

## **FINANCE, ADMINISTRATION AND AUDIT COMMITTEE – JUNE 6, 2018**

### **COMMUNICATIONS**

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#### **Distributed June 1, 2018**

	<b><u>Item</u></b>
C1. Memorandum from the Deputy City Manager, Public Works, dated June 6, 2018.	5
C2. Memorandum from the Chief Financial Officer and City Treasurer, dated May 28, 2018.	6

#### **Distributed June 5, 2018**

C3. Memorandum from the Chief Financial Officer and City Treasurer, dated June 6, 2018.	15
C4. Memorandum from the Chief Financial Officer and City Treasurer, the Deputy City Manager, Public Works, the Director of Financial Services/Deputy City Treasurer and the Director of Environmental Services Dated June 6, 2018.	15

#### **Distributed June 6, 2018**

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#### **Disclaimer Respecting External Communications**

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**Please note there may be further Communications.**

## memorandum

C 1  
COMMUNICATION  
FAA - June 6/2018  
ITEM - 4.5

**DATE:** May 31, 2018

**TO:** Finance, Administration and Audit Committee

**FROM:** Stephen Collins, Deputy City Manager, Public Works

**COPY:** Daniel Kostopoulos, City Manager  
Tim Simmonds, Chief of Corporate Initiatives and Intergovernmental Relations  
Laura Mirabella, Chief Financial Officer and City Treasurer

**RE:** **FAA Meeting - June 6, 2018, Item #2018-204**  
**Review of City of Vaughan Response to April 14-15, 2018 Ice Storm**

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### **Purpose**

To provide Council a review of the City's response to the ice storm event that took place April 14-15, 2018, and to identify opportunities to improve our extreme weather preparedness and response protocols.

### **Recommendations**

1. That Council receive this report for information.

### **Report Highlights**

- The April 14-15 Ice Storm occurred beyond the typical winter season, and consisted of an unpredictable combination of ice pellets, freezing rain and snow received over a period of more than two days.
- The City's response was in accordance with existing protocols and aligned with peer municipalities.
- Communications efforts reflected action undertaken by Public Works employees, who continuously monitored weather forecasts and made the necessary decisions and adjustments to storm response operations.
- The estimated cost of the City's Ice Storm response was \$1.14 million.
- Staff are currently assessing opportunities to improve extreme weather preparedness and response protocols. Additional resources needed for these initiatives will be identified in the 2019 budget process.

## **Background**

**Southern Ontario endured an ice storm on the weekend of April 14-15, 2018, beyond the typical winter season, traditionally assumed to end on or before March 31 each year.**

A mix of freezing rain, ice pellets and snow fell across the City and neighbouring municipalities throughout the weekend of April 14-15. With significant rain and warming temperatures in the forecast, several municipalities, including the City of Vaughan, chose not to plow, in order to avoid flooding, which could result from blocked catch basins.

The actual conditions between April 14 and 16 were different from forecast. As shown in Table 1, temperatures hovered around freezing throughout the weekend, resulting in freezing rain, ice pellets and snow falling on City roads and sidewalks. Although temperatures warmed slightly on Monday, it was not sufficient to melt the accumulation of ice and snow. Staff continued to assess the conditions and monitor road and sidewalk conditions during and following the ice storm, and then made the decision to begin plowing on April 17.

**Table 1: Actual weather data for April 13-17, 2018**

Date 2018	Day	Temp (°C)			Rain (mm)	Snowfall (cm)
		Max	Min	Mean		
April 13	Friday	5.9	1.6	3.8	7.4	0.0
April 14	Saturday	3.8	-4.4	-0.3	5.6	4.2
April 15	Sunday	0.8	-4.0	-1.6	15.2	3.8
April 16	Monday	2.9	0.8	1.9	18.6	Trace
April 17	Tuesday	1.1	-2.0	-0.5	0.0	0.2

Source: Environment Canada (<http://climate.weather.gc.ca>) for Toronto Pearson weather station.

Communications efforts were undertaken to inform the public about the City's ongoing response efforts throughout the storm. Please see Table 6 for a complete listing of communications response support.

## **Previous Reports/Authority**

Council, at their meeting on May 23, 2018, adopted a Member's Resolution directing staff to provide Council with a review of the City's planning, decision-making, execution and communications processes in response to the ice storm event that took place April 14-15, 2018.



## **Analysis and Options**

**The City of Vaughan protects its citizens, services and infrastructure from the impacts of extreme weather by continuously monitoring weather conditions and forecasts, and ensuring that departments work closely together to provide a coordinated response.**

City staff receive weather reports from specialized weather services four (4) times a day through the winter, and three (3) times a day through the summer. Based on those forecasts, staff take proactive measures to ensure the safety of citizens along City-owned streets and sidewalks, and at City-owned facilities. Before and throughout extreme weather events, the City keeps citizens informed about weather risks, actions being taken by the City, and facility closures through multiple communication channels, including social media, City websites, constituent correspondence, mainstream media, and digital signage.

**During the week preceding the April ice storm, forecasts were calling for freezing rain into the weekend, followed by heavy rain beginning Sunday and into Monday. Based on that forecast, staff were focused on flood mitigation.**

Staff actions in response to this forecast were as follows:

1. On April 12 and 13 (Thursday and Friday), the City's Corporate and Strategic Communications (CSC) Department posted social media messages warning of the ice storm expected over the weekend, and digital signs were programmed to display the message "Heavy Rain Expected. Clear catchbasins. Point downspouts away from homes" from April 13-16.
2. In anticipation of flooding, on Friday, April 13, the Environmental Services (ES) Department invoked their Heavy Rain Protocol, which involves cleaning catchbasins in flood-prone areas, and inspecting receiving ponds to ensure the inlet and outlet are clear. This work was supported by the Transportation Services, Parks and Forestry Operations (TSPFO) Department. ES also developed a secondary standby list of staff to maintain stormwater infrastructure should the storm occur off-hours.
3. In consultation with ES, TSPFO decided not to plow through the weekend, to ensure that catchbasins would remain clear for anticipated rain run-off.

**The winter road maintenance contract had been extended from March 31 to April 15, then just prior to the storm was further extended to April 18.**

The City had already extended the end date of its winter road maintenance contract from March 31 to April 15. Due to the timing of the ice storm, staff decided on April 12 to arrange an additional extension to April 18.

**Beginning on Friday morning, April 13, Public Works staff established Ice Storm Coordination conference calls to be held three times each day until the weather risk subsided.**

Directors, Supervisors and Managers from TSPFO and ES held coordination telephone meetings each day at 9am, 3pm and 9pm each day from Friday morning, April 13,



through Wednesday morning, April 18. During each call, weather conditions and forecasts were reviewed, operational adjustments discussed. Any changes to the response were then communicated to the CSC Department.

**Freezing rain fell throughout the weekend; however, forecasts continued to call for warming temperatures and heavy rain on Monday.**

ES staff continued to execute the Heavy Rain Protocol, attempting to clear catchbasins throughout the weekend. At the direction of TSPFO, the City's winter maintenance contractors completed four rounds of salting through Saturday and Sunday.

Through the weekend, the CSC Department posted ongoing messages on social media informing the public that staff were continuing to monitor potential power outages and fallen trees and branches. A fourth message on Sunday evening informed the public that staff continued to monitor for expected heavy rainfall.

**By Monday morning, slush and ice pellets had accumulated, and many calls were received from citizens struggling with that day's commute.**

Warmer temperatures and rain still signaled a risk of flooding, so staff continued to clear catchbasins. One more round of salt was applied on Monday to melt the ice and slush.

The CSC Department posted two (2) public service announcements on the storm response, along with social media messages, explaining that the City was continuing to focus on preventing catchbasin blockages, and that plowing would increase the risk of flooding due to such blockages.

**By Tuesday, April 17, precipitation had tapered off; however, temperatures remained around freezing, preventing the accumulated ice and snow from melting.**

With the risk of heavy rain and flooding past, the City began a plowing operation (with salting) to remove the accumulated ice and snow from City-owned streets, and to clear residents' windrows. The plowing was required to meet the provincial Minimum Maintenance Standards for roads, and to alleviate mobility issues being experienced by residents and businesses. Citizens were informed about this plowing operation through social media, the City's website, digital signage, and a public service announcement.

**Forecasts showed more snow expected later in the week, so the winter road maintenance contract was extended a third time, to April 22.**

Although the worst of the storm appeared to have past, forecasts on Wednesday, April 18, were calling for snow later in the week. As such, staff further extended the winter road maintenance contract to April 22 to ensure that salting and plowing services would be available, if needed.

**Staff surveyed neighbouring municipalities on their responses to the ice storm, and found that all who were surveyed has salted their roads throughout the storm; however, plowing activities varied from municipality to municipality.**

Like Vaughan, the cities of Markham, Brampton, Mississauga and Toronto did not plow through the weekend storm, or plowed only their primary roads. Similar to Vaughan, their decisions were driven by a concern about potential flooding caused by blocked catch-basins. Some also cited a desire to avoid creating windrows at the end of residential driveways, as well as difficulty and high cost of calling in plowing equipment after the contracted season had ended. In contrast, Richmond Hill, Aurora and Newmarket plowed their roads Sunday and Monday.

**Table 2: Dates that Neighbouring Municipalities Plowed their Roads during the Ice Storm**

Municipality*	April 14, 2018 Saturday	April 15, 2018 Sunday	April 16, 2018 Monday	April 17, 2018 Tuesday
Vaughan	No**	No***	No	Yes
Markham	No	No	Primary roads only	unknown
Brampton	No	No	No	No
Mississauga	Primary roads only	Primary roads only	Primary roads only	Unknown
Toronto	No	Primary roads only	Primary roads only	No
Richmond Hill	No	Yes	Yes	unknown
Aurora	No	Yes	Yes	Yes
Newmarket	No	Yes	Yes	Yes

\* York Region is not included in this comparison, because their road network is composed mostly of arterials, whereas the City of Vaughan's roads are mostly secondary roads.

\*\* On Saturday, Vaughan plowed and salted rural roads, because these roads do not have catch basins that would be blocked by ice.

\*\*\* On Sunday, Vaughan plowed junctions to Regional roads, in order to remove the windrows left by the Region's plows.

**Several improvement opportunities were identified, for which resources may be requested through the 2019 budget process.**

Following the storm, staff held a debrief session to review the City's response to the ice storm, and identified improvement opportunities listed in Table 3.



**Table 3: Improvement Opportunities**

Topic	Improvement Opportunity	Action Plan
Winter Road Maintenance Contract	Consider costs and benefits of extending winter maintenance contract to cover a longer winter season	<p>Alternatives are currently under review, and being assessed against historical weather patterns and public risk.</p> <p>Recommendations will be considered in the 2019 budget process.</p>
Communications	<p>When anticipating extreme weather, arrange a meeting with Mayor and Council staff to discuss communications support and overall response efforts being taken by other departments. Explore possibility of conference call updates for Mayor and Council staff outside of work hours. Further solicit feedback from Council staff about constituent inquiries and respond accordingly.</p> <p>Develop “<i>what was said</i>” updates to staff on public feedback, during severe weather conditions, received through social media, by email and through Access Vaughan and public correspondence to Mayor and Council.</p>	<p>Create a standing agenda for Mayor and Council staff meetings that provides Mayor and Council staff with additional context and support about efforts and communications support during severe weather conditions.</p> <p>Develop a process that provides ongoing updates to departments about public commentary, concerns and overall feedback.</p>
Stand-by Procedures	Review standard operating procedures and for stand-by staff, and ensure that responsibilities match authorities	TSPFO has prioritized this effort for 2018, recognizing it as an urgent need.
Heavy Rain Protocol	Update Heavy Rain Protocol to consider freezing rain impact on stormwater system	ES may request additional resources through the 2019 budget processes to support this initiative.
Extreme Weather Operations	<p>Establish Extreme Weather Operations (EWO) protocols, which may leverage resources (staff and equipment) from across the Corporation.</p> <p>Authority to trigger EWO must be defined, as well as execution and communication processes, roles and responsibilities.</p>	TSPFO will begin developing protocols for wind and flood responses in preparation for the upcoming summer season. However, additional resources may be requested through the 2019 budget processes to establish a more comprehensive set of EWO protocols.



## **Financial Impact**

**It is estimated that the April Ice Storm response cost the City \$1.14 million.**

A breakdown of the costs related to the April Ice Storm are shown in Table 4. The Ice Storm occurred beyond the City's planned winter contract period, requiring the City incur additional standby costs for the contracted road maintenance fleet. Moreover, with precipitation changing between freezing rain and ice pellets over a period of three days, the response required more salting and plowing than an average winter event.

**Table 4: Cost of April 2018 Ice Storm, in thousands of \$**

Storm Response Cost Element		Cost	Sub-Total
<b>Roads</b>			<b>\$ 847.7</b>
	Standby – April 14-18	\$ 273.4	
	Salt – 3,911 tonnes	\$ 363.5	
	Salting – 6 rounds	\$ 128.1	
	Plowing & Windrows – 1 round	\$ 82.7	
<b>Sidewalks</b>			<b>\$ 170.4</b>
	Salt – 588 tonnes	\$ 54.6	
	Salting & plowing	\$ 115.8	
<b>City-owned Buildings (walkways &amp; parking lots)</b>			<b>\$ 95.0</b>
	Salt – 228 tonnes	\$ 21.1	
	Salting & plowing	\$ 73.9	
<b>Heavy Rain Protocol (clearing catchbasins)</b>			<b>\$ 20.0</b>
	Labour to clean catchbasins and inspect stormwater ponds	\$ 20.0	
<b>Forestry</b>			<b>\$ 4.0</b>
	Addressing tree damage	\$ 4.0	
<b>TOTAL</b>			<b>\$ 1,137.1</b>

The total winter operations budget for 2018 is \$11.1 million. Including the response costs from the April ice storm, approximately 80% of the 2018 budget has been spent to date. The April Ice Storm was an extraordinary weather event and the additional costs incurred as a result of this event has put pressure on the winter operations budget for the remainder of the year. It is difficult to forecast what the year-end financial position will be as it will depend on weather events that occur in Q4. However, if Q4 weather adheres to average historical weather patterns for that period, it is likely that total costs for the year will exceed budget. Staff will work with Finance and seek to mitigate this risk within the City's overall approved budget.

## **Broader Regional Impacts/Considerations**

City staff consulted neighbouring municipalities throughout the Ice Storm to compare approaches and share ideas. Staff will continue to cooperate and collaborate with peer municipalities to leverage best practices in extreme weather operations, as well as to identify opportunities to coordinate extreme weather responses.

## **Conclusion**

The April 13-19 extreme weather event occurred beyond the typical winter season, and consisted of an unpredictable combination of ice pellets and freezing rain received over a period of more than four days. The City's response was in accordance with existing protocols.

The estimated cost of the City's Ice Storm response was \$1.14 million.

Staff have identified several opportunities to improve future responses to extreme weather, and will modify operations accordingly. Any budget impact to the modifications will be submitted for Council's consideration in the 2019 budget.

**For more information on winter salting and plowing operations**, please contact:  
Zoran Postic, Director of Transportation Services, Parks and Forestry Operations, ext. 6137

**For more information on the Heavy Rain Event Protocol**, please contact:  
Jennifer Rose, Director of Environmental Services, ext. 6116

**For more information on the corporate communications protocols**, please contact:  
Michael Genova, Director of Corporate and Strategic Communications, ext. 8027

## **Attachments**

1. Corporate & Strategic Communications Support During Ice Storm of April 2018

**Prepared by**

Elaine Chang, Manager of Business Contracts and Services, ext. 6120

Maurice Battistuzzi, Business Analyst, TSPFO, ext. 6149

In consultation with:

Joerg Hettmann, Manager of Parks & Roads, ext. 6139

Jay Todd, Manager of Forestry & Horticulture, ext. 6158

Chris Wolnik, Manager of Wastewater and Stormwater Services, ext. 6152

Jennifer Rose, Director of Environmental Services, ext. 6116

Zoran Postic, Director of Transportation, Parks and Forestry Operations, ext. 6137

Michael Genova, Director of Corporate and Strategic Communications, ext. 8027

Kay-Ann Brown, Acting Manager of Financial Planning & Analysis, ext. 8252

Rita Selvaggi, Director of Financial Planning & Development Finance, ext. 8438



## **Corporate and Strategic Communications Support During Ice Storm of April 2018**

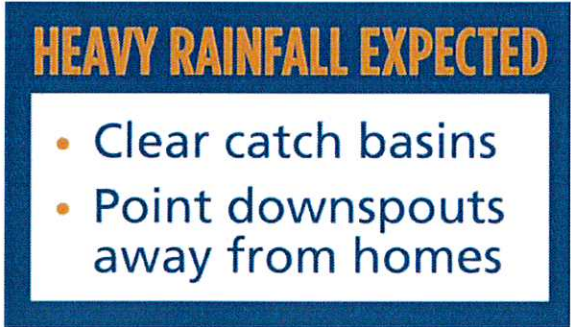
The CSC Department collaborated with Public Works staff, along with other departments, to provide communications support for Mayor and Members of Council in response to the ice storm. Ten separate Communications Briefings were provided to Mayor and Members of Council between Friday, April 13 to Wednesday, April 18. Briefings included social media content, public correspondence, visuals, public service announcements and a question and answer document. Much of the content was incorporated by Mayor and Members of Council directly into their own communications with residents. Moreover, communication content was provided to Access Vaughan staff and Council Offices to address the higher-than-normal number of calls and questions from frustrated residents.

Public communications reflected action undertaken by Public Works employees, who continuously monitored weather forecasts and made the necessary decisions and adjustments to response storm operations. Also, throughout the weather event, the corporate Twitter account shared social media messages from partner organizations, such as Alectra, Toronto Region and Conservation Authority and York Region, to help keep citizens informed.

The @City\_of\_Vaughan corporate account gained 132 followers between April 14-18. On average, the City gains 100 followers in one month. The City of Vaughan Facebook account gained 61 page likes between April 14-18. On average, the City gains 40 page likes in one month.


**Table 6: Day-to-Day Communications Support**


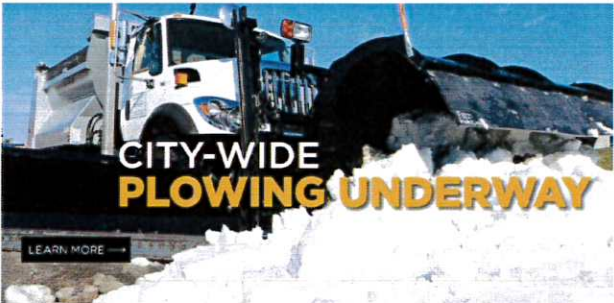

<b>Date</b>	<b>Main Public Communication</b>	<b>Communications Support</b>
Thursday, April 12 (Morning)	Special weather statement for Vaughan. Potential for ice storm over the weekend.	Social media

Date	Main Public Communication	Communications Support
Friday, April 13 (Afternoon)	<p>An ice storm is expected this weekend. Make sure your emergency kit is up to date. Learn more about what should be in your kit: <a href="http://bit.ly/2pW8bC2">http://bit.ly/2pW8bC2</a>.</p> <p>Please note that the Ministry of Transportation has advised that the full closure of Highway 400 between Teston Road and King Road, for the demolition of the King-Vaughan bridge, that was scheduled for this Sunday has been cancelled due to inclement weather. It has been rescheduled for the following weekend (April 21-22).</p>	<p>Communications Briefing 1</p> <p>Social media</p> <p>Digital Sign</p>
Digital Sign scheduled for April 13 to April 16.		
Saturday, April 14 (Morning)	Staff continue to monitor potential power outages and fallen trees and branches.	<p>Communications Briefing 2</p> <p>Social media</p>
Saturday, April 14 (Evening)	Staff continue to monitor potential power outages and fallen trees and branches. We have also provided information from York Region about emergency overnight conditions.	<p>Communications Briefing 3</p> <p>Social media</p>
Sunday, April 15 (Morning)	<p>Staff will continue to monitor potential power outages and fallen trees and branches throughout the day.</p> <p>We have been informed that the sinkhole (and surrounding area) at 10472 Islington Road has been made safe. The hole has been temporarily backfilled and the Water Department will further address the issue this week.</p> <p>Update to Recreation Services webpage:</p> <p>Inclement Weather Update to Recreation Services</p>	<p>Communications Briefing 4</p> <p>Social media</p> <p>Website</p>

Date	Main Public Communication	Communications Support
	<ul style="list-style-type: none"> <li>• All community centres remain open and programs are running, as scheduled.</li> <li>• Swim programs at Woodbridge Pool and Memorial Arena are cancelled.</li> </ul>	
Sunday, April 15 (Afternoon)	<p>Vaughan public libraries are closed.</p> <p>Recreation staff have contacted participants that may have been affected by program service disruptions today.</p>	<p>Communications Briefing 5</p> <p>Social media</p>
Sunday, April 15 (Evening)	<p>Staff continue to monitor expected heavy rainfall.</p>	<p>Communications Briefing 6</p> <p>Social media</p> <p>Heavy rainfall digital sign visual</p>
Sunday, April 15 (7pm)	<p>Corporate and Strategic Communications staff arranged for Mayor Bevilacqua to do a live interview at approximately 7 p.m. with CP24 updating the public about Vaughan's ongoing storm response efforts.</p>	<p>CP24</p>



Date	Main Public Communication	Communications Support
Monday, April 16 (Afternoon)	<p>There remains a focus to prevent black ice from accumulating on roads throughout neighbourhoods, and to prevent blocked catch basins, which would result in flooding.</p> <p>PSA on storm response issued.</p>	<p>Communications Briefing 7</p> <p>Social media content</p>
	<p>"Weather Update" website homepage scrolling banner live pointing to the PSA on the Newsroom site.</p> 	<p>Heavy rain visual</p> <p>Constituent correspondence</p> <p>Website</p> <p>Local and GTA Media</p>
Monday, April 16 (Evening)	<p>As staff monitor the ongoing weather, it has been determined that during this storm plowing could potentially increase the risk of flooding and result in new problems. This is because catch basins could be blocked with the buildup of ice and snow.</p> <p>Staff will continue to monitor weather forecasts and make the necessary decisions and adjustments to operations, including considering plowing.</p>	<p>Communications Briefing 8</p> <p>Social media content</p> <p>Constituent correspondence</p> <p>Public Service Announcement (PSA)</p>

Date	Main Public Communication	Communications Support
Tuesday, April 17 (Afternoon)	<p>After seven salting operations of all City of Vaughan streets, followed by unexpected low temperatures, Public Works staff have begun city-wide snow plowing. Windrow services will follow. Residents and businesses are reminded to be cautious around snow plows and ensure cars are not parked on the road.</p> <p>Updated website scrolling homepage banner with the "Storm Response" slide pointing to the PSA.</p> 	<p>Communications Briefing 9</p> <p>Social media content</p> <p>Public Service Announcement (PSA)</p> <p>Question and Answer Document</p> <p>Snow Plowing Visual Website</p>
	<p>Updated website scrolling homepage banner with "Plowing Underway"</p> 	<p>Website</p>
	<p>Updated digital sign with "Plowing Underway"</p> 	<p>Digital Sign</p>
Wednesday, April 18 (Afternoon)	<p>Since the onset of our operations, weather conditions continuously shift between ice pellets, snow, sleet, freezing rain and rain. Forecasts are now calling for a possible 3-4 cm of snow later this week instead of the original and previously forecasted warmer/sunnier conditions. Public Works staff are extending plowing,</p>	<p>Communications Briefing 10</p> <p>Social media content</p>

Date	Main Public Communication	Communications Support
	salting and windrow contract equipment for the third time this season (until April 22 at midnight) to better serve residents and prepare for the ongoing unpredictable weather.	





## memorandum

**DATE:** May 28, 2018  
**TO:** Mayor and Members of Council  
**FROM:** Laura Mirabella, Chief Financial Officer and City Treasurer  
**RE:** **ITEM 4.6 FINANCE, ADMINISTRATION AND AUDIT COMMITTEE,  
JUNE 6, 2018  
DEVELOPMENT CHARGES – SEMI-ANNUAL ADJUSTMENT**

C 2  
**COMMUNICATION**  
FAA - June 6 2018  
ITEM - 4.6

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**ACTION:** DECISION

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### **Recommendation**

The Chief Financial Officer and City Treasurer recommends;

1. That in accordance with the appropriate semi-annual adjustment sections of the City-Wide Development Charge and Special Service Area Development Charge by-laws that the associated rates be increased by 1.8% effective July 1, 2018; and
2. That the following revised Development Charge Rates (Attachments 1 and 2) be approved.

### **Background**

Statistics Canada Quarterly, Construction Price Statistics that informs the rate for indexing of Development Charges was published after the above noted report was written. The report recommended that the semi-annual adjustment be brought forward via a communication to Finance, Administration and Audit Committee on June 6, 2018 upon receipt of the Statistics Canada Quarterly, Construction Price Statistics.

### **Financial Impact**

The semi-annual adjustment will provide a 1.8% increase in City-Wide Development Charges and Special Area Development Charges.

## **Conclusion**

Staff recommends that the approved City of Vaughan Development Charges be increased by 1.8%. The City-Wide Development Charges and the Special Service Area Development Charges may be indexed without amending the by-laws. The revised schedules reflecting the new rates are attached.

**For more information**, please contact: (Rita Selvaggi, Interim Director, Financial Planning and Development Finance)

## **Attachments**

1. Indexed City-Wide Rates applicable from July 1, 2018
2. Indexed Special Service Area Charges from July 1, 2018

Respectfully submitted,

A handwritten signature in cursive script, reading "Laura Mirabella", followed by a horizontal line.

Laura Mirabella  
Chief Financial Officer and City Treasurer



**City of Vaughan City Wide Development Charges<sup>1</sup> (By-Law 045-2013)  
(Effective July 1, 2018)**

**Residential Use Development Charges**

	<b>Engineering Services<sup>2</sup></b>	<b>General Services<sup>3</sup></b>	<b>Total Per Unit Development Charge</b>
Single & Semi Detached Dwellings	\$ 13,761	\$ 11,688	\$ 25,449
Multiple Unit Dwellings	\$ 11,720	\$ 9,954	\$ 21,674
Large Apartments	\$ 8,431	\$ 7,161	\$ 15,592
Small Apartments	\$ 6,049	\$ 5,137	\$ 11,186

**Non-Residential Use Development Charges**

			<b>Total Per Sq.M. of GFA Development Charge</b>
Mid-High Density Mixed Use Non-Residential <sup>4</sup>	\$ 44.02	\$ 6.19	\$ 50.21
Non-Mixed Use Non-Residential	\$ 51.92	\$ 6.54	\$ 58.46

<sup>1</sup> All rates subject to normal indexing - Rates shown are current as of July 1, 2018

<sup>2</sup> Engineering Services portion of Residential Development Charge paid at Subdivision Agreement execution

<sup>3</sup> General Services portion of Residential Development Charge paid at Building Permit issuance

<sup>4</sup> See definition section of by-law for definition of "Mid-High Density Mixed Use"



**City of Vaughan Special Area Development Charges <sup>1</sup>**  
**(effective from July 1, 2018)**

BY-LAW	SERVICE	AREA	CHARGE PER HECTARE
046-2013	Rainbow Creek Drainage Works	D-8	\$ 2,562
047-2013	Pressure District 5 West (Woodbridge Watermain)	D-15	\$ 10,239
048-2013	Pressure District 6 West (Major Mackenzie Drive Watermain)	D-18	\$ 3,958
049-2013	Pressure District 6 East (Rutherford Road Watermain)	D-19	\$ 8,604
050-2013	Pressure District 7 Watermain West	D-20	\$ 12,977
051-2013	Dufferin/Teston Sanitary Sewer (OPA 332 Ultimate Outlet)	D-23	\$ 13,429
052-2013	Zenway/Fogal Sanitary Sub Trunk	D-25	\$ 11,254
053-2013	Highway 27 South Servicing Works	D-26	\$ 193,464
054-2013	Huntington Road Sewer (Tradevalley to Rutherford)	D-27	\$ 10,823
079-2016	Edgeley Pond & Black Creek Channel Works	D-28	
	Map 1-Immediately Affected Landowners	D28.1	\$ 2,722,161
	Map 2-Vaughan Metropolitan Centre Draining to Edgeley Pond	D28.2	\$ 90,341
	Map 3- Undeveloped Lands in the Black Creek Drainage Shed	D28.3	\$ 24,445

<sup>1</sup> All rates subject to normal indexing - rates shown are current as of July 1, 2018



## memorandum

C 3

COMMUNICATION

FAA - June 6/2018

ITEM - 4.15

DATE: June 6<sup>th</sup>, 2018

TO: MAYOR AND MEMBERS OF COUNCIL

FROM: LAURA MIRABELLA, CHIEF FINANCIAL OFFICER AND CITY TREASURER

RE: Communication – Attachment to the Q1 Fiscal Health Report  
(Related to: Finance, Administration and Audit Committee Item 4.15,  
Fiscal Health Report – For the Quarter Ending March 31, 2018)

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### Recommendation

1. That this Communication and the Attachment 1 – Financial Summary to the Fiscal Health Report – For the Quarter Ending March 31, 2018 be received.

### Background

When the report titled Fiscal Health Report – For the Quarter Ending March 31, 2018 was submitted, the Attachment 1 – Financial Summary noted in the report was accidentally omitted. This Communication is to have this attachment added.

Respectfully submitted,

For 

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Laura Mirabella, CPA, CA  
Chief Financial Officer and City Treasurer



**CITY OF VAUGHAN**

**2018 City Operating Budget**

**Property Tax Based Budget**

**Fiscal Position as of**

**March 31, 2018**



**CITY OF VAUGHAN**  
**2018 City Operating Budget**  
**Fiscal Position as of March 31, 2018**

**REVENUE / EXPENDITURE SUMMARY**

	2018 ANNUAL BUDGET	2018 YTD		VARIANCE	
		BUDGET	ACTUAL	FAV. / (UNFAV.) \$	%
TAXATION	191,650,052	91,561,881	91,445,383	-116,498	-0.1%
SUPPLEMENTAL TAXATION	3,200,000	0	0	0	0.0%
GRANT / PAYMENT IN LIEU	2,725,200	750,000	777,632	27,632	3.7%
RESERVES AND OTHER TRANSFERS	18,659,740	4,890,887	2,032,217	-2,858,670	-58.4%
FEES AND SERVICE CHARGES	56,559,610	13,999,236	14,374,656	375,420	2.7%
CORPORATE	20,323,735	1,444,839	1,301,231	-143,608	-9.9%
<b>TOTAL REVENUES</b>	<b>293,118,337</b>	<b>112,646,843</b>	<b>109,931,119</b>	<b>-2,715,724</b>	<b>-2.4%</b>
<b>EXPENDITURES:</b>					
DEPARTMENTAL	262,955,940	68,957,805	62,376,131	6,581,674	9.5%
RESERVE CONTRIB. & CORP. EXP.	9,916,395	12,424,590	12,460,981	-36,391	-0.3%
LONG TERM DEBT	10,521,368	-924,369	535,790	-1,460,159	158.0%
CONTINGENCY	2,495,496	-99,415	12,862	-112,277	112.9%
CAPITAL FROM TAXATION	7,229,138	313,182	7,229,138	-6,915,956	-2208.3%
<b>TOTAL EXPENDITURES</b>	<b>293,118,337</b>	<b>80,671,793</b>	<b>82,614,902</b>	<b>-1,943,109</b>	<b>-2.4%</b>
<b>EXCESS OF REVENUES OVER EXPENDITURES</b>	<b>0</b>	<b>31,975,050</b>	<b>27,316,218</b>	<b>-4,658,833</b>	<b>-14.6%</b>

CITY OF VAUGHAN  
2018 City Operating Budget  
Fiscal Position as of March 31, 2018  
March 31, 2018

REVENUE BY MAJOR SOURCE

	2018 ANNUAL BUDGET	2018 YTD		VARIANCE	
		BUDGET	ACTUAL	FAV. / (UNFAV.) \$	%
<b>TAXATION</b>					
Tax Levy	191,650,052	91,561,881	91,445,383	-116,498	-0.1%
Supplementals	3,200,000	0	0	0	0.0%
<b>GRANT</b>					
Library Grant	145,200	0	36,135	36,135	0.0%
<b>PAYMENT IN LIEU / OTHER</b>					
Payment In Lieu / Other	2,580,000	750,000	741,497	-8,503	-1.1%
<b>RESERVES AND OTHER TRANSFERS</b>					
Engineering Reserve	8,769,988	2,190,900	1,578,061	-612,839	-28.0%
Election Cost	1,200,000	1,088,798	300	-1,088,498	-100.0%
CIL Recreation Land Reserve	1,281,000	320,250	320,250	0	0.0%
Administrative Recovery from Capital	1,500,000	375,000	133,606	-241,394	-64.4%
Building Standards Service Continuity Reserve	3,749,215	915,939	0	-915,939	-100.0%
Tax Rate Stabilization Reserve	1,289,948	0	0	0	0.0%
Working Capital Reserve	269,589	0	0	0	0.0%
Debtenture Payment Reserve	600,000	0	0	0	0.00%
<b>TOTAL RESERVES</b>	<b>18,659,740</b>	<b>4,890,887</b>	<b>2,032,217</b>	<b>-2,858,670</b>	<b>-58.4%</b>
<b>CITY MANAGER</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00%</b>
Office of Chief Corporate Initiatives & Intergov. Relations	333,400	153,749	12,500	-141,249	-91.9%
Economic Development & Culture Services	0	0	32,500	32,500	0.00%
Corporate Communications	0	0	0	0	0.0%
<b>TOTAL OFFICE OF CHIEF CORPORATE INITIATIVES &amp; INTERGOV. RELATIONS</b>	<b>333,400</b>	<b>153,749</b>	<b>45,000</b>	<b>-108,749</b>	<b>-91.9%</b>
<b>OFFICE OF TRANSFORMATION &amp; STRATEGY</b>	<b>141,732</b>	<b>70,866</b>	<b>59,621</b>	<b>-11,245</b>	<b>-15.9%</b>
Chief Human Resources Officer	0	0	0	0	0.00%
Chief Information Officer	263,064	62,916	0	-62,916	-100.0%
Office of the City Clerk - Clerks	263,702	54,697	81,411	26,714	48.8%
-Committee Of Adjustment	1,275,578	302,923	148,843	-154,280	-50.9%
<b>TOTAL DEPUTY CITY MANAGER CORPORATE SERVICES</b>	<b>1,802,342</b>	<b>420,538</b>	<b>230,054</b>	<b>-190,482</b>	<b>-45.3%</b>
Tax Certificates And Documents	1,039,481	252,590	417,822	165,232	65.4%
Cashiering Services	57,964	0	14,491	14,491	0.00%
Financial Planning & Development Finance	518,517	121,990	63,858	-58,132	-47.7%
Procurement Services	58,200	14,432	16,394	1,962	13.6%
<b>TOTAL OFFICE OF THE CFO/CITY TREASURER</b>	<b>1,674,162</b>	<b>389,012</b>	<b>512,565</b>	<b>123,553</b>	<b>31.8%</b>
<b>OFFICE OF THE CITY SOLICITOR</b>	<b>841,406</b>	<b>218,233</b>	<b>12,957</b>	<b>-205,276</b>	<b>-94.1%</b>
Recreation Services	18,739,484	5,135,309	5,813,179	477,870	9.3%
Community Development & Events	700,000	271,394	434,189	162,795	60.0%
Facility Maintenance Services	561,922	131,641	55,569	-76,072	-57.8%
Fire And Rescue Services	1,007,298	164,957	248,972	82,015	49.7%
By-Law, Compliance, Licensing and Permits	4,135,982	1,005,639	870,106	-135,533	-13.5%
<b>TOTAL DEPUTY CITY MANAGER COMMUNITY SERVICES</b>	<b>25,144,686</b>	<b>6,708,940</b>	<b>7,220,015</b>	<b>511,075</b>	<b>7.6%</b>
Development Planning	8,746,833	2,259,653	2,236,255	-23,398	-1.0%
Development Eng & Infrastructure Planning	499,209	100,052	82,575	-17,477	-17.5%
Policy Planning & Environmental Sustainability	760,466	285,928	63,052	-222,876	-77.9%
Parks Development	453,453	119,824	0	-119,824	-100.0%
Building Standards - Licenses/Permits	9,372,538	1,701,549	2,745,967	1,044,418	61.4%
- Plumbing Permits	786,532	130,865	150,498	19,633	15.0%
- Service Charges	778,177	191,131	175,388	-15,743	-8.2%
<b>TOTAL DEPUTY CITY MANAGER PLANNING GROWTH MANAGEMENT</b>	<b>21,397,208</b>	<b>4,789,002</b>	<b>5,453,736</b>	<b>664,734</b>	<b>13.9%</b>
Infrastructure Planning and Corporate Asset Management	1,305,756	326,441	69,044	-257,397	-79.8%
Infrastructure Delivery	1,208,803	302,199	222,253	-79,947	-26.5%
Environmental Services	1,472,464	358,949	358,111	-838	-0.2%
Trans Serv and Parks & Forestry Ops	699,767	128,412	42,209	-86,203	-67.1%
Cemeteries	110,534	27,404	39,822	12,418	45.3%
<b>TOTAL DEPUTY CITY MANAGER PUBLIC WORKS</b>	<b>4,797,324</b>	<b>1,143,405</b>	<b>731,438</b>	<b>-411,967</b>	<b>-36.0%</b>
<b>VAUGHAN PUBLIC LIBRARIES</b>	<b>427,350</b>	<b>105,493</b>	<b>109,271</b>	<b>3,778</b>	<b>3.6%</b>
<b>TOTAL FEES / SERVICE CHARGES</b>	<b>56,559,610</b>	<b>13,999,236</b>	<b>14,374,656</b>	<b>375,420</b>	<b>2.7%</b>
<b>TOTAL CORPORATE REVENUES</b>	<b>20,323,735</b>	<b>1,444,839</b>	<b>1,301,231</b>	<b>-143,608</b>	<b>-9.9%</b>
<b>TOTAL REVENUE</b>	<b>293,118,337</b>	<b>112,646,843</b>	<b>109,931,119</b>	<b>-2,715,724</b>	<b>-2.4%</b>

CITY OF VAUGHAN  
2018 City Operating Budget  
Fiscal Position as of March 31, 2018  
March 31, 2018

REVENUE BY MAJOR SOURCE

CORPORATE REVENUE DETAIL:

	2018 ANNUAL BUDGET	2018 YTD		VARIANCE	
		BUDGET	ACTUAL	FAV. / (UNFAV.) \$	%
Fines And Penalties	5,200,000	1,068,891	669,565	-399,326	-37.4%
Investment Income	2,560,000	-59,416	-544,740	-485,324	816.8%
Powerstream Investment Income	3,802,000	277,000	937,620	660,620	238.5%
Powerstream Dividends	8,260,000	0	-31,466	-31,466	0.0%
Miscellaneous Revenue	170,000	0	8,810	8,810	0.00%
Sale of Fixed Assets	30,000	7,500	26	-7,474	-99.6%
Mayor's Gala/Golf Classic	301,735	150,864	261,415	110,551	73.3%
<b>TOTAL CORPORATE REVENUE</b>	<b>20,323,735</b>	<b>1,444,839</b>	<b>1,301,231</b>	<b>-143,608</b>	<b>-9.9%</b>



CITY OF VAUGHAN  
2018 City Operating Budget

March 31, 2018

DEPARTMENTAL EXPENDITURES BY MAJOR CATEGORY (1)

	2018 ANNUAL BUDGET	2018 YTD		VARIANCE	
		BUDGET	ACTUAL	FAV. / (UNFAV.) \$	%
COUNCIL	1,721,267	430,108	349,540	80,568	18.7%
OFFICE OF THE INTEGRITY COMMISSIONER	509,944	125,510	76,957	48,553	38.7%
INTERNAL AUDIT	690,746	125,713	140,081	-14,368	-11.4%
CITY MANAGER	608,108	143,207	138,738	4,469	3.1%
Office of Corporate Communication	1,390,469	328,341	208,909	119,432	36.4%
Economic Development & Culture Services	2,129,475	458,418	430,208	28,210	6.2%
Office of the Chief Corporate Initiatives & Intergov Relations	860,557	195,947	160,993	34,954	17.8%
OFFICE OF THE CHIEF CORPORATE INITIATIVES & INTERGOV. RELATIONS	4,380,501	982,706	800,111	182,595	60.4%
OFFICE OF TRANSFORMATION & STRATEGY	853,029	238,818	185,880	52,938	22.2%
Office of the Chief Financial Officer/City Treasurer	555,189	125,726	115,874	9,852	7.8%
Financial Services	3,829,173	886,425	781,735	104,690	11.8%
Financial Planning & Development Finance	3,802,696	937,526	741,965	195,561	20.9%
Procurement Services	2,666,366	642,191	457,612	184,579	28.7%
TOTAL OFFICE OF THE CFO/CITY TREASURER	10,853,424	2,591,868	2,097,186	494,682	19.1%
TOTAL OFFICE OF THE CITY SOLICITOR	4,912,043	1,163,068	968,362	194,706	16.7%
Office of the Deputy City Manager Corporate Services	716,013	225,688	0	225,688	100.0%
Office of the Chief Human Resources Officer	3,489,753	835,890	840,733	-4,843	-0.6%
Office of the Chief Information Officer	12,091,628	3,168,012	2,665,854	502,158	15.9%
Office of the City Clerk	5,640,634	1,416,170	1,246,890	169,280	12.0%
City Clerk - Insurance	5,924,101	4,319,909	3,287,210	1,032,699	23.9%
Committee of Adjustment	619,336	133,514	139,339	-5,825	-4.4%
Council Corporate	99,573	26,236	19,074	7,162	27.3%
TOTAL DEPUTY CITY MANAGER CORPORATE SERVICES	28,581,038	10,125,419	8,199,100	1,926,319	19.0%
Office of Deputy City Manager Community Services	616,510	172,781	125,828	46,953	27.2%
Community Grants & Advisory Committees	45,004	15,344	9,592	5,752	37.5%
Access Vaughan	1,280,368	289,661	250,042	39,619	13.7%
Recreation Services	28,356,018	6,137,482	5,875,475	262,007	4.3%
Community Development & Events	1,910,649	490,184	467,025	23,159	4.7%
Facility Maintenance Services	14,567,670	2,999,197	3,001,465	-2,268	-0.1%
Fire and Rescue Services	49,520,337	11,244,060	11,141,095	102,965	0.9%
Emergency Planning	224,621	60,651	40,793	19,858	32.7%
By-Law, Compliance, Licensing & Permits	7,775,980	1,797,660	1,465,371	332,289	18.5%
TOTAL DEPUTY CITY MANAGER COMMUNITY SERVICES	104,297,157	23,207,020	22,376,687	830,333	3.6%
Office of Deputy City Manager Planning & Growth Management	587,089	133,470	86,848	46,622	34.9%
Development Planning	5,436,805	1,328,166	880,300	447,866	33.7%
Development Eng & Infrastructure Planning	5,314,809	1,300,778	884,432	416,346	32.0%
Policy Planning & Environmental Sustainability	2,644,984	605,277	542,363	62,914	10.4%
Parks Development	2,352,111	618,727	432,713	186,014	30.1%
Building Standards	9,947,112	2,268,366	2,144,220	124,146	5.5%
TOTAL DEPUTY CITY MANAGER PLANNING GROWTH MANAGEMENT	26,282,910	6,254,784	4,970,876	1,283,908	20.5%
Office of Deputy City Manager Public Works	513,561	113,025	121,427	-8,402	-7.4%
Infrastructure Planning and Corporate Asset Management	2,772,881	655,292	418,458	236,834	36.1%
Fleet Management	3,249,303	785,297	677,808	107,489	13.7%
Infrastructure Delivery	3,516,984	724,929	571,735	153,194	21.1%
Environmental Services	10,554,981	2,364,968	2,217,903	147,065	6.2%
Trans Serv and Parks & Forestry Ops	39,500,588	12,742,188	12,519,530	222,658	1.7%
TOTAL DEPUTY CITY MANAGER PUBLIC WORKS	60,108,298	17,385,699	16,526,861	858,838	4.9%
VAUGHAN PUBLIC LIBRARIES	19,157,475	6,183,885	5,545,751	638,134	10.3%
TOTAL DEPARTMENTAL EXPENDITURES	262,955,940	68,957,805	62,376,131	6,581,674	9.5%
RESERVE CONTRIBUTIONS & CORP. EXP.	9,916,395	12,424,590	12,460,981	-36,391	-0.3%
LONG TERM DEBT	10,521,368	-924,369	535,790	-1,460,159	158.0%
CONTINGENCY	2,495,496	-99,415	12,862	-112,277	112.9%
CAPITAL FROM TAXATION	7,229,138	313,182	7,229,138	-6,915,956	-2208%
TOTAL DEPARTMENTAL AND CORPORATE EXPENDITURES	293,118,337	80,671,793	82,614,902	-1,943,109	-2.4%

(1) Expenditures are net of Hydro Joint Services Revenue and Library Joint Service Charges.

**CITY OF VAUGHAN  
2018 City Operating Budget**

March 31, 2018

**DEPARTMENTAL EXPENDITURES BY MAJOR CATEGORY (1)**

	2018 ANNUAL BUDGET	2018 YTD		VARIANCE	
		BUDGET	ACTUAL	FAV. / (UNFAV.) \$	%
RESERVE CONTRIBUTIONS AND CORP. EXP. DETAIL:					
RESERVE CONTRIBUTIONS:					
Bldg & Facil. Infrast. Res. Contrib.	4,520,389	4,520,389	4,520,389	0	0.0%
Roads Infrastructure Reserve Contribution	459,672	459,672	459,672	0	0.0%
Parks Infrastructure Reserve Contribution	1,743,214	1,743,214	1,743,214	0	0.0%
Election Reserve Contribution	450,000	450,000	450,000	0	0.0%
Additional Vehicle Contribution	798,370	798,370	798,370	0	0.0%
Fire & Rescue Contrib.	2,008,023	2,008,023	2,008,023	0	0.0%
Heritage Contrib.	232,075	232,075	232,075	0	0.0%
Streetscapes Contrib.	500,000	500,000	500,000	0	0.0%
City Playhouse Contrib.	15,000	15,000	15,000	0	0.0%
Tax Rate Stabilization Reserve Contribution	-1,764,090	-6,023	-6,023	0	0.0%
ITM Reserve Contrib.	1,359,330	1,359,330	1,359,330	0	0.0%
Public Art Reserve Contribution	56,144	56,144	56,144	0	0.0%
DC Transition Repayment	320,000	320,000	0	320,000	100.0%
TOTAL RESERVE CONTRIBUTIONS	10,698,127	12,456,194	12,136,194	320,000	2.6%
CORPORATE EXPENDITURES:					
Mayor's Gala/Golf Classic	301,735	150,867	70,051	80,816	53.6%
Bank Charges	101,800	28,987	14,621	14,366	49.6%
Bank Investment Fees	0	0	3,433	-3,433	0.0%
Professional Fees	185,405	-5,475	-56,007	50,532	-923.0%
VMC Development & Implementation	25,073	-705	44,334	-45,039	6388.5%
Joint Services ( Payroll/Cashiering)	532,831	133,206	135,538	-2,332	-1.8%
Sundry	0	0	65	-65	0.0%
Charitable Organization Rebate	0	0	-121,291	121,291	0.0%
Tax Adjustments	2,300,000	448,746	165,225	283,521	63.2%
Amo Membership	20,800	20,800	19,311	1,489	7.2%
Election	1,200,000	221,277	49,506	171,771	77.6%
Corporate Reorganization	0	-142,691	0	-142,691	100.0%
Anticipated Labour Savings	-5,449,376	-886,616	0	-886,616	100.0%
TOTAL CORPORATE EXPENSES	-781,732	-31,604	324,787	-356,391	1127.7%
TOTAL RESERVE CONTRIBUTIONS & CORPORATE EXP.	9,916,395	12,424,590	12,460,981	-36,391	-0.3%
LONG TERM DEBT	10,521,368	-924,369	535,790	-1,460,159	158.0%
CONTINGENCY	2,495,496	-99,415	12,862	-112,277	112.9%
CAPITAL FROM TAXATION	7,229,138	313,182	7,229,138	-6,915,956	-2208.3%

**DATE:** June 6, 2018**C 4**  
**COMMUNICATION**  
**FAA -** June 6/2018  
**ITEM -** 4.15**TO:** MAYOR AND MEMBERS OF COUNCIL**FROM:** LAURA MIRABELLA, CHIEF FINANCIAL OFFICER AND CITY TREASURER  
STEPHEN COLLINS, DEPUTY CITY MANAGER, PUBLIC WORKS  
DEAN FERRARO, DIRECTOR OF FINANCIAL SERVICES/DEPUTY CITY  
TREASURER  
JENNIFER ROSE, DIRECTOR OF ENVIRONMENTAL SERVICES**RE:** COMMUNICATION – FINANCE, ADMINISTRATION AND AUDIT COMMITTEE  
JUNE 6, 2018 – ITEM 4.15 - FISCAL HEALTH REPORT – FOR THE QUARTER  
ENDING MARCH 31, 2018 (MUNICIPALITIES FOR CLIMATE INNOVATION  
PROGRAM (MCIP))**Purpose**

The City of Vaughan actively seeks out funding partnerships to help offset costs associated with infrastructure projects thereby reducing the burden to Vaughan residents. The City was successfully awarded \$299,900 under the Federation of Canadian Municipalities' (FCM) Municipalities for Climate Innovation Program (MCIP). Council approval is required to amend capital project EV-2122-18, Stormwater Climate Change Mitigation Measures to reflect the FCM grant funding.

**Recommendations**

1. That the approved budget for Capital Project EV-2122-18 Stormwater Climate Change Mitigation Measures be increased by \$299,900, funded from the MCIP; and
2. That inclusion of this matter on a Public Committee or Council agenda with respect to amending the capital budget as identified above be deemed sufficient notice pursuant to Section 2(1)(c) of By-Law 394-2002, as amended.

**Background**

The Federation of Canadian Municipalities for Climate Innovation Program (MCIP) is a five-year, \$75 million program designed to encourage Canadian municipalities to better prepare for and adapt to the new realities of climate change as well as reduce greenhouse gas emissions.

The initiatives that the program support must have the potential to reduce vulnerability of new or existing infrastructure to climate change impacts so that municipalities can continue to deliver and maintain existing levels of service. The MCIP provides funding for up to 80% of eligible costs, to a maximum of \$1.0 million for capital projects, to undertake eligible initiatives.

The FCM grant would allow the City to pilot technologies to determine their effectiveness in reducing the impacts of climate change. The project is in 4 phases and anticipated to be completed at the end of 2020. The FCM will disburse the grant amount upon completion of the project.

In November 2017, Council approved the submission of an application to the FCM for the MCIP to support the implementation of measures to address stormwater climate change vulnerabilities. A 2018 capital project in the amount of \$77,250, EV-2122-18 Stormwater Climate Change Mitigation Measures, was approved as part of the 2018 Budget, with the anticipation the City would be successful in their grant application to the MCIP. The City submitted an application for the MCIP to the FCM in January



2018. A letter from the FCM was received in April 2018 confirming the success of the grant application with approval of up to \$299,900.

**Financial impact**

The current approved capital budget of \$77,250 in project EV-2122-18, Stormwater Climate Change Mitigation Measures, includes only the City funded portion, representing approximately 20% of the total revised budget. A budget amendment of \$299,900 as indicated in Table 1 below is required to reflect the additional funding from the MCIP. Upon project completion, the City will submit an expense claim to the federal program agency for reimbursement of 80% of the eligible expenditures.

**Table 1: Capital Budget Amendment Summary**

EV-2122-18 Stormwater Climate Change Mitigation Measures	
Approved Budget (funded from Stormwater Reserve)	\$77,250
Grant from MCIP	\$299,900
Revised Budget	\$377,150

**Conclusion**

In April 2018 the City received confirmation from the FCM about the City's successful application to the MCIP. The MCIP grant program assists municipalities, funding projects that help prepare for, and adapt to, climate change, and to reduce greenhouse gas emissions. A budget amendment is required to include the additional grant funding of \$299,900 in the capital project EV-2122-18, Stormwater Climate Change Mitigation Measures.

**Prepared by**

Wynkie Ha Hau, Senior Financial Analyst Stormwater, extension 8432

Respectfully submitted,



Laura Mirabella, CPA, CA  
Chief Financial Officer and City Treasurer



Stephen Collins  
Deputy City Manager, Public Works



Dean Ferraro, CPA, CA  
Director, Financial Services/Deputy City Treasurer



Jennifer Rose  
Director, Environmental Services

# Construction Audit of Fire Station 7-4: Phase 1

FA&A Committee – Wednesday June 06, 2018

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# Today's Presentation

- Audit Objective, Scope and Methodology
- Audit Conclusion
- Audit Observations
- Management Action Plans
- Next Steps
- Questions



2



# Audit Objective

- The objective of the audit was to evaluate the effectiveness of construction management policies and procedures related to the fiscal, operational, and administrative controls over construction activities, including project scope, cost, schedule and quality.



# Audit Scope & Methodology

- The scope of the audit will encompass the complete lifecycle of the project.
- Audit reports will be issued after the completion of the following project phases:
  - Planning and Design, and Bid and Procurement Phases (Phase 1).
  - Construction Phase (Phase 2).
  - Close Out Phase (Phase 3).



# Audit Scope & Methodology

- Phase 1 included a review of:
  - Governance and project management framework.
  - Awarding the architectural contract.
  - Planning, budgeting and architectural programming.
  - Qualifying contractors and awarding the construction contract.
  - Performance and monitoring.





# Audit Conclusion

- The planning and design, bid and procurement phases of the construction of Fire Station 7-4 have experienced numerous issues that have significantly increased the risk that this project will not be delivered on time or on budget while increasing the risk of litigation and reputational damage to the City.



# Issues and Observations

The following organization wide improvements are required to improve capital project delivery:

1. Establish a standardized project management governance framework that clearly defines roles, responsibilities and accountability of all project stakeholders.
2. Clearly define and finalize the business case and project scope, including cost and schedule estimates, prior to entering the bid and procurement phase.



# Issues and Observations

3. Develop a city-wide change management process for evaluating the feasibility of an existing project if new information becomes available that may compromise the goals and objectives of the originally approved project.
4. Enhance the vendor performance management and pre-qualification criteria.
5. Ensure members of the vendor evaluation committee have the necessary experience and technical expertise to properly evaluate the submission.





# Management Action Plans

1. Establish a standardized project management governance framework.

## Corporate Project Management Office

- Develop and implement common project management framework
- Create scalable delivery framework for small low risk projects and increase monitoring and oversight for large high risk projects
- Create consistency in project planning and executing
- Complete update to Project Management Procedures Manual



# Management Action Plans

2. Clearly define and finalize the business case and project scope, including cost and schedule estimates, prior to entering the bid and procurement phase.

Infrastructure Delivery in collaboration with Corporate Project Management Office

- Update all capital projects' scope, schedule and cost to reflect latest estimates for submission as part of 2019 Budget
- Develop a business case template for use on new infrastructure/building capital projects



# Management Action Plans

3. Develop a city-wide change management process for evaluating the feasibility of an existing project if new information becomes available that may compromise the goals and objectives of the originally approved project.

Infrastructure Delivery in collaboration with Corporate Project Management Office

- Update all capital projects to reflect current cost and schedule estimates
- Reassess the business case of a project if new estimates are significantly different than at time of approval
- Recommend changes for Council's consideration as part of the annual budget process





# Management Action Plans

4. Enhance the vendor performance management and pre-qualification criteria.

## Procurement Services

- Developed draft Procurement Procedures PP-13, Contract Management and PP-14, Vendor Performance to pro-actively evaluate and improve the performance of all suppliers, vendors and contractors.
- Preparing implementation plans, including pilot projects



# Management Action Plans

5. Ensure members of the vendor evaluation committee have the necessary experience and technical expertise to properly evaluate the submission.

Procurement Services in collaboration with Corporate Project Management Office

- Procurement Procedure PP-02, Requests for Proposals, has been revised to incorporate enhanced guidelines on technical experience and organizational placement
- Procurement Procedure PP-06, Engaging a Fairness Monitor for a Procurement, has been implemented
- Updated procedures have been included in the procurement training program



# Next Steps

- Action plans have been developed.
- Implementation is underway.
- Internal Audit will follow up and report on the status of these action plans.





# Questions?



15

# Forestry and Horticulture Operations Audit

FA&A Committee – Wednesday June 06, 2018

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# Today's Presentation

- Audit Objective, Scope and Methodology
- Audit Conclusion
- Audit Observations
- Management Action Plans
- Next Steps
- Questions



2



# Audit Objective

- The objective of the audit was to evaluate the adequacy and effectiveness of the internal controls, processes and procedures in place to mitigate the business risks associated with managing Forestry and Horticulture Operations.



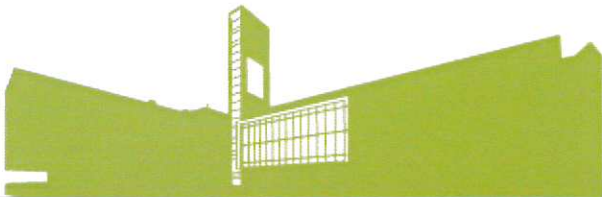
# Audit Scope & Methodology

- Review of existing policies and procedures
- Staff interviews
- Review of the tree planting and beautification strategy
- Sampling of work orders and 3rd party service agreements.
- The scope of the audit covered Forestry and Horticulture activities for the period of January 2016 to August 2017.



# Audit Conclusion

- Improvements are required to ensure risks related to the execution of the City's Forestry and Horticulture operations are efficiently and effectively mitigated.



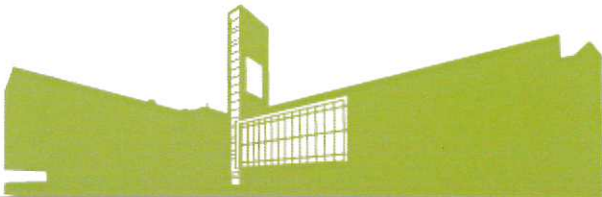
5



# Issues and Observations

The following opportunities were identified:

1. Establishing a risk based framework to determine priority activities, service levels and whether existing resources can appropriately sustain these activities, considering present and future City growth.
2. Improving monitoring and oversight activities over several processes including contract administration, work order administration and inspections.



# Management Action Plans

1. Establishing a risk based framework to determine priority activities, service levels and whether existing resources can appropriately sustain these activities, considering present and future City growth.
  - Staff will explore best practices and Forestry Operations service levels in surrounding municipalities, recommend an appropriate service level for the City of Vaughan, and estimate resources required to deliver that service level.
  - The initial focus will be development of a tree pruning plan, followed by a more comprehensive forest maintenance strategy.



# Management Action Plans

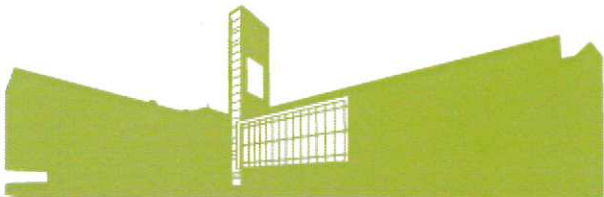
2. Improving monitoring and oversight activities over several processes including contract administration, work order administration and inspections.
- Management will develop and implement a formal inspection process which defines the roles, responsibilities, accountabilities for verifying the quality and completeness of work.
  - Management is also committing to work with all TSPFO teams to review and update existing thresholds for each work order function within the department.





# Next Steps

- Action plans have been developed.
- Implementation is underway.
- Internal Audit will follow up and report on the status of these action plans.



# Questions?



10

# Winter Maintenance Audit

FA&A Committee – Wednesday June 6, 2018

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# Today's Presentation

- Audit Objective, Scope and Methodology
- Audit Conclusion
- Audit Observations
- Management Action Plans
- Next Steps
- Questions



2



# Audit Objective

- To evaluate the adequacy and effectiveness of the internal controls, processes and procedures in place to mitigate the business risks associated with the execution of the City's winter maintenance strategy and programs.



3

# Audit Scope & Methodology

- Review of existing policies and procedures
- Review of the procurement process for awarding the winter road maintenance services agreement
- Staff interviews
- Sampling of work orders and 3<sup>rd</sup> party service agreements
- Review included the first 1.5 years under the new agreement (January 2016 – December 2017)

**Not in Scope:** → Parking lot & Sidewalk Clearing Program



# Audit Conclusion

- Improvements are required to ensure risks related to the execution of the City's winter maintenance strategy are efficiently and effectively mitigated.
- No issues were noted in our review of the procurement process for awarding the winter road maintenance services agreement.



# Issues and Observations

1. Conduct a risk based evaluation of the City's winter maintenance strategy and programs.
2. Ensure winter maintenance budgets are reflective of historical and anticipated spend.
3. Enhance the inspection process to verify the quality and completeness of contractor work.
4. Improve monitoring and oversight activities over several processes including material inventory and usage, contract administration, work order administration, and record retention.





# #1 – Issues & Observations - Road Classes

- Ontario Regulation 239/02 sets out the Minimum Maintenance Standards for road classes 1 to 5.
- Road classification is based on the applicable speed limit and the average annual daily traffic.
- The City of Vaughan is not responsible for any Class 1 roads.
- Class 6 signifies laneways, which represents 16 lane kilometres in Vaughan. There are currently no Minimum Maintenance Standards as it relates to class 6 roads.



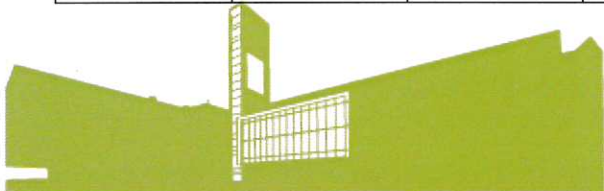
# #1 – Road Classes – City of Vaughan

Class	Kilometres	Examples
2	26	Centre Street, Clark Avenue West (partial), Martin Grove Road (partial), Woodbridge Avenue (partial)
3	201	York Hill Boulevard (partial), Creditstone Road, Melville Avenue (partial), Chancellor Drive, Willis Road
4	867	Avro Road (partial), Westmount Boulevard, Doughton Road, Zenway Boulevard (partial), Blue Willow Drive
5	974	Charles Street, Railway Street, Ontario Street, Cartwright Boulevard, North Field Court
6	16	Cousin's Lane, Bute Court, Green Avenue, Belsite Court



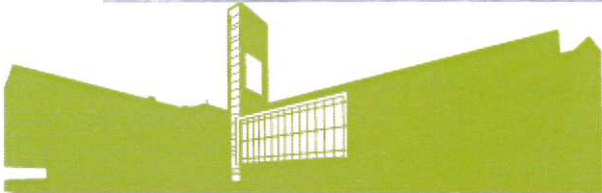
# #1 – Strategy Comparison

Level of Service Commitment: Pavement Condition									
Class[1]	Snow Depth (cm)	Minimum Maintenance Standards	Vaughan Lane Kms	Vaughan	Toronto	Richmond Hill	Markham	Brampton	Newmarket
2	5	Min (3m, lane width)	26	Bare	Bare	N/A	Bare	Bare	N/A
3	8	Min (3m, lane width)	201	Bare	Centre bare	Centre bare	Bare	Bare	Safe and Passable
4	8	5m total	867	Bare	Safe and Passable	Safe and Passable	Safe and Passable	Safe and Passable	Safe and Passable
5	10	5m total	974	Bare	Safe and Passable	Safe and Passable	Safe and Passable	Safe and Passable	Safe and Passable
6	NA	No standard	16	Clear	No Standard	No Standard	No Standard	No Standard	No Standard





# #1 – Class 5 Road, Richmond Hill (After Ploughing – Safe & Passable)





## #1 – Class 5 Road, Vaughan (After – Bare)





# #1 – Class 5 Road, Side By Side Comparison

(Richmond Hill on the Left, Vaughan on the Right)



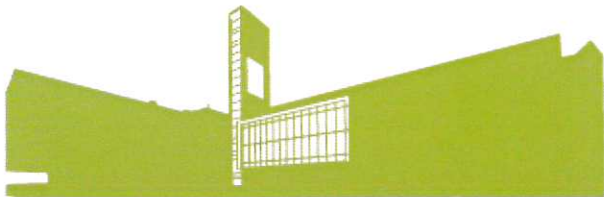
# #1 – De-icer Comparison (2016)

Municipality	De-Icing Agent	2016 (Tons)	Lane Kms	Tons/Lane Km
Vaughan	Thawrox	45,000	2,084	22
Toronto	Salt	88,140	14,800	6
Richmond Hill	Salt, Thawrox	9,000	1,432	6
Markham	Salt	29,000	2,189	13



# #1 – Financial Implications

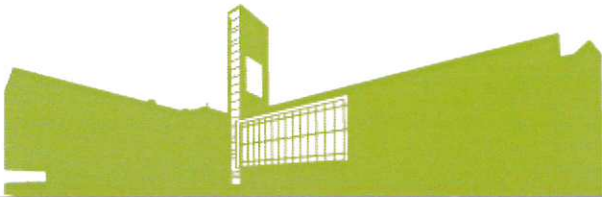
- The 2016 budget of \$2.1M represents 23,000 tons of salt purchases.
- The City's historical average usage over the past ten years has been 34,000 tons.
- The City's winter maintenance reserves have been depleted.





# #1 – Environmental Implications

- A five-year study on the effect of road salt conducted by Environment Canada concluded in 2012 that "road salts pose a risk to plants, animals and the aquatic environment." The salt is damaging the ecosystem, beginning to infiltrate ground water supply and has the potential to kill sensitive species.
- Salinity is measured by tracking the chloride level of water. On Jan. 8 2018, soon after four centimetres of snow fell in Mississauga, the chloride level of the Cooksville Creek was 18,000 mg/litre. The average chloride level in oceans is 20,000 mg/liter.



# #1 – Environmental Implications

- In 2015, the U.S. National Highway Traffic Safety Administration pegged salt corrosion as the culprit in thousands of vehicle brake failures.
- Salt brine seeping into concrete dramatically speeds up the corrosion of rebar within — and is heavily responsible for the poor state of bridges and highway overpasses across central Canada.
- Dalhousie University estimated that it costs it an extra \$15,000 in cleaning and maintenance each year just to repair all the damage salt does to floors and baseboards.



# #1 – Recommendation

- Currently, the City does not have any performance measures in place to determine whether our existing winter maintenance strategies and levels of service are deriving any significant benefits given the incremental cost and potentially adverse environmental impact.
- A risk based evaluation would help develop criteria that would evaluate the risks to achieving several of the City's winter maintenance objectives.





# Management Action Plans

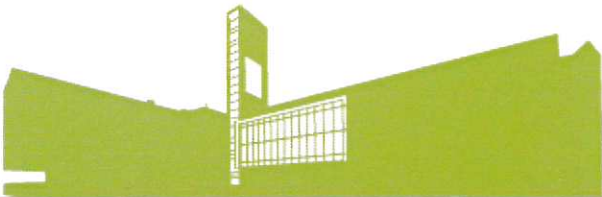
1. Conduct a risk based evaluation of the City's winter maintenance strategy and programs.
  - Management will conduct a study to evaluate current service levels and overall winter maintenance strategy and programs.
  - Management will study the use of a Maintenance Decision Support System (MDSS) which will aid in optimizing winter maintenance decisions.



# Management Action Plans

## 2. Ensure winter maintenance budgets are reflective of historical and anticipated spend.

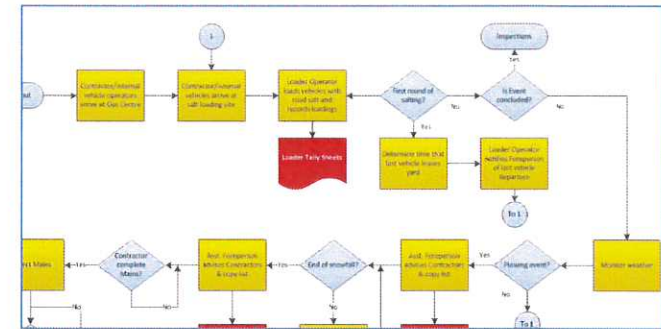
- Future budget submissions will be proposed based on historical weather trends and service levels defined in the approved winter maintenance strategy.
- Budget submissions will also aim to reestablish the winter reserve.



# Management Action Plans

3. Enhance the inspection process to verify the quality and completeness of contractor work.

- Management implemented enhanced procedures during the 2017-18 winter season, including consistent, secure inspection processes



→ Management to include a risk-based inspection sampling approach



# Management Action Plans

4. Improve monitoring and oversight activities over several processes including material inventory and usage, contract administration, work order administration, and record retention.

→ Management has already instituted a number improvements to contract administration, material inventory and record retention.

→ Management to reflect these changes by creating the following

SOPs:

- Inspection Protocol
- Document Management
- Contract Mobilization
- Financial Management
- Winter Event Management

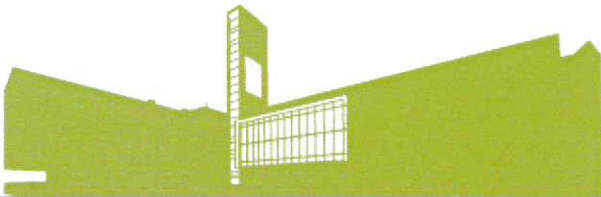


# Next Steps

- Action plans have been developed.
- Implementation is underway.
- Internal Audit will follow up and report on the status of these action plans.



# Questions?



23



# Review of City of Vaughan Response to April 14-15, 2018 Ice Storm

Finance, Audit and Administration Committee  
June 6, 2018

Presented by:  
Public Works  
Corporate and Strategic Communications



# Winter Maintenance in Vaughan



## 51 routes

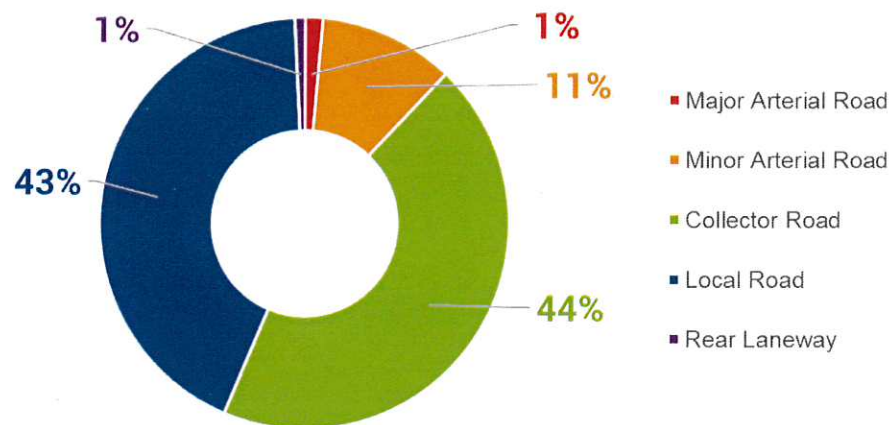
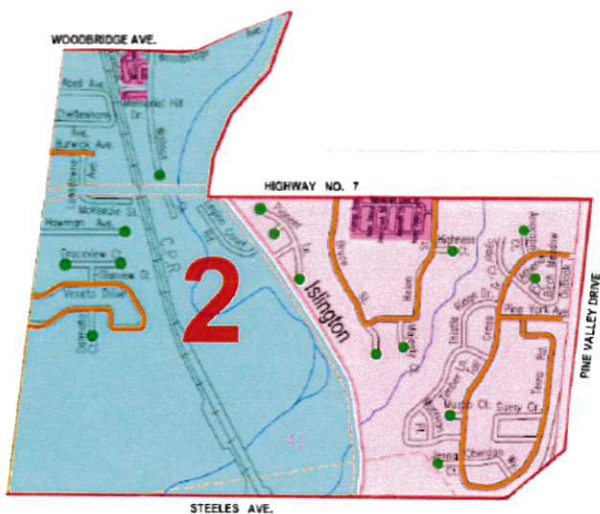
**48 routes**

being completed by contractors

**3 routes**

being completed internally by the City

Vaughan has various types of roads



# Shared Responsibility for Performance



## City Staff

- Monitor weather forecasts & adjust strategy
- Hold regular coordination meetings before, during and after event
- Deploy contractor to execute response strategy
- Inspect and manage performance
- Keep public informed



## Contractors

- Execute response strategy
- Conduct quality assurance protocol
- Receive & respond to deficiency reports
- Share feedback with City staff



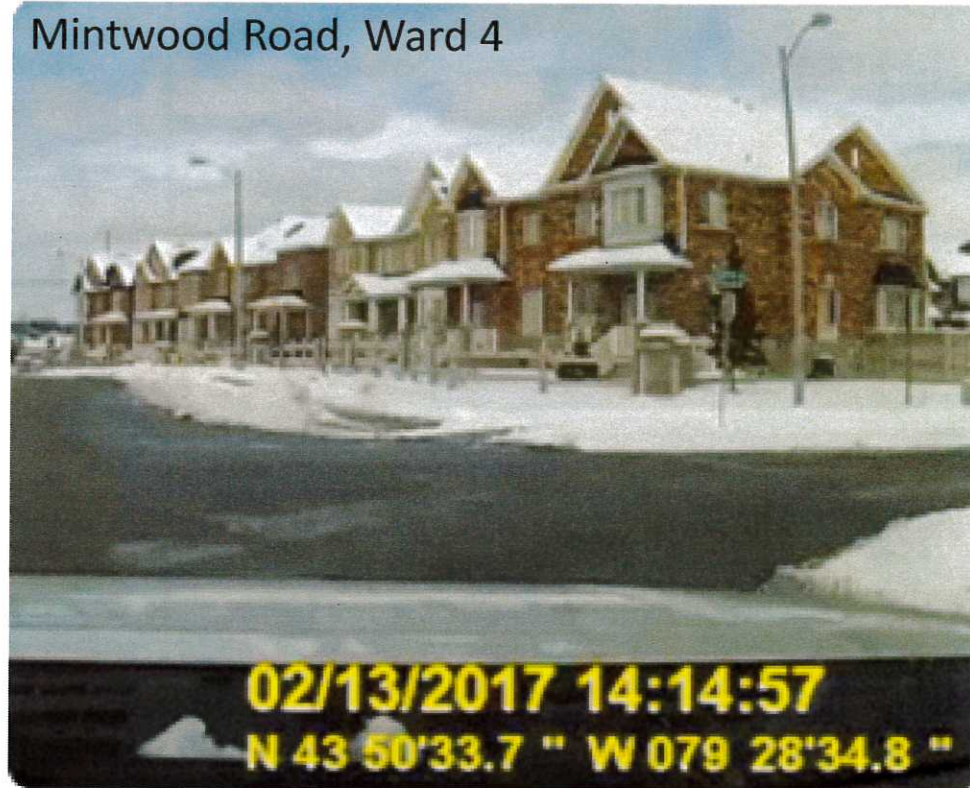
# Quality Assurance



City staff collect the following data after each event:

- ✓ Salt distribution on the roads based on the spread rate on the vehicle
- ✓ GPS tracking on vehicles
- ✓ Salt usage tracked by the Loader Operator
- ✓ Quality Assurance Inspections

Mintwood Road, Ward 4





# Preparation for Winter throughout the Off-Season



## Preparing for the April Storm

### Freezing Rain

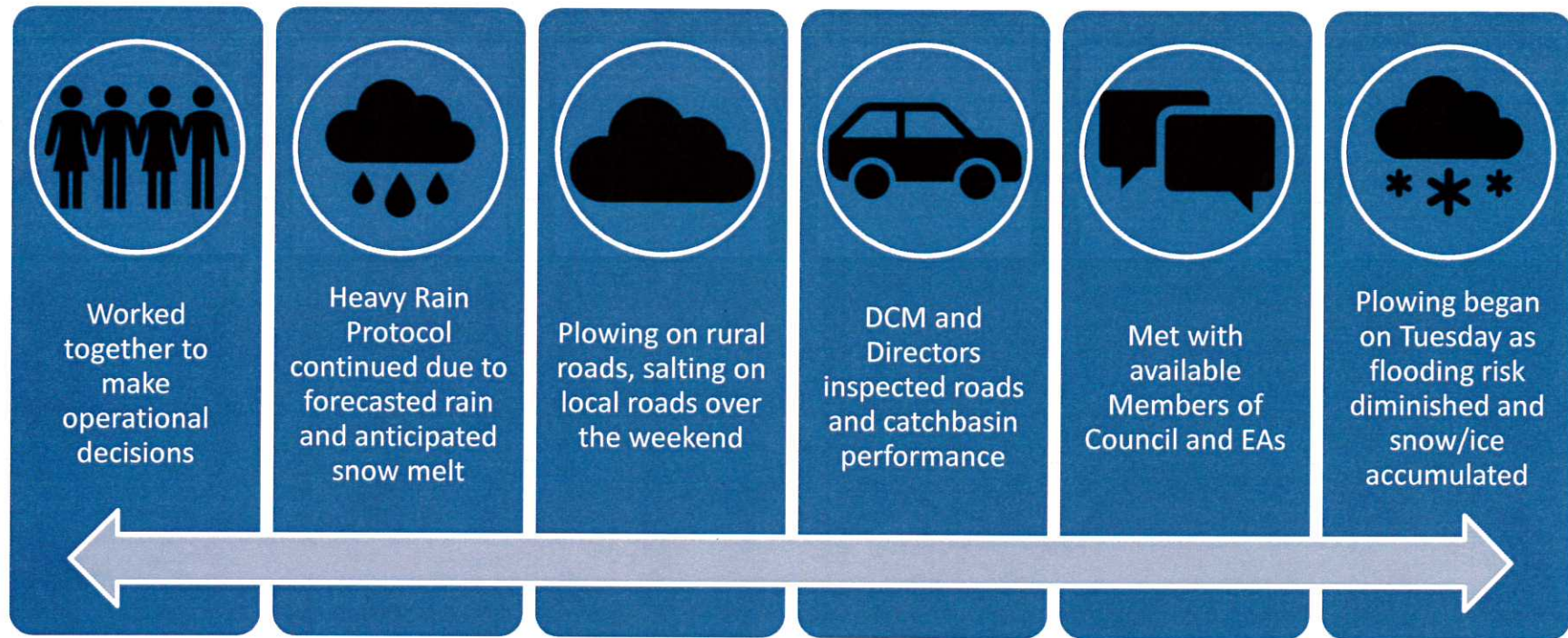
- Extend the winter maintenance contract for salting operations
- Check salt levels

### Rain and Warm Temperatures

- Implemented the Heavy Rain Protocol
  - Clear catchbasins
  - Inspect water courses
  - Inspect ponds and inlets and outlets



# Executing through the Unpredictable Storm





## Corporate and Strategic Communications Support



**10**

Council  
communication  
briefings



**132 NEW**  
**Twitter**  
followers

**4**

Visual  
banners

**61 NEW**



Facebook  
page  
likes



**vaughan.ca**



# Continuous Improvement

1. Enhancing **communications** during extreme weather events.
2. Establishing **Public Works EOC**.
3. Consider updating the **Heavy Rain Protocol** to account for freezing rain.
4. Considering extending the winter maintenance **contract season**.
5. Reviewing **stand-by** procedures, roles & responsibilities.

