Area 30	Completed (2008)	
Area 55	To begin in 2022	

Basement Flooding Protection Program Implementation Summary - to end of 2015

Project Implementation Progress	Project Highlights
<p>TOTAL \$166.90 M</p> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	• 1.9 km of storm sewer upgrades installed

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD: 162 Properties without FPD: 6636 	<ul style="list-style-type: none"> Subsidized by City: \$0.26 M Cost to Property Owners: \$0.20 M

Basement Flooding Protection Program Summary

Ward 26 - Don Valley West



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 2	Completed (2015)	
Area 46	Underway (began in 2015)	
Area 55	To begin in 2022	
Area 58	To begin in 2022	

Basement Flooding Protection Program Implementation Summary - to end of 2015

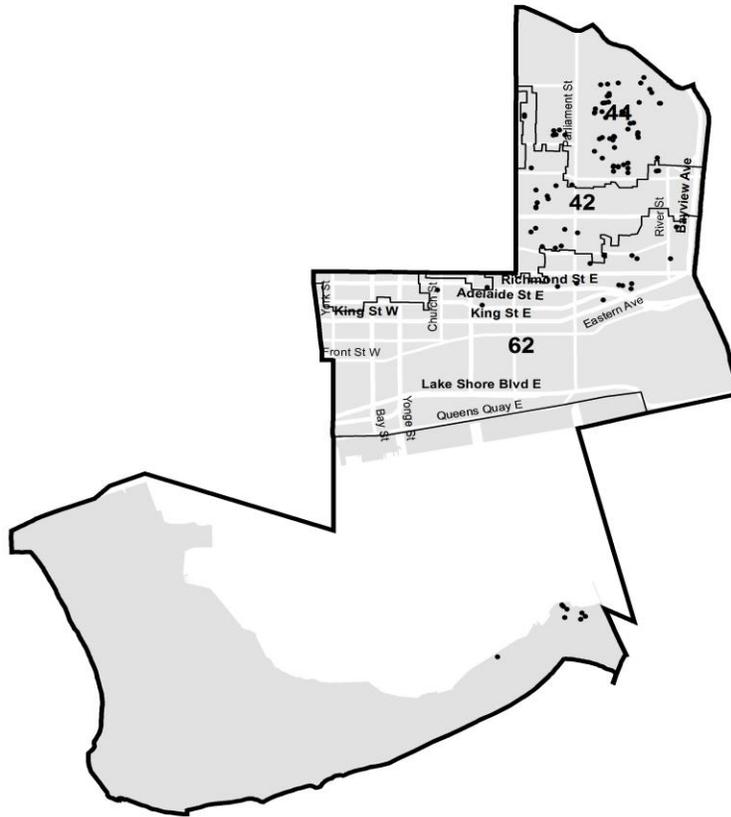
Project Implementation Progress	Project Highlights
<ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD 	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners
<div style="display: flex; justify-content: space-around;"> <div style="background-color: #003366; color: white; padding: 5px; border: 1px solid black;">276</div> <div style="background-color: #336699; color: white; padding: 5px; border: 1px solid black;">2972</div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #003366; color: white; padding: 5px; border: 1px solid black;">\$ 0.44 M</div> <div style="background-color: #ADD8E6; color: white; padding: 5px; border: 1px solid black;">\$ 0.37 M</div> </div>

Basement Flooding Protection Program Summary

Ward 28 - Toronto Centre—Rosedale



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 42	To begin in 2016	<p style="text-align: center;">100%</p>
Area 44	To begin in 2016	
Area 62	To begin in 2024	

Basement Flooding Protection Program Implementation Summary - to end of 2015

Project Implementation Progress	Project Highlights
<p>Implementation will proceed following completion of the first Environmental Assessment Study in this ward</p> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<p>■ Properties with FPD ■ Properties without FPD</p> <p style="font-size: 2em; font-weight: bold;">74</p> <p style="font-size: 1.5em; font-weight: bold;">2009</p>	<p>■ Subsidized by City ■ Cost to Property Owners</p> <p style="font-size: 1.5em; font-weight: bold;">\$ 0.12 M</p> <p style="font-size: 1.5em; font-weight: bold;">\$ 0.08 M</p>

Basement Flooding Protection Program Summary

Ward 29 - Toronto—Danforth



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	●	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 2	Completed (2015)	
Area 32	Completed (2012)	
Area 46	To begin in 2018	
Area 47	To begin in 2018	

Basement Flooding Protection Program Implementation Summary - to end of 2015

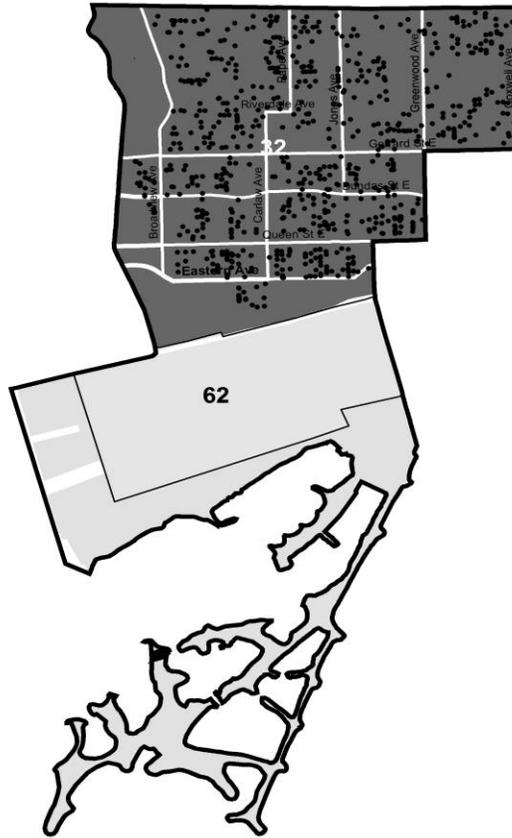
Project Implementation Progress	Project Highlights
<p>Implementation will proceed following completion of the first Environmental Assessment Study in this ward</p> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD 	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners
<div style="display: flex; justify-content: space-around;"> <div style="background-color: #003366; color: white; padding: 5px;">491</div> <div style="background-color: #336699; color: white; padding: 5px;">6568</div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #003366; color: white; padding: 5px;">\$ 0.84 M</div> <div style="background-color: #ADD8E6; color: white; padding: 5px;">\$ 0.61 M</div> </div>

Basement Flooding Protection Program Summary

Ward 30 - Toronto—Danforth



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 32	Completed (2012)	
Area 62	To begin in 2024	

Basement Flooding Protection Program Implementation Summary - to end of 2015

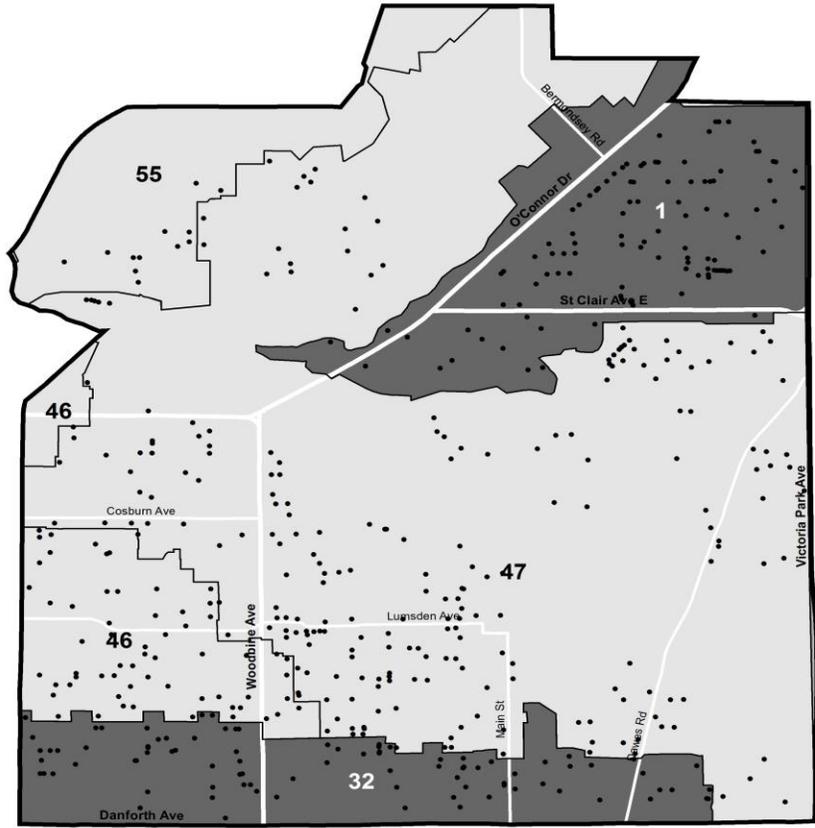
Project Implementation Progress	Project Highlights
	<ul style="list-style-type: none"> 150 m of storm sewer upgrades installed

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD: 667 Properties without FPD: 6878 	<ul style="list-style-type: none"> Subsidized by City: \$ 1.13 M Cost to Property Owners: \$ 0.79 M

Basement Flooding Protection Program Summary

Ward 31 - Beaches—East York



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	●	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 1	Completed (2014)	
Area 32	Completed (2012)	
Area 46	To begin in 2018	
Area 47	To begin in 2018	
Area 55	To begin in 2022	

Basement Flooding Protection Program Implementation Summary - to end of 2015

Project Implementation Progress	Project Highlights

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures								
<table style="width: 100%; text-align: center;"> <tr> <td>■ Properties with FPD</td> <td>■ Properties without FPD</td> </tr> <tr> <td style="font-size: 2em;">450</td> <td style="font-size: 2em;">7092</td> </tr> </table>	■ Properties with FPD	■ Properties without FPD	450	7092	<table style="width: 100%; text-align: center;"> <tr> <td>■ Subsidized by City</td> <td>■ Cost to Property Owners</td> </tr> <tr> <td style="font-size: 1.5em;">\$ 0.74 M</td> <td style="font-size: 1.5em;">\$ 0.50 M</td> </tr> </table>	■ Subsidized by City	■ Cost to Property Owners	\$ 0.74 M	\$ 0.50 M
■ Properties with FPD	■ Properties without FPD								
450	7092								
■ Subsidized by City	■ Cost to Property Owners								
\$ 0.74 M	\$ 0.50 M								

Basement Flooding Protection Program Summary

Ward 32 - Beaches—East York



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 32	Completed (2012)	<ul style="list-style-type: none"> Area Studied Study is Underway Area to be Studied
Area 47	To begin in 2018	
Area 62	To begin in 2024	

Basement Flooding Protection Program Implementation Summary - to end of 2015

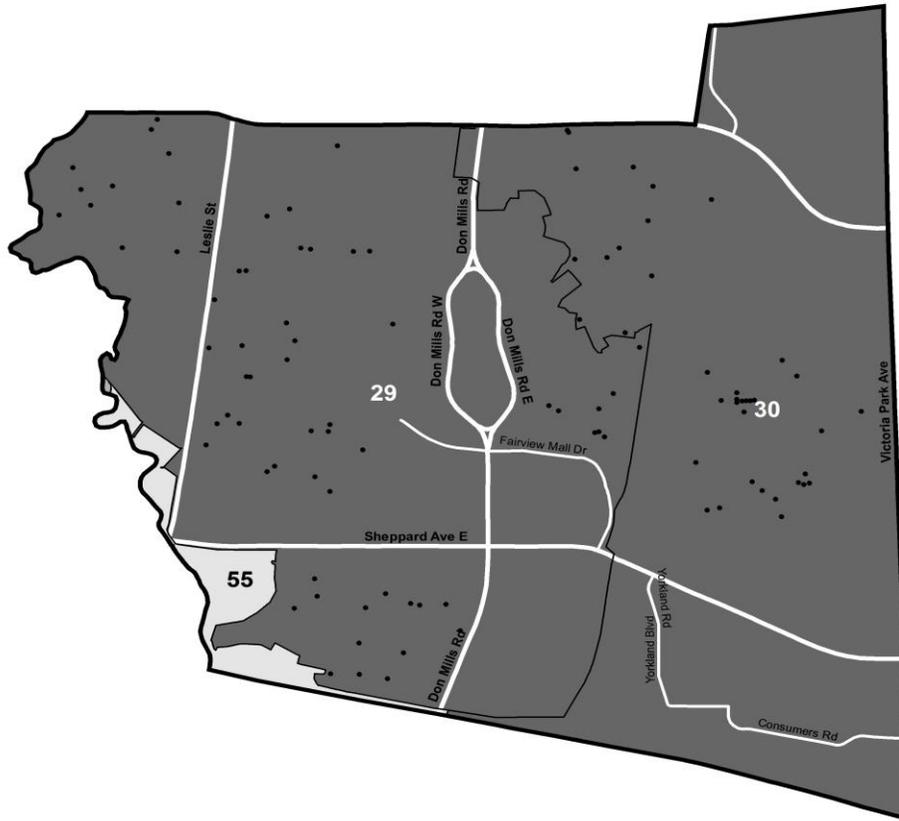
Project Implementation Progress	Project Highlights
<ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	<ul style="list-style-type: none"> • 240 m of combined sewer upgrades installed

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="background-color: lightblue; padding: 5px; border: 1px solid black;">770</div> <div style="background-color: darkblue; padding: 5px; border: 1px solid black;">8105</div> </div>	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="background-color: darkblue; padding: 5px; border: 1px solid black;">\$ 1.22 M</div> <div style="background-color: lightblue; padding: 5px; border: 1px solid black;">\$ 1.00 M</div> </div>

Basement Flooding Protection Program Summary

Ward 33 - Don Valley East



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	●	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 29	Completed (2008)	<p>3% 97%</p> <ul style="list-style-type: none"> Area Studied Study is Underway Area to be Studied
Area 30	Completed (2008)	
Area 55	To begin in 2022	

Basement Flooding Protection Program Implementation Summary - to end of 2015

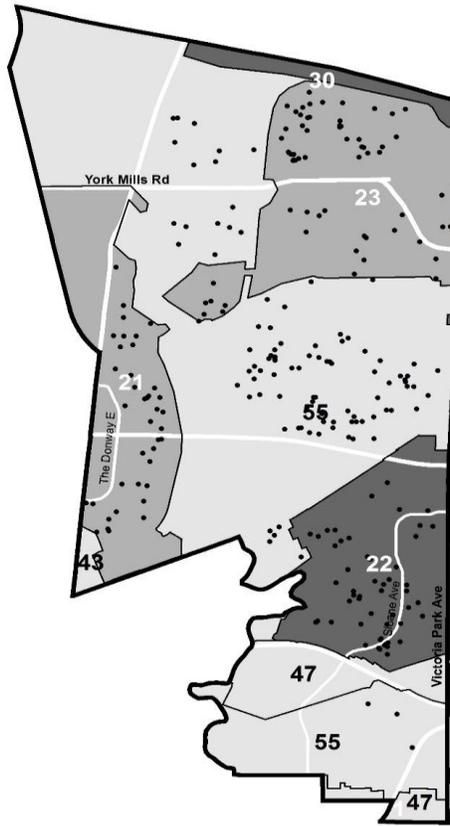
Project Implementation Progress	Project Highlights
<p>TOTAL \$ 160.58 M</p> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	<ul style="list-style-type: none"> •4.9 km of storm sewer upgrades installed •100 m of sanitary sewer upgrades installed •Muirhead Park SWM Pond, Old Sheppard Underground Storm Tank

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD: 71 Properties without FPD: 5566 	<ul style="list-style-type: none"> Subsidized by City: \$ 0.12 M Cost to Property Owners: \$ 0.09 M

Basement Flooding Protection Program Summary

Ward 34 - Don Valley East



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 21	Underway (began in 2013)	<ul style="list-style-type: none"> Area Studied Study is Underway Area to be Studied
Area 22	Completed (2014)	
Area 23	Underway (began in 2015)	
Area 30	Completed (2008)	
Area 43	To begin in 2016	
Area 47	To begin in 2018	
Area 55	To begin in 2022	

Basement Flooding Protection Program Implementation Summary - to end of 2015

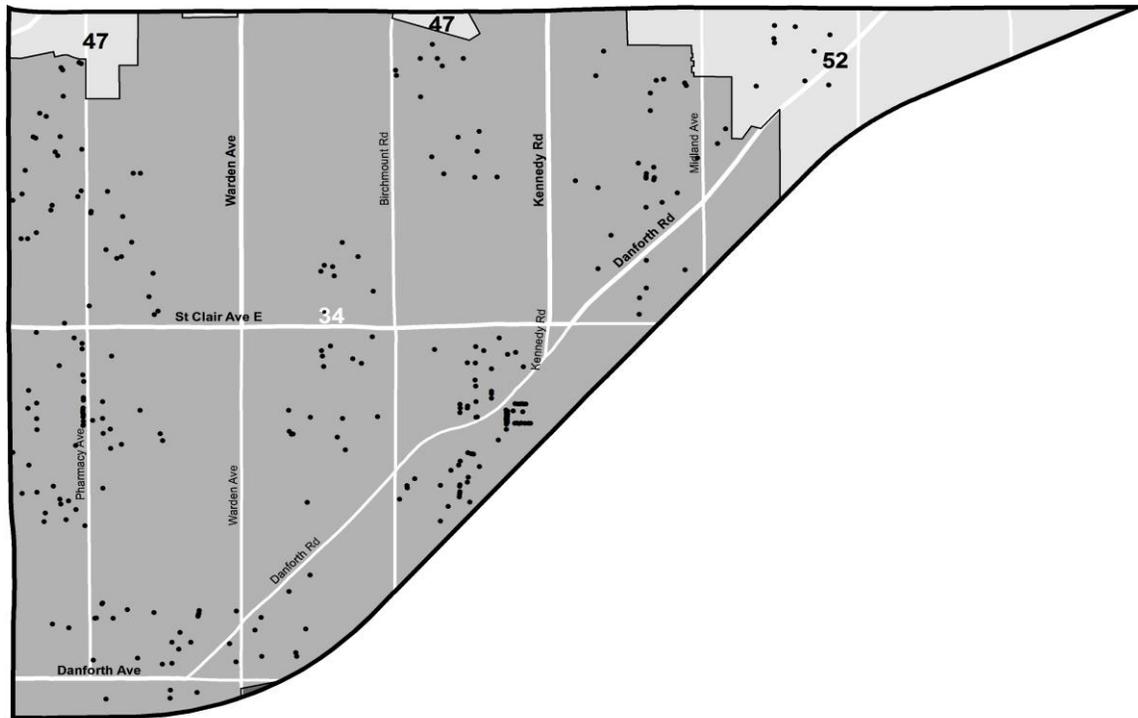
Project Implementation Progress	Project Highlights
<p style="text-align: center;">TOTAL \$ 16.55 M</p> <p>\$ 16.55 M, 100%</p> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD <p style="text-align: center;">208 4965</p>	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners <p style="text-align: center;">\$ 0.33 M \$ 0.25 M</p>

Basement Flooding Protection Program Summary

Ward 35 - Scarborough Southwest



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	●	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 34	Underway (began in 2015)	<div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> Area Studied </div> <div style="text-align: center;"> Study is Underway </div> <div style="text-align: center;"> Area to be Studied </div> </div>
Area 47	To begin in 2018	
Area 52	To begin in 2020	

Basement Flooding Protection Program Implementation Summary - to end of 2015

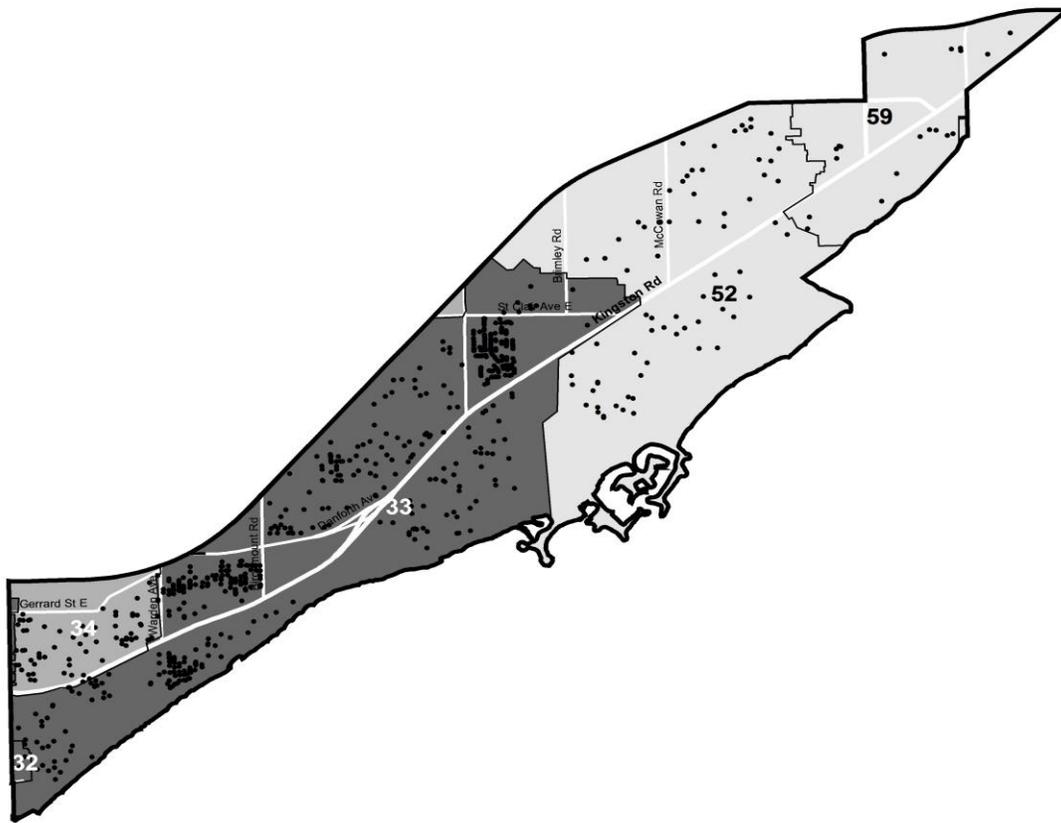
Project Implementation Progress	Project Highlights
<p>Implementation will proceed following completion of the first Environmental Assessment Study in this ward</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) </div>	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> Properties with FPD 249 </div> <div style="text-align: center;"> Properties without FPD 7256 </div> </div>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> Subsidized by City \$ 0.43 M </div> <div style="text-align: center;"> Cost to Property Owners \$ 0.24 M </div> </div>

Basement Flooding Protection Program Summary

Ward 36 - Scarborough Southwest



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 32	Completed (2012)	<ul style="list-style-type: none"> Area Studied Study is Underway Area to be Studied
Area 33	Completed (2011)	
Area 34	Underway (began in 2015)	
Area 52	To begin in 2020	
Area 59	To begin in 2024	

Basement Flooding Protection Program Implementation Summary - to end of 2015

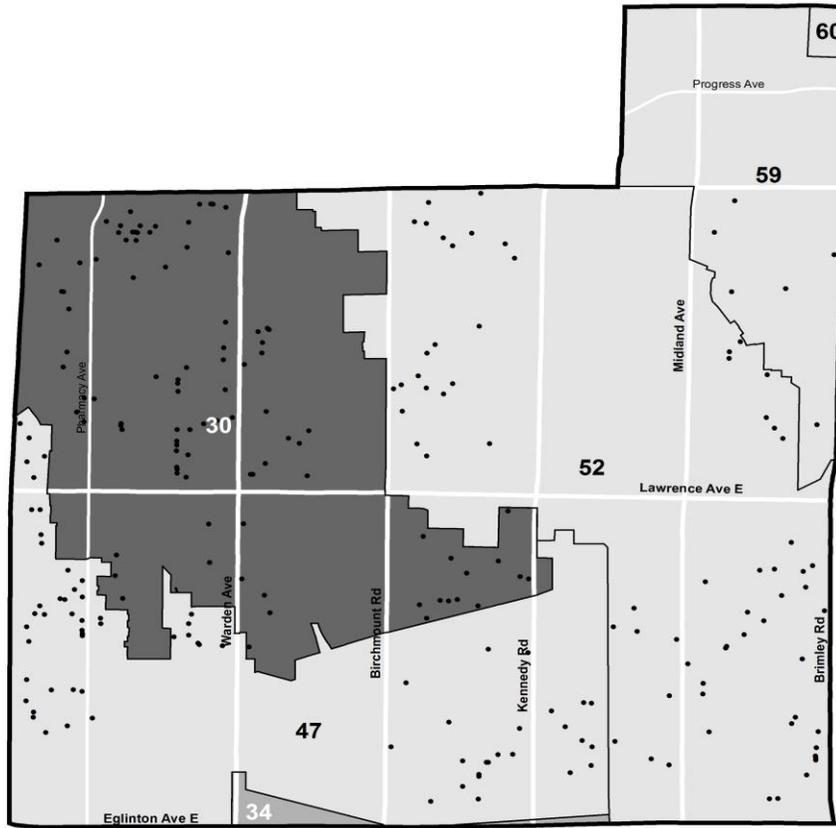
Project Implementation Progress	Project Highlights
<p>TOTAL \$ 5.90 M</p> <p>\$ 5.90 M, 100%</p> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD <p>612 7650</p>	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners <p>\$ 1.06 M \$ 0.53 M</p>

Basement Flooding Protection Program Summary

Ward 37 - Scarborough Centre



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	●	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 30	Completed (2008)	<ul style="list-style-type: none"> Area Studied Study is Underway Area to be Studied
Area 34	Underway (began in 2015)	
Area 47	To begin in 2018	
Area 52	To begin in 2020	
Area 59	To begin in 2024	
Area 60	To begin in 2024	

Basement Flooding Protection Program Implementation Summary - to end of 2015

Project Implementation Progress	Project Highlights
<p style="text-align: center;">TOTAL \$ 19.05 M</p> <p>\$ 19.05 M, 100%</p> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation		Program Expenditures	
■ Properties with FPD ■ Properties without FPD	■ Subsidized by City ■ Cost to Property Owners	■ \$ 0.35 M ■ \$ 0.21 M	■ \$ 0.21 M
214 9131			

Basement Flooding Protection Program Summary

Ward 39 - Scarborough—Agincourt



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 30	Completed (2008)	<ul style="list-style-type: none"> Area Studied Study is Underway Area to be Studied
Area 31	Completed (2011)	
Area 59	To begin in 2024	
Area 60	To begin in 2024	

Basement Flooding Protection Program Implementation Summary - to end of 2015

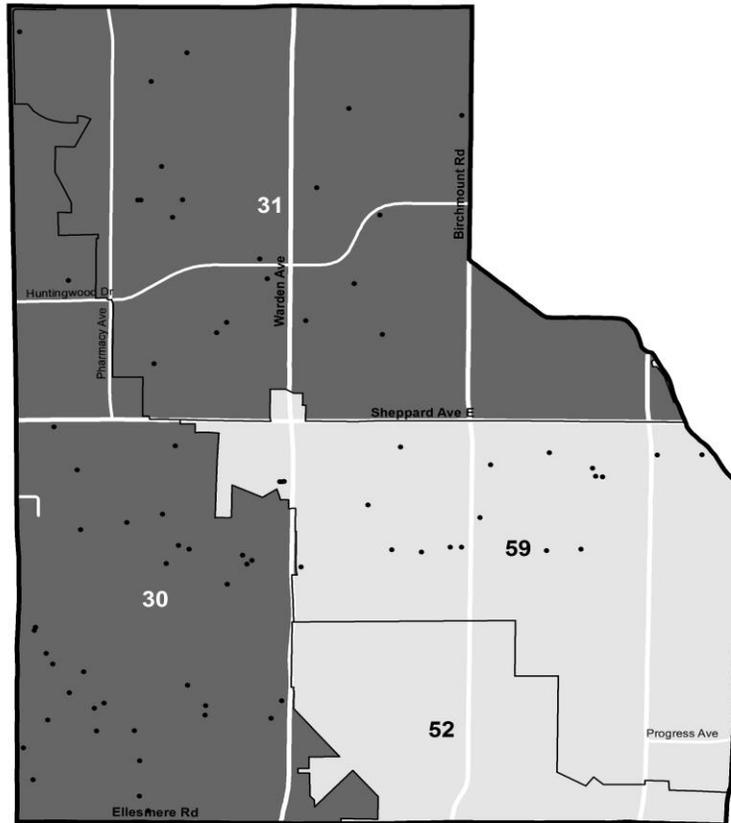
Project Implementation Progress	Project Highlights
<ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefiting property) 	• 1 km of storm sewer upgrades installed

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD 	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners
<div style="display: flex; justify-content: space-around;"> 28 6186 </div>	<div style="display: flex; justify-content: space-around;"> \$ 0.05 M \$ 0.03 M </div>

Basement Flooding Protection Program Summary

Ward 40 - Scarborough—Agincourt



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	●	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 30	Completed (2008)	
Area 31	Completed (2011)	
Area 52	To begin in 2020	
Area 59	To begin in 2024	

Basement Flooding Protection Program Implementation Summary - to end of 2015

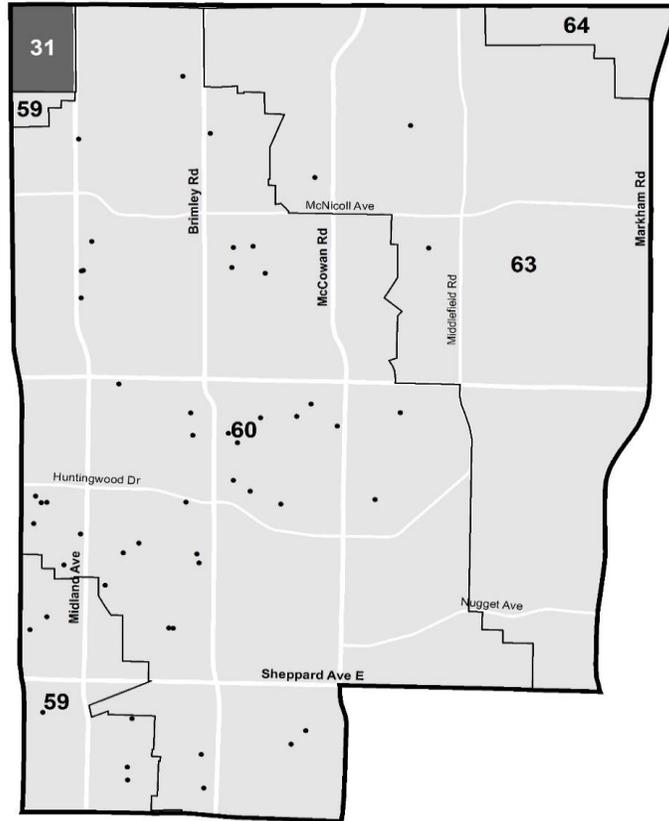
Project Implementation Progress	Project Highlights
<p>TOTAL \$29.83 M</p>	<ul style="list-style-type: none"> •800 m of storm sewer upgrades installed •400 m of sanitary sewer upgrades installed

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> ■ Properties with FPD ■ Properties without FPD <p>61 5874</p>	<ul style="list-style-type: none"> ■ Subsidized by City ■ Cost to Property Owners <p>\$ 0.11 M \$ 0.06 M</p>

Basement Flooding Protection Program Summary

Ward 41 - Scarborough—Rouge River



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 31	Completed (2011)	<div style="display: flex; justify-content: center; margin-top: 10px;"> <div style="width: 15px; height: 15px; background-color: #333; margin-right: 5px;"></div> Area Studied <div style="width: 15px; height: 15px; background-color: #ccc; margin-right: 5px; margin-left: 10px;"></div> Study is Underway <div style="width: 15px; height: 15px; background-color: #fff; border: 1px solid #ccc; margin-right: 5px; margin-left: 10px;"></div> Area to be Studied </div>
Area 59	To begin in 2024	
Area 60	To begin in 2024	
Area 63	To begin in 2025	
Area 64	To begin in 2025	

Basement Flooding Protection Program Implementation Summary - to end of 2015

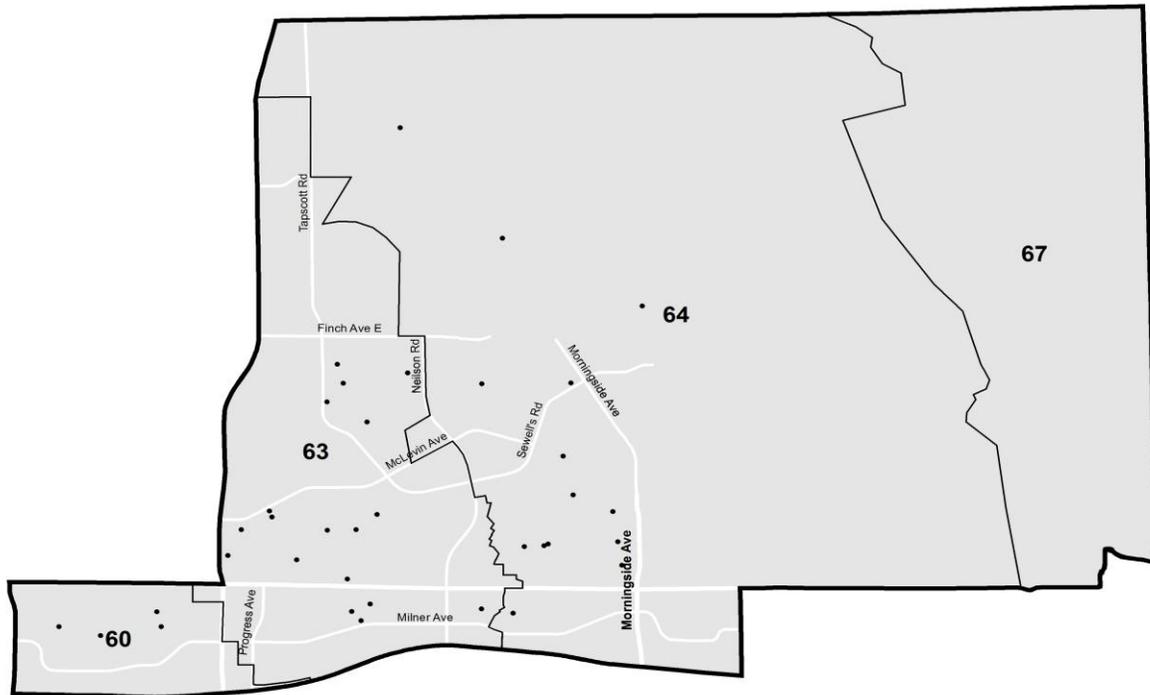
Project Implementation Progress	Project Highlights
<p>Implementation will proceed following completion of the first Environmental Assessment Study in this ward</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) </div>	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<div style="display: flex; justify-content: space-around; font-size: small;"> ■ Properties with FPD ■ Properties without FPD </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="width: 45%; background-color: #003366; color: white; text-align: center; padding: 5px;">37</div> <div style="width: 45%; background-color: #003366; color: white; text-align: center; padding: 5px;">8986</div> </div>	<div style="display: flex; justify-content: space-around; font-size: small;"> ■ Subsidized by City ■ Cost to Property Owners </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="width: 45%; background-color: #003366; color: white; text-align: center; padding: 5px;">\$ 0.06 M</div> <div style="width: 45%; background-color: #ccc; color: black; text-align: center; padding: 5px;">\$ 0.04 M</div> </div>

Basement Flooding Protection Program Summary

Ward 42 - Scarborough—Rouge River



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	●	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 60	To begin in 2024	<p style="text-align: center;">100%</p>
Area 63	To begin in 2025	
Area 64	To begin in 2025	
Area 67	To begin in 2025	

Basement Flooding Protection Program Implementation Summary - to end of 2015

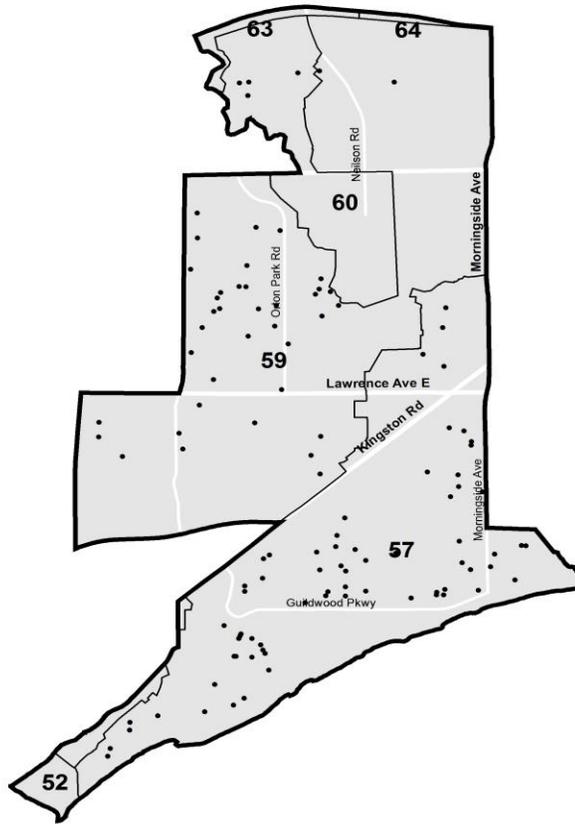
Project Implementation Progress	Project Highlights
<p>Implementation will proceed following completion of the first Environmental Assessment Study in this ward</p> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD 	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners
<div style="display: flex; justify-content: space-around;"> <div style="background-color: #003366; color: white; padding: 5px; width: 45%; text-align: center;">30</div> <div style="background-color: #336699; color: white; padding: 5px; width: 45%; text-align: center;">9425</div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #003366; color: white; padding: 5px; width: 45%; text-align: center;">\$ 0.04 M</div> <div style="background-color: #99c2ff; color: white; padding: 5px; width: 45%; text-align: center;">\$ 0.03 M</div> </div>

Basement Flooding Protection Program Summary

Ward 43 - Scarborough East



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	•	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 52	To begin in 2020	<p style="text-align: center;">100%</p>
Area 57	To begin in 2022	
Area 59	To begin in 2024	
Area 60	To begin in 2024	
Area 63	To begin in 2025	
Area 64	To begin in 2025	

Basement Flooding Protection Program Implementation Summary - to end of 2015

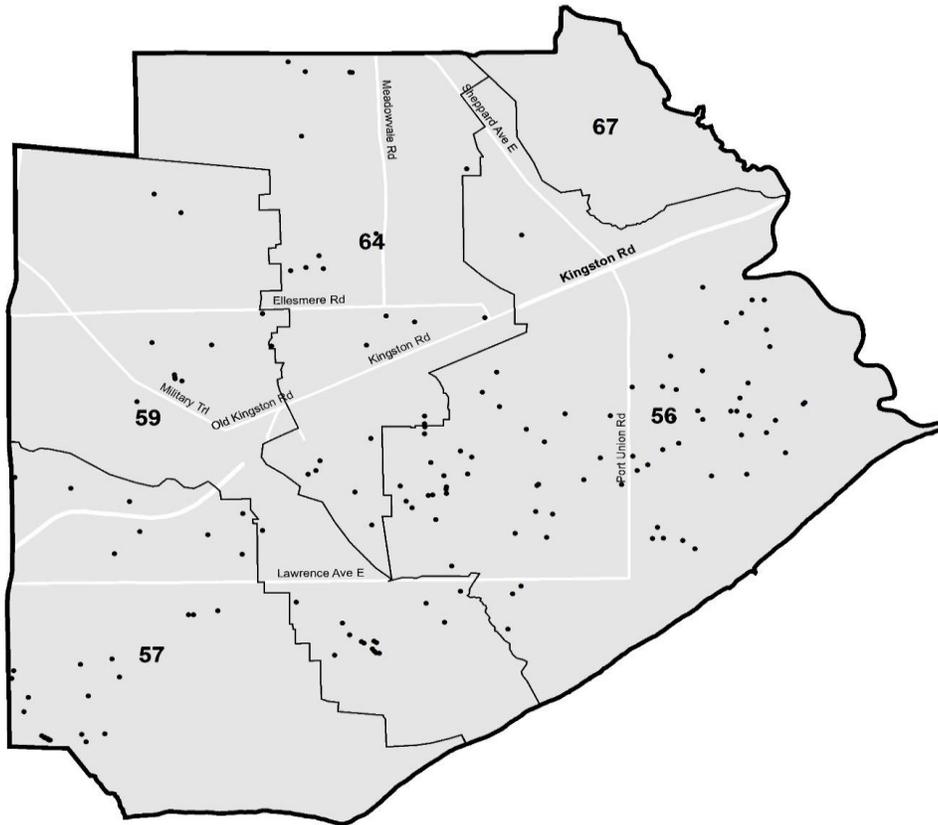
Project Implementation Progress	Project Highlights
<p style="text-align: center;">Implementation will proceed following completion of the first Environmental Assessment Study in this ward</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) </div>	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD 	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="background-color: #004a99; color: white; padding: 10px 20px; border-radius: 5px;">96</div> <div style="background-color: #4f81bd; color: white; padding: 10px 20px; border-radius: 5px;">6494</div> </div>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="background-color: #004a99; color: white; padding: 10px 20px; border-radius: 5px;">\$ 0.18 M</div> <div style="background-color: #cfe2f3; color: black; padding: 10px 20px; border-radius: 5px;">\$ 0.10 M</div> </div>

Basement Flooding Protection Program Summary

Ward 44 - Scarborough East



Properties With Installed Flooding Protection Device(s) (FPD), 2006 to Q3 2015	●	Completed Environmental Assessment (EA) Study Area	#
		Ongoing Environmental Assessment (EA) Study Area	#
		Future Environmental Assessment (EA) Study Area	#

Basement Flooding Environmental Assessment (EA) Studies Summary - to end of 2015

Study Areas in Ward	Status of EA Studies	EA Study Progress in Ward
Area 56	To begin in 2022	
Area 57	To begin in 2022	
Area 59	To begin in 2024	
Area 64	To begin in 2025	
Area 67	To begin in 2025	

Basement Flooding Protection Program Implementation Summary - to end of 2015

Project Implementation Progress	Project Highlights
<p>Implementation will proceed following completion of the first Environmental Assessment Study in this ward</p> <ul style="list-style-type: none"> Constructed Under Construction Design Process Initiated Planned for Design Initiation Deferred (>\$32,000 per benefitting property) 	

Basement Flooding Protection Subsidy Program Summary - 2006 to Q3 2015

Program Participation	Program Expenditures
<ul style="list-style-type: none"> Properties with FPD Properties without FPD 	<ul style="list-style-type: none"> Subsidized by City Cost to Property Owners
<div style="display: flex; justify-content: space-around;"> <div style="background-color: #0056b3; color: white; padding: 5px; width: 45%;">120</div> <div style="background-color: #a6c9ec; padding: 5px; width: 45%;">9369</div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #0056b3; color: white; padding: 5px; width: 45%;">\$ 0.20 M</div> <div style="background-color: #a6c9ec; padding: 5px; width: 45%;">\$ 0.14 M</div> </div>