

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON DECEMBER 12, 2016
FROM:	KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER
SUBJECT:	FLOODING MATTERS PHASE II – PROGRESS REPORT

RECOMMENDATION

That on the recommendation of the Managing Director - Environmental & Engineering Services and City Engineer, the following actions BE TAKEN with respect to this Flooding Matters Phase II Progress report:

- a) The attached Appendix A - Summary of Progress - Immediate Delivery Initiatives **BE RECEIVED** for information; and,
- b) The Civic Administration **BE DIRECTED** on how to proceed with the initiatives identified in the attached Appendix B - Summary of Progress, Moderate Delivery Initiatives.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

- CWC Report of 2016-07-18, Item 12, Flooding Matters, Work Plan – Phase II
- CWC Report of 2016-06-08, Item 16, Flooding Matters, Work Plan – Phase I (Investigation)
- CWC Report of 2015-12-01, Item 10, Flooding Matters Work Plan Proposal
- CWC Report of 2015-10-06, Item 6, Flooding Matters, Terms of Reference
- CWC Report of 2015-07-20, Item 5, Update on Rainfall Event of June 23, 2015
- CWC Report of 2014-09-22, Item 9, Update on Rainfall Event of September 10, 2014
- CWC Report of 2012-08-22, Foundation Drain Disconnection to Mitigate Basement Flooding
- BNEC Report of 2011-11-14, Foundation Drain Disconnection to Mitigate Basement Flooding

15-19 STRATEGIC PLAN

This report and its recommendations support the Strategic Plan under Building a Sustainable City – Strong and healthy environment, by finding new ways to help residents protect their basements from flooding.

BACKGROUND

Purpose

The purpose of this report is to provide an update on the initiatives identified in the July 26, 2016 Council meeting resolution:

- a) the Civic Administration BE DIRECTED to implement the action items identified as Immediate Delivery in Appendix “A”; appended to the staff report dated July 18, 2016; and,

b) the Civic Administration BE DIRECTED to report back with further detailed information on Moderate Delivery action items identified in Appendix “B” appended to the staff report dated July 18, 2016.

Context

In a July 18, 2016 report to the Civic Works Committee, Civic Administration proposed seventeen (17) new initiatives for Council’s consideration in an Appendix ‘A’. These new initiatives are considered enhancements to the City’s current flood mitigation program and are directly associated with the Homes, Hotspots and Programs research categories identified in the December 1, 2015 Civic Works Committee report. The seventeen initiatives proposed were intended to produce immediate and favourable outcomes, without additional resources.

Further, the July 18, 2016 Flooding Matters, Phase II Civic Works Committee report identified five (5) additional initiatives in an Appendix ‘B’ requiring time and effort on the part of Civic Administration to determine the feasibility, legal ability, potential liabilities and additional resources to initiate them.

DISCUSSION

In order to comply with the July 26, 2016 Municipal Council resolution, Civic Administration set out to ensure that each of the initiatives identified in Appendix ‘A’ were launched and commenced an investigation that would determine the feasibility of five new initiatives identified in Appendix ‘B’.

Progress Report – Immediate Delivery Initiatives

There are five possible progress ratings noted in the status column of the attached Appendix A - Immediate Delivery Initiatives, representing progress to date: Complete, Ongoing, Complete/Ongoing, In Progress and Deleted. Where the status of the initiative is indicating a combination of Complete/Ongoing (for example, initiative 12 pertaining to low impact development (LIDS) projects), accomplishments have already been realized. However, the implementation of future LIDS projects will continue.

Of the 17 initiatives indicated in Appendix A, six are indicating ‘Complete’, five ‘Complete/Ongoing, two ‘Ongoing’ and three ‘In Progress’. Initiatives #5 and #13 were combined for effectiveness; Civic Administration is now in a good position to deliver an effective campaign to promote available flooding mitigation products and customer service delivery in advance of the anticipated flooding season in 2017. No further action to advance initiative #15 is recommended given an inability to meet timing and logistics of delivering an effective and accurate message to citizens concurrent with a high intensity, short duration rainfall event that typically only lasts 20 to 30 minutes.

Progress Report – Moderate Delivery Initiatives

Each of the five initiatives subject to further study are summarized below, with recommendations.

- 1. Hold Public Drainage Workshops** – In the early months of 2016, an investigation was conducted with the intent of drawing comparisons between customer service levels, municipal flooding related initiatives, communication strategies and municipal flooding mitigation programs. One of the conclusions drawn from the investigation confirms that the City of London is a leader nationally in terms of the proactive and preventative products, programs and level of customer service delivery it offers its citizens. However, through the investigation, City staff discovered a public workshop hosted by Utilities Kingston. This proactive, public awareness workshop covering such topics as home drainage 101, simple, do-it yourself drainage solutions and preventative plumbing appeared to be unique to the municipalities surveyed.

Through the feasibility investigation it was learned that approximately four workshops are held in Kingston annually. Each workshop is designed to host approximately 15 interested citizens and is conducted by a third party. While a component of the 2 hour session speaks to preventative plumbing methods, a greater focus is made on water conservation. These interactive and successful workshops provide citizens with a better appreciation for the various types of flooding commonly encountered by property owners, an explanation for how each flooding type occurs and the tools that enable property owners to develop flood mitigating strategies, specific to their individual properties. Further to the classroom instruction, a half hour session is held in an adjoining garden where citizens are provided planting techniques to resolve overland flow issues.

Comments/Recommendation: In concept, the Kingston model is worth considering given the history of successful workshops conducted to date. These workshops afford the opportunity for concerned and interested citizens to connect and interact with City staff, who can provide expert advice and viable solutions through the City's subsidized programs and flooding mitigation products. Serious consideration should be given to the implementation of a pilot workshop in London with a primary focus on basement flooding through the utilization of in-house resources. Arrangements can be made to choose a centrally located venue, and the timing of such a pilot workshop should coincide with initiative #13 noted in Appendix 'A' entailing the initiation of a flooding campaign that is tentatively scheduled to take place in the spring of 2017. Expenses to host a pilot workshop can be absorbed through current, approved Operating budgets.

2. **Develop Flood Prevention Video** – This new initiative is complete at no cost to the citizens. With the permission of the Institute for Catastrophic Loss Reduction (ICLR), the following City web link connects citizens interested in learning about flood prevention to a series of 5 videos. The video series includes the following topics:

- Why basements flood
- Lot drainage issues
- The ABC's of infiltration flooding
- Plumbing measures to limit basement flooding
- Taking action to reduce basement flooding

https://www.youtube.com/watch?v=yXynH_DFv04&list=PL70CA66E2C1519D7C&index=2

Comments/Recommendation: No additional costs were incurred to complete this initiative. While it can be considered complete, staff should continue to seek future resources to supplement, or replace the existing content currently posted to the City's website.

3. **Identifying Potential Flooding Risks on Home Inspection Reports** – This initiative was formed with the concept of working with local home inspection companies to ensure backwater valves, sump pumps and private drain connection inspections are included as inspection points identified on standard home inspection checklists.

The Ontario Association of Home Inspectors reports that anyone can call themselves a home inspector. This is currently an unregulated business. However, on August 17, 2016, the Government of Ontario, Ministry of Government and Consumer Affairs issued a public notice expressing their intent to introduce legislation that would regulate the province's home inspection industry in order to better protect consumers. Because the industry is currently unregulated, mandatory licensing and minimum standards for home inspection reports do not exist. Some home inspectors may elect to include confirmation of existing backwater valves and sump pumps and others may not. Currently, home inspectors electing to warn and educate potential home owners about the absence of a backwater valve and the importance of such equipment are doing so on a standard of care basis, rather than a standard of practice.

Comments/Recommendation: Civic Administration must wait until the Province regulates the home inspection industry. At such time, City staff should make an effort to connect with the Ontario Association of Home Inspectors, requesting, or confirming that backwater valves and sump pumps form part of the standard home inspection checklist.

- 4. Developing a Mechanism to Advise Property Owners on Maintaining Their Homes in Accordance with Current Ontario Building Code Standards –** To simplify an understanding for this initiative, the feasibility investigation eliminated any consideration for new homes constructed under new developments. Stringent and current provisions of the Ontario Building Code do not permit downspouts to be connected to weeping tiles, sump pumps must be installed, storm water discharged from a sump pump must be directed through dedicated storm private drain connections (PDC) and weeping tiles are not permitted to connect with newly constructed sanitary private drain connections.

Developing a new preventative flooding mitigation mechanism by advising property owners to maintain their homes in accordance with current provisions of the Ontario Building Code is not feasible as the code is not retroactive. In other words, current provisions of the Ontario Building Code cannot be imposed on property owners maintaining existing homes. The installation of new flooding prevention measures is solely carried out by individual property owners at their choice and is considered a maintenance measure, or an enhancement to the existing dwelling.

However, indirectly and through the City's programs, subsidized products and customer service delivery, a mechanism to advise property owners on maintaining their homes to meet current provisions of the Ontario Building Code might be considered already in place. Interested citizens who invest in flooding mitigation measures offered through City programs and products align with provisions of the Ontario Building Code.

Comments/Recommendation: The Ontario Building Code is not retroactive. It is the sole responsibility of the property owner to maintain their property through maintenance; enhancement initiatives such as the preventative flooding programs and products offered by the City meet the Code.

- 5. Expanding the City's Current Home Visit Water Efficiency Program –** This program is known as Growing Naturally and is currently posted to the City's website.

<http://www.london.ca/residents/Property-Matters/Lawns-Gardens/Pages/EcoYard-Evaluation-Program.aspx>

This informative and diverse program provides citizens with an avenue to connect with City staff who are experts in the field of water and energy conservation, lawn care, effective landscape drainage, planting strategies, pollution prevention and waste diversion. Initiative # 5, identified in Appendix 'B' is intended to determine the feasibility of expanding the existing City program and confirming associated benefits to the citizens of London.

Upon the conclusion of the feasibility exercise, it was determined that the current Growing Naturally program is implemented by temporary, seasonal staff and managed by a resident manager. At this time, existing resources are sufficient to cover the anticipated, additional workload associated with an extension of the program to include basement flooding. Supplementing the existing program would provide another avenue for citizens to learn about basement flooding. Important contact information would form part of the program extension, directing citizens with questions or concerns about basement flooding to resident City staff, who are experts in the subject matter.

Recommendation: Expand the Growing Naturally program through the addition of a new category pertaining to basement flooding. The proposed information is not only intended to provide citizens with an overview of flooding matters, but will also provide important contact information enabling citizens to connect with appropriate

City staff who are available to offer assistance. Additional funding is not required at this time.

Other New Initiatives

Further to the 22 initiatives that total Appendix 'A' and Appendix 'B', an ongoing effort is being made to implement ways to elevate customer service delivery to benefit of the citizens of London who are interested in addressing flooding matters. The following three new initiatives are currently in progress:

- Foundation Drain Disconnection to Mitigate Basement Flooding – reference Civic Works Committee report – October 4, 2016.
- Conducting a retroactive campaign that would see distribution of the new maintenance brochure for sump pumps, backwater valves and private drain connections (PDC) to property owners who have already participated in one of the City's flooding subsidy programs.
- Advertising flooding information on Sewer Operations equipment, similar to the City's garbage packers.

Conclusions

Under Appendix 'A', 17 new initiatives were identified that could be implemented to enhance the City's current programs, products and level of customer service delivery without additional resources. The attached Appendix A indicates significant progress has been made to date. More specifically, 11 of the 17 initiatives are complete or complete/ongoing, two will continue in perpetuity, three are in progress and one deleted for reasons of logistics and feasibility. Finally, an effort is well underway to build an effective campaign that will promote the City's flooding prevention products and satisfy initiatives #5 and #13. The campaign is scheduled to take place at the beginning of the anticipated flooding season, 2017.

Appendix 'B' identifies five new initiatives that required further investigation to determine the feasibility of implementation including additional staffing and financial resources. With the exception of proposed initiative #4 (building a mechanism to advise property owners to adhere to current provisions of the Ontario Building Code), all of the initiatives proposed in Appendix 'B' are deemed feasible and can be implemented without additional resources. Initiative #2 pertaining to posting a flood prevention video is already complete at no cost to the citizens of London. Initiative #3 will be advanced after regulations are passed for the home inspection industry.

Finally, aside from the initiatives proposed in Appendices 'A' and 'B', City staff continue to find ways of enhancing its current programs and products to provide the citizens of London the highest level of customer service possible. Three new initiatives identified in this report are proof of the City's ongoing dedication to flooding matters.

Acknowledgements

This report was prepared with the assistance of Tom Copeland P. Eng., Wastewater & Drainage Engineering.

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December 5, 2016

Attach: Appendix 'A' – Immediate Delivery Initiatives
Appendix 'B' – Moderate Delivery Initiatives

APPENDIX 'A'
IMMEDIATE DELIVERY INITIATIVES

	Description	Comments	Status
1	Embed pertinent flooding information inside "Homeowner Letters" delivered to property owners who are impacted by Capital construction projects.		Complete
2	Utilize available communication avenues to educate property owners on general insurance information.	Information is now posted to the City's website under Sewers and Flooding/Basement Flooding Causes/Basement Flooding Prevention.	Complete
3	Continue to dialogue with the insurance industry and higher levels of government as appropriate until a viable solution is realized.		Ongoing
4	Discuss data sharing with insurance companies without disclosing impacted property information.		Ongoing
5	Develop a communications plan to promote more self-reporting of basement flooding, while assuring citizens that information received remains confidential.	This initiative has been combined with initiative 13. Production is well underway and will roll out in the spring of 2017.	In progress
6	Continue to accurately document significant rainfall events and use the information to update priorities.	A monthly Rainfall and Flooding memo is generated and distributed, confirming current rainfall event data.	Complete /Ongoing
7	Posting Insurance Bureau of Canada contact information and FAQ's to the City's website.	Information is now posted to the City's website under Sewers and Flooding/Basement Flooding Causes/Basement Flooding Prevention.	Complete
8	Additional Councillor/Civic Administration participation in local radio and television talk shows.	This will occur as opportunity permits. Annually, EES staff have participated in a Rogers television program typically aired in the Spring.	Complete /Ongoing
9	Additional opportunities/participation in local events – kiosks in the annual Western Fair, Annual Home & Garden Show, emergency preparedness events, etc.	Flooding brochures were made available at this year's Western Fair. Staff continue to seek new venues to participate in that will provide good value and benefit to the citizens of London. Also, an effort will be made to extend the level of effort in such venues as the 2017 Emergency Preparedness Week.	Complete /Ongoing
10	As opportunities permit, support academics who are leading initiatives related to climate change.	Information published by the Institute of Catastrophic Loss reduction (ICLR) has been posted to the City's website in video format.	Complete /Ongoing

11	Provide property owner information specific to backwater valve maintenance.	The production of brochures is in the last editing phase. Brochures will be made available shortly.	In progress
12	Consider Low Impact Development (LID) strategies on new and retrofit construction initiatives.	The Stormwater Management Division is leading two Arterial projects Sarnia and Commissioners. Two pilot projects are in progress (Oakridge subdivision and Waterloo St). The City's strategic plan development is in progress. Provincial standards are pending.	Complete / Ongoing
13	Initiate a basement flooding campaign to inform property owners about downspout disconnections, backwater valves, window wells, grading around foundations, and the City's Grant Program.	City staff are positioning to implement an effective campaign in the spring of 2017. Social media options are currently being considered.	In progress
14	Develop a template that can be completed and posted through media avenues to provide warnings to Londoners prior to anticipated significant rainfall events.	A template has been developed for the City's Flood Coordinator to issue through social media (Twitter). The City has a significant following on Twitter.	Complete
15	Develop an effective communication mechanism to provide property owners with current information during a significant rainfall event.	Based on timing and logistics of issuing a communication during brief (20 -30 minutes), high intensity rainfall events, this initiative is recommended to be deleted.	Delete
16	Develop a post event information template that provides property owners with helpful information including contacts to deal with basement flooding issues.	A template has been developed for the City's Flood Coordinator to issue through Twitter. The City has a significant following on Twitter.	Complete
17	Post related third party basement flooding publications to the City's website.	Information published by the Institute of Catastrophic Loss reduction (ICLR) has been posted to the City's website in video format	Complete

APPENDIX 'B'
MODERATE DELIVERY INITIATIVES

	Description	Progress/Comments	Status
1	Hold public drainage workshops.	Arrangements will be made to conduct a pilot workshop in 2017.	In progress
2	Develop flood prevention video.	ICLR video web links sent to Corporate Communications to post to City website - October 13th. Upon permission from ICLR, videos are posted - October 20 th .	Complete
3	Identifying potential flooding risks on home inspection reports.	This initiative can be satisfied when the home inspection industry is regulated. The provincial government has presented a Bill which is working through the legislative process.	In progress
4	Developing a mechanism to advise property owners on maintaining their homes to meet current Ontario Building Code standards.	This cannot be accomplished as the Ontario Building Code is not retroactive.	Delete
5	Expanding the City's current home visit water efficiency program to include basement flooding.	An extension of the City's existing Growing Naturally program will take place in 2017.	In progress