



WEST HANTS REGIONAL MUNICIPALITY REPORT

Information ☐	Recommendation ☐	Decision Request ☐	Councillor Activity ☐
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To: West Hants Regional Municipal Council

Submitted by: Councillor Jim Ivey & Councillor Laurie Murley

Date: April 23, 2024

Subject: WHRM Flood and CSO Emergency Plan Recommendation Report

LEGISLATIVE AUTHORITY

MGA 30 (1) (2) (3) (4)
MGA 65 Power to Expend Money

RECOMMENDATION or DECISION REQUEST

Recommend that staff be directed to begin the acquisition and preparation of the emergency storm kits including sump pumps, gas generators and hoses to be available for deployment for impacted homeowners on an emergency borrowed basis from the Municipality, not more than 30 days from this motion.

Recommend that staff be directed to begin the process of identifying the properties that would benefit from berms along their property perimeters that would serve to prevent the overflow of storm and sewer above the curbs and across private properties

Recommend that staff be directed prepare a plan to be implemented that would close 'flood zone' street sections to prevent traffic from creating 'waves' of CSO's during flooded street events

Recommend that during flood events that staff have available or on call suction truck[s], on call/ on site in preparation for storm-sewer system overflows and that following overflow events, the septic suction truck[s] remove free-standing storm-sewer water from immediate and surrounding areas.

Other recommendation or modifications to these recommendations may arise during council discussion including a motion to have staff determine the cost for provide a separate storm water pipe from the length of Stannus to the waterfront.

BACKGROUND

Property ✓	Public Opinion ☐	Environment ✓	Social ☐	Economic ✓	Councillor Activity ☐
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In January a motion for an emergency flood plan was initiated by Council to alleviate suffering experienced by residents in areas prone to extreme flooding and consequently combined sewer overflows in and around their properties.

As short-term solution were not unable to be identified in March, a letter was subsequently received from one of the residents offering short-term solutions that could be considered by Council and staff.

Unfortunately the recommendations of the resident were not attached or the April Committee of the Whole meeting and thus, this report is provided for Council's consideration and discussion.

Immediately below is the email positioning the recommendations from Stannus Street resident Mr. Peter Moore. Following his email correspondence you will find the temporary and permanent recommendation.

From: Peter Moore

Sent: March 27, 2024 7:26 AM

To: Mark Phillips

Cc: Abraham Zebian; PublicOnlyCouncilEmail; Minister, Environment; MLA Melissa Sheehy Richard; John Lohr; Kody Blois;

Subject: Suggested by Mayor Abe...

In a communique with Jennifer, the Mayor suggested residents could put forth their ideas regarding the Windsor Flood Zone crisis. Logically, it stands to reason, for those of us suffering the full and repeated effects of this ongoing crisis, that we are significantly more in tune with the issues than the Municipality; we have no choice. We are governed by common sense, not fears of setting precedence, liability, or driven by cost factors, or public perception or an unwavering resolve to maintain the status quo; you know, all the things that traditionally keep elected officials and public servants from doing the right thing. Without question, most of us living in the Windsor Flood Zone have been discussing our crisis every day for the past 30+ months [let that sink in]; what to do, what we have to do, what can be done, what 'they' should do... all with a tone of expressing deep frustration as to, 'why aren't they doing anything?'.

As no infrastructure solution is coming for the foreseeable future, an emergency plan is required to protect citizens from the emotional and financial impact of repeated flooding and environmental exposure to CSO's in surrounding areas, properties and homes.

For 30+ months Municipal Operations has been repeatedly directed by Governance to address the emergency and storm-sewer structural issues in the Windsor Flood Zone. To watch Council meetings of late, where the topic of the Windsor Flood Zone is to [finally] have decisions made regarding a) storm-system upgrades, and b) an actionable resident Emergency Plan, it is abundantly clear... it's not that Operations doesn't care, it that Operations couldn't care less. It also seems, more and more Councilors are expressing their frustration with the information, documentation and lack of 'motionable' recommendations they are receiving from Operations, from which they can debate and make decisions. Mainly, this speaks volumes to the lack of designated leadership, or perhaps intentional collaboration, in not stopping the proceedings to address 'the elephant in the room', specifically, the lack of leadership from Operations, and in presenting any meaningful effort regarding this crisis; no point is made of demanding accountability.

With regards to the long-standing knowledge of the undersized/ combined storm-sewer infrastructure issue, in the Windsor Flood Zone, Municipal Operations has yet to gain a quantifiable/ qualifiable understanding. And though reems of both types of information exist in this regard, their inability to analyze the data for the purpose of presenting clear 'solution oriented' recommendations to Governance, has not materialized. And, recently communicated to Council by Operations, any solution [structure] is not likely to start for another 18 months, or for an emergency plan, "nothing new here".

The attached document is presented to Council for their immediate and serious actionable consideration. Notwithstanding the Infrastructure Upgrade section [more common sense], the other ideas represent the most immediate, cost effective, actionable SOLUTIONS. These will suffice as the basis for a permanent and 'per event' Emergency Plan, to address the CSO flood crisis in the immediate area, on our properties and in homes.

Peter J Moore

'Conscience; truth's greatest witness

Emergency Plan Flood Solutions

Provided as an attachment with Mr. Moore's emails (pasted immediately below)

Who Qualifies

Any program[s] which have the potential to set 'precedent' must be clearly defined in terms of eligibility:

- Residential homes located in the Windsor area,

- are in close proximity or directly located in areas prone to repeated flooding, and/ or flood plains,
- where the storm system infrastructure is a 'combined' system, designed to carry both storm water and sewer water,
- where there is a constant threat of CSO's due to an undersized storm-sewer system in the immediate area,
- are subject to having 'standing CSO water' in these areas and on residential properties, days after the weather event has ended,
- as directed by the Municipality, have undertaken all measures to mitigate flooding of their properties, specific to defined home-owner responsibilities.

Emergency Plan

The Emergency Plan has a two-fold purpose. Firstly, to 'permanently' protect citizens from the repeated and potential overflow of the Municipality's *water* from a] an undersized storm system and b] CSO's onto their properties and into homes. Secondly, to safeguard citizens and properties from potential overflows during and after flood prone weather events. Offered to qualified residents, either individually or as a collective, financed solely by the Municipality, undertaken by homeowners:

Option 1

Permanent

1. Property perimeter - berm properties and/ or multiple properties, designed to be aesthetically appealing and structurally functional,
2. Driveway entrance – install permanent or detachable flood barriers, a water flood control shield.

Temporary

'Red Triangle' weather alerts, 'on-call, on-site'; in anticipation of storm system CSO overflow:

1. Close 'flood zone' street sections to prevent traffic from creating 'waves' of CSO's,
2. Minimal 3" gas powered pump with 50-100' of hose, gas cans; operated by residents and utilized should overflows breach berms,
3. During event, septic suction truck[s], on call/ on site in preparation for storm-sewer system overflow,
4. Following event, septic suction truck[s] remove free-standing storm-sewer water from immediate and surrounding areas.

Option 2

Residential Buyout

Amount to replace, 'same for same' in value, size, rooms, etc., factoring in the cost associated for decimating the property's value due to increased/ ongoing public-market awareness, and all moving, mortgage, legal, etc., costs.

Infrastructure Upgrade – Immediate

As per Wastewater Systems Effluent Regulations, 2017 Status Report, specific to CSO legislation, "Owners or operators of a wastewater system subject to the WSER and not designed to achieve the national effluent quality limits had until June 30, 2014 to apply for a transitional authorization (TA).

A TA establishes the conditions under which such systems may continue to operate and sets the deadline (end of 2020, 2030 or 2040) to meet the mandatory national effluent quality limits.¹

Admittedly this writer did a quick search and quicker perusal of the document, gaining but a vague understanding of the report. However, the specific point of this search was simply to confirm there is legislation in place to eliminate combined storm-sewer systems in Canada, by specific dates.

There is little doubt or ability to argue, documented both in recent and ancient history, the Windsor Flood Zone is a long-standing issue, prone to repeated flooding, and on Stannus Street, repeated combined sewer overflows. Similarly, the absolute [known] fact is, the Stannus Street storm-sewer system is undersized for the volumes of water entering it, from more frequent-extreme volume occurrences due to climate change.

There exist two definitive statements of truth. 1] water always finds its own level, 2] all water runs to the sea. It is an observable fact, particularly with south Stannus Street, that it is located at the bottom of a bowl. During red triangle weather events, considerable amounts of 'additional' water runs over streets, down hills, through yards and also into the storm-sewer system, to Stannus Street... to get to the sea.

Therefore, logically, given CSO legislation, nature's chosen avenue to the sea, and this ongoing emergency/crisis, Governance need only redirect committed capital project budget[s], aka delay them, and direct Operations to immediately remove the combined sewer system on Stannus Street.

Further, regardless of who, when, how someone finally has the capacity to determine the overall system [re]structural plan for downtown Windsor, given this crisis, little argument can be made to not immediately a] separate the storm sewer line on Stannus Street, and given the logic of 'all water flows to the sea, via Stannus Street, at the same time, drop in an oversized [size?] pipe. Therefore, having one foundational piece in place for the design of any future system-infrastructure projects required for the Windsor Flood Zone.

1 https://publications.gc.ca/collections/collection_2021/eccc/En11-19-2017-eng.pdf; Section 3.1 p22. " There are no applications for transitional authorization in Nova Scotia.²

2 Ditto, Table 9 p22-24. It is interesting to note, under section 4.2 179 Systems with Combined Sewers, the then, Town of Windsor was not listed as having combined sewers... even though the Stannus Steet upgrade occurred prior to this report.

DISCUSSION

From the options provided as outlined by Mr. Moore in the background of this report, Council should undertake a discussion on the following options:

- 1 (a) Berming of property perimeters
(b) Detachable flood barriers for driveway entrances
(c) For red triangle CSO alerts have flooded streets closed to non-local traffic
(prevention of storm / CSO sewer waves. Additionally access to 3 inch gas-powered pumps with hoses for the removal of any CSO's and stormwater that may breach the perimeter berms / driveway barriers. Septic trucks on call for potential storm-sewer overflows into the streets or onto properties.
- 2 Residential Property buyouts

Additionally for discussion Council should consider and be prepared to discuss the following options as identified for consideration by Councillor Murley

1. Municipal storage of flood kits and manpower to deliver to residents and help to install when needed.
2. Sump pumps (perhaps battery operated)
3. Generators where necessary
4. Hoses
5. Batteries
6. Waterproof 2 x 4's, beams or saw horses to raise contents in basements off the floor
7. Sand bags
8. [Flood Panels and Barriers](#)
 - a. [Dams](#)
 - b. [Self-Absorbing Flood Sacks](#)
 - c. [Municipal Flood Risk Sharing in Canada](#)
9. Immediate infrastructure upgrades on Stannus Street and in the flood zone to be discussed for 2024-25

NEXT STEPS

To Be Determined based on Council review and discussion

FINANCIAL IMPLICATIONS

To Be Determined

ALTERNATIVES

Council and Staff may wish to provide alternative solutions that can be achieved over the next 30 days.

ATTACHMENTS

(List any attachment to the report, if anything.)

CHIEF ADMINISTRATIVE OFFICER REVIEW

(For use if report is from a Councillor. CAO to provide additional comments on background, department/staff responsible and workload, budget, options, preferred strategy. State “Not Applicable” if report is from staff which already incorporates CAO review.)

Report Prepared by: Councillor Jim Ivey and Councillor Laurie Murley

Report Reviewed by: _____
(Name and Title)

Report Approved by: _____
(Name and Title)