

REPORT NO. 79 of the
ENVIRONMENT, TRANSPORTATION & PUBLIC SAFETY
STANDING COMMITTEE
of its meeting held October 24, 2012

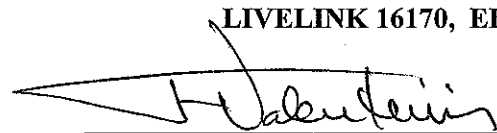
Present: **Councillor J. Gignac**
 Councillor A. Halberstadt
 Councillor R. Jones
 Councillor H. Payne
 Councillor F. Valentinis

That the following recommendations of the Environment and Transportation Standing Committee **BE APPROVED:**

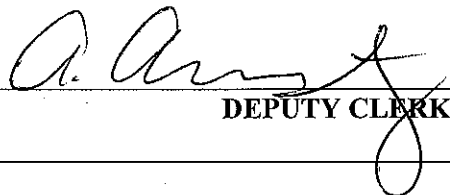
Moved by Councillor Gignac, seconded by Councillor Halberstadt,
THAT the City of Windsor's Climate Change Adaptation Plan **BE APPROVED**
in principle; and
THAT the adaptation options proposed for inclusion in the 2013 capital budget
BE CONSIDERED during the capital budget process.
Carried.

Clerk's Note: The report authored by the City Engineer dated October 3, 2012 entitled "City of Windsor's Climate Change Adaptation Plan" is attached as background information.

LIVELINK 16170, EI/10822



CHAIRPERSON



DEPUTY CLERK

NOTIFICATION:				
Name	Address	Email Address	Telephone	FAX

THE CORPORATION OF THE CITY OF WINDSOR
Environment, Transportation & Public Safety Standing Committee -
Administrative Report

**MISSION STATEMENT:**

"The City of Windsor, with the involvement of its citizens, will deliver effective and responsive municipal services, and will mobilize innovative community partnerships"

LiveLink REPORT #: 16170 EI/10822	Report Date: October 3, 2012 (3432 10/3/12 hg)
Author's Name: Karina Richters	Date to Standing Committee: October 24, 2012
Author's Phone: 519 253 7111 ext. 226	Classification #:
Author's E-mail: krichters@city.windsor.on.ca	

To: Environment & Transportation Standing Committee

Subject: City of Windsor's Climate Change Adaptation Plan

1. RECOMMENDATION: City Wide: Ward(s): _____

I. That the City of Windsor's Climate Change Adaptation Plan **BE APPROVED** in principle.

II. That the adaptation options proposed for inclusion in the 2013 capital budget, **BE CONSIDERED** during the capital budget process.

EXECUTIVE SUMMARY:

N/A

2. BACKGROUND:

The draft Climate Change Adaptation Plan was tabled for a 30-day comment period in mid-July 2012. At this time the draft plan was circulated and posted to the City of Windsor website for public comment. At the August 29th Environment and Transportation Standing Committee the draft report was brought forward for comment from the committee. The following motion was passed by the Standing Committee

THAT the draft Climate Change Adaptation Plan attached to this report **BE TABLED** for 30 days for public comment, and further;

THAT the Author of the report **BE DIRECTED** to consult with City Administration including members of the Environment & Transportation Standing Committee and **REPORT BACK** up to six identified climate change adaption options as outlined in the "Draft Climate Change Adaptation Plan" that City Council may consider implementing when devising 2013 Budgets.

This motion was accepted at the City Council meeting of September 17th.

3. DISCUSSION:

The finalized climate change adaptation plan incorporates several of the suggestions received during the public comment period, strengthening the content and importance of the plan. No dissenting comments were received by the public on the proposed adaptation options and as such the adaptation options remain the same.

The proposed adaptation options were discussed with the various departments early in 2012. During the development of the plan, cost for implementation was one of the issues considered. The anticipated costs were weighed against other factors including immediacy of the risk, the level of understanding of the option and public support to name a few.

Several of these proposed options have already received funding in 2012 through various sources. The majority of these options were determined to be necessary to mitigate the risk of flooding and as such received commitments in the 2012 Capital Budget. Table 1 outlines those adaptation options that have already received at least partial funding in 2012.

Table 1: Proposed Adaptation Options currently funded in 2012

Proposed Adaptation Options	Current Funding	Comments
Mandatory Downspout Disconnection	\$2,000,000 (2012) \$400,000 (2014) \$220,000 (2015) \$330,000 (2016)	Funding as outlined in the 2012 Sewer Surcharge Budget update/Measures to Mitigate Basement Flooding (LiveLink report # 15652)
Mandatory Backwater valves	\$500,000 (2011) \$250,000 (2012) \$1,000,000 (2013-2016)	Funding as outlined in the 2012 Sewer Surcharge Budget update/Measures to Mitigate Basement Flooding (LiveLink report # 15652)
Enhance Sewer Maintenance & CCTV Program	\$200,000 (2012)	Funding as outlined in the 2012 Sewer Surcharge Budget update/Measures to Mitigate Basement Flooding (LiveLink report # 15652)
Update of the rainfall intensity duration and frequency (IDF) curves.	\$50,000 (2012)	Funding as outlined in the 2012 Sewer Surcharge Budget update/Measures to Mitigate Basement Flooding (LiveLink report # 15652) *In part, dependent on local municipalities participation.
Initiate flow monitoring of priority sewers	\$300,000 permanent monitors (2012) \$250,000 temporary monitors (2012) \$200,000 for temporary monitors and to build the model (2013)	Funding as outlined in the 2012 Sewer Surcharge Budget update/Measures to Mitigate Basement Flooding (LiveLink report # 15652)

Undertake Public Education on Sewer Use, Waste Water Treatment	\$10,000 (2012 EMP operating funds)	The City of Windsor, with funding from the Environmental Master Plan operating budget has partnered with the DRCC to produce an educational video on sewer and waste water treatment and our connection with the Detroit River. DRCC's free movie night will also be on sewer use. (Note date: November 7, 2012) *Additional operating funds should be set aside to keep up with the continual education program.
Increase in Heat Education at Community Centres and Pools	\$2,000	There is currently a surplus of grant funding available from previous MOA's with Health Canada for Stay Cool Windsor-Essex activities. A portion of these funds are made available each year for promotion of heat education. However, it is expected that these funds will be diminished by 2014. *Additional resources may be required for large outdoor events.
Complete an Urban Heat Island Study	\$20,000 (2012 grant funding)	In 2012, Health Canada contributed \$20,000 towards the completion of an Urban Heat Island Study for the City of Windsor.

Table 2 outlines the proposed adaptation options that may be funded in part through existing operating funds. Additional funding will be subject to operating budgets available funding in future.

Table 2: Proposed Adaptation Options suggested for inclusion in 2013 Operating Budget

Proposed Adaptation Options	Funding Estimate Required	Comments	Responsible Area
Development of a Green Roof Policy	Subject to 2013 Operating Budget, should be achievable within existing budgets.	A significant amount of research has already been completed into the development of a green roof policy through the grant funding provided by Health Canada. As well, Parks & Facilities has already begun to look at roofs that need replacement to determine if a green or cool roof may be used.	Parks & Facilities Planning EMP
Increase the Use of Flow Restrictors	Subject to 2013 Operating Budget	The City of Windsor currently uses flow restrictors to mitigate flooding in known problem areas. The use of	PW - Operations

	pressures.	flow restrictors can be expanded to other areas as warranted depending on the funding available through future operating budget.	
Seal Manhole Covers	Subject to 2013 Operating Budget pressures.	Sealing of manholes is a relatively low cost maintenance option for sanitary manholes known to be located in ponding areas. Investigation into the methods of sealing manholes should be completed in 2013 and implemented as funding is available through the future budgets.	PW - Operations
Targeted Education towards homeowners with suspected cross-connections to sanitary sewer	\$15,000	A portion of this targeted education will be a requirement under the Source Water Protection Plan with a deadline for completion by 2014. At this time, it has not been determined if provincial funding will be available to municipalities to complete the actions under the Source Water Protection Plan.	Engineering PW – Operations Building EMP
Increase Tree Planting	Subject to 2013 Operating budget pressures	Subject to operating budget. Prioritizing tree planting based on the urban heat island mapping as well as vulnerable areas such as playground equipment and new sports fields.	Forestry & Horticulture Planning
Develop Clear Policies for Weather Response	Subject to 2013 Operating Budget, should be achievable within existing budgets.	Several response plans are currently in place to deal with extreme weather. The existing plans should be reviewed to ensure that the plans are robust enough to cover climate change scenarios.	PW – Operations Fire & Rescue Services Housing & Children's Services

It is recommended that the following three adaptation options be included to enhance projects already planned for 2013. As these are pilot projects for the City of Windsor, and therefore there are no local examples to learn from, it is expected that additional costs may be required to complete the projects. However, these options have been employed in several municipalities with great success. If these options prove successful and local experience levels increase, the costs for construction is expected to decrease over time.

Table 3: Proposed Adaptation Options suggested for 2013 Capital

Proposed Adaptation Options	Funding Estimate Required	Comments	Responsible Area
Develop pilot projects for the use of Porous Pavement on	TBD	Parking lots to be replaced within the 2013 capital budget should be reviewed to determine if porous pavement may be an option.	Engineering Planning PW - Operations Parks & Facilities

City Properties and develop guidelines for use in development		Current options include; new construction or rehabilitation of a parking lot	EMP
Installation of Rain Gardens as a pilot project to determine effectiveness	Early estimate \$15,000 (need more detailed specifics)	As with porous pavement, a pilot project should be completed in 2013, dependent on capital budget allocation. ERCA is currently working with local municipalities to develop rain garden projects. Current options include: Captain Wilson Park	Engineering Planning PW - Operations Parks & Facilities Forestry & Horticulture EMP
Increase Capital for Shade Structures	\$80,000 including permits and footings	Increase shading can occur from either increased tree planting or constructed shade structures. The current focus of shade structures should be on play grounds and new sport fields. These areas are already being considered through Parks and Forestry. Current options include a constructed shade structure at Captain Wilson Park	Parks & Facilities Planning

The adaptation options outlined in Table 4 are suggested for 2014 or later. Many of these options will require additional work prior to implementation.

Table 4: Proposed Adaptation Options suggested for 2014 Capital or Operating

Proposed Adaptation Options	Comments	Responsible Area
Consideration of additional Off-Line Storage of Stormwater	The development of the Storm and Sanitary Sewer Use Master Plan will begin in 2014 and will not conclude until late 2015/2016. This master plan will determine the priorities for off-line storage of stormwater.	Engineering
Improvement and Enhancement of Green Space to improve rain water retention	Several initiatives underway in 2013 will help guide the direction of this adaptation option including the Parks Master Plan to be completed in 2013 subject to capital budget funding.	Planning PW - Operations Parks & Facilities
Use Social Media and other Communication tools to warn public of risk of basement flooding	The use of social media as a warning tool for basement flooding will not be ready to be implemented until the flow monitoring program is completed and a level of confidence in the system is in place. However, the cost to implement social media for this purpose will be minimal.	Communications Pollution Control
Creation of an Extreme Weather	The creation of this reserve fund will be dependent of availability of surplus funding from	Finance

Fund Reserve	2013.	
Enhanced Maintenance & Inspection of roads and sidewalks during snow or extreme weather events	The City of Windsor is continuously looking at ways to enhance maintenance and inspections of roads and sidewalks. Additional research is still needed to determine the appropriate level of service required to mitigate future risk.	PW – Operations Risk Management

Some of these adaptation options may be eligible for grant funding through various provincial and/or federal programs.

The draft plan was presented to the Windsor Essex County Environmental Committee on September 6, 2012. Following the presentation and discussion the committee passed the following motion:

That Administration as a high priority **BE REQUESTED** to implement low impact development policies and pilot projects such as green/cool roofs, porous pavement and rain gardens, as well as modifications to development standards as outlined in the Draft Climate Change Adaptation Plan.

This motion supports moving forward with several of the adaptation options recommended for inclusion in either the 2013 operating or capital budgets.

The finalization of the Climate Change Adaptation Plan completes Milestone 3 of the ICLEI Initiative. Milestone 4 (implementation of the adaptation options) and Milestone 5 (monitoring and reviewing) will be ongoing.

4. RISK ANALYSIS:

The development of the Climate Change Adaptation Plan included vulnerability and risk assessments for potential impacts. The plan focuses on mitigating those potential impacts that scored a medium-high or greater risk factor. However, it is expected that through implementing the proposed adaptation options several of the lower risk impacts will also be addressed.

As mentioned in the plan, the City of Windsor is already beginning to experience some of the impacts noted such as more intense precipitation events and hot weather. Through implementation of the proposed adaptation options, the goal is to minimize the possible consequences of the impacts.

5. FINANCIAL MATTERS:

The proposed options for adaptation suggested for consideration during the 2013 Operating and Capital budget process (and subsequent years) will need to compete with other submissions from other City departments in order to receive funding.

It will be the responsibility of City Council during those budget deliberations to prioritize which proposed options (if any), receive full or partial funding so that the adaptation plan proposed can be executed, as necessary.


6. CONSULTATIONS:

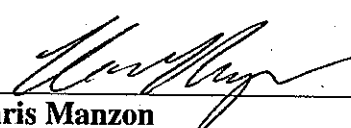
Risk Management, Engineering, Parks and Facilities, Planning

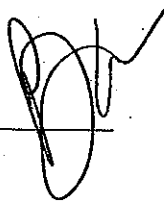
7. CONCLUSION:

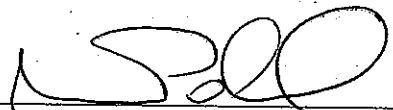
The City of Windsor is one of the first municipalities to finalize a Climate Change Adaptation Plan. A high level of interest on the plan has been received by both residents and other municipalities across Canada.

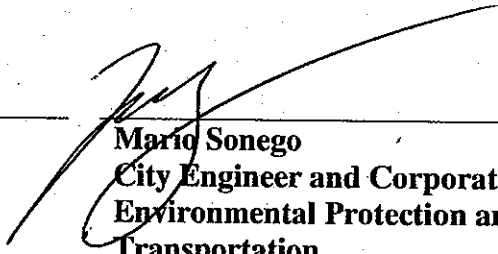
As outlined in the Environmental Master Plan, "The City of Windsor is committed to being a leader through its daily actions and services to enhance the environment for present and future generations". The finalization of this plan exemplifies this commitment.

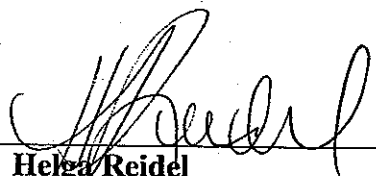

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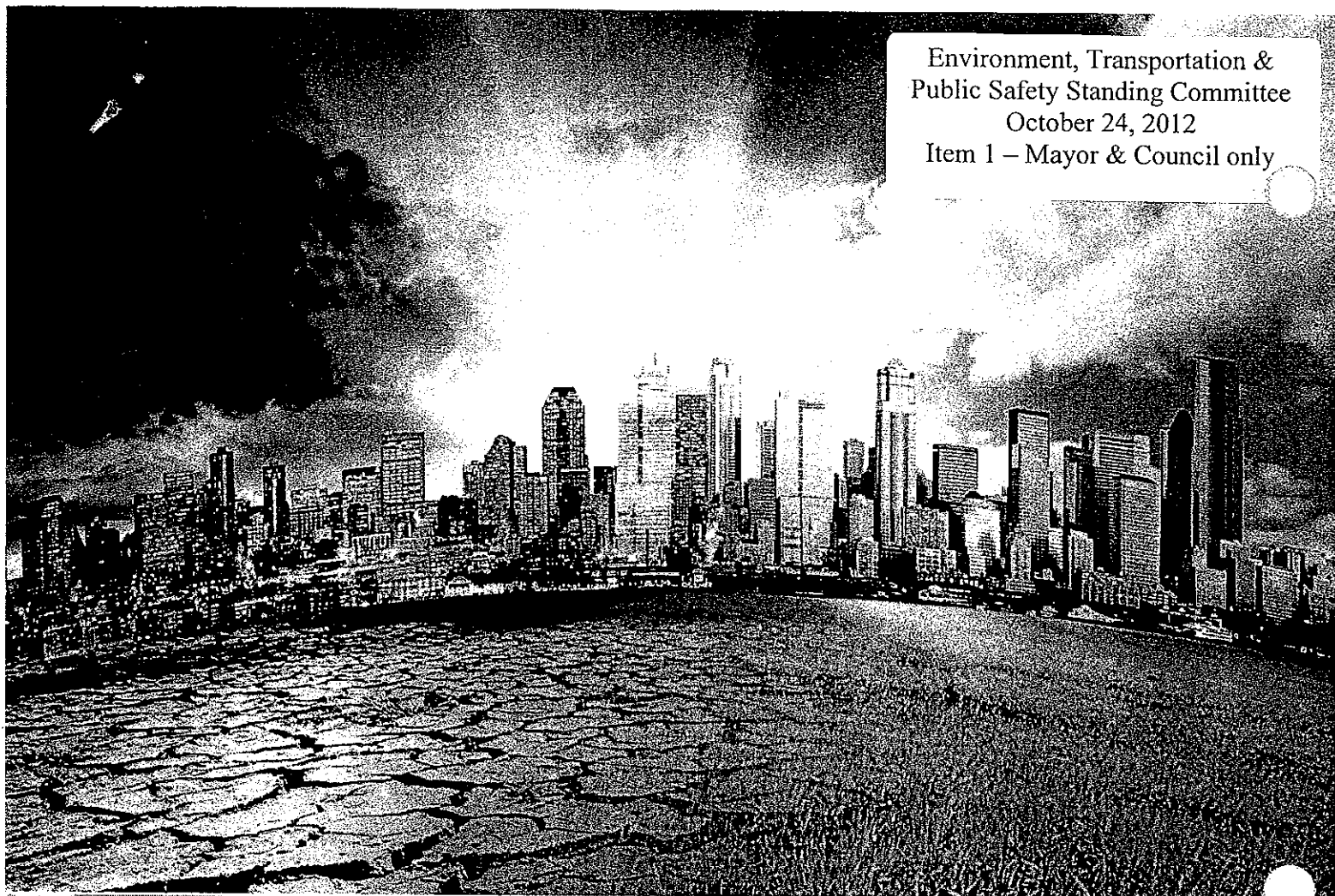
APPENDICES:
Final Climate Change Adaptation Plan (Enclosed for Mayor & Council due to size)

DEPARTMENTS/OTHERS CONSULTED:
Name:
Phone #: 519 ext.

NOTIFICATION :

Name	Address	Email Address	Telephone	FAX

Environment, Transportation &
Public Safety Standing Committee
October 24, 2012
Item 1 – Mayor & Council only



City of Windsor

Climate Change Adaptation Plan

September 2012



THE CITY OF
WINDSOR