

# Agenda

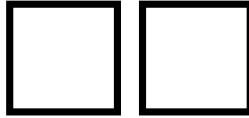
## Advisory Committee on the Environment

4th Meeting of the Advisory Committee on the Environment  
March 7, 2018, 12:15 PM  
Committee Room #4

	Pages
<b>1. Call to Order</b>	
1.1 Disclosures of Pecuniary Interest	
<b>2. Scheduled Items</b>	
2.1 12:15 PM Orest Katolyk, Chief Municipal Law Enforcement Officer – Proposed Public Nuisance By-law Amendment to Address Odour	3
2.2 12:30 PM Barry Orr, Sewer Outreach and Control Inspector – Overview of Current Issues With Respect to What is Going Down Drains/Toilets	11
<b>3. Consent</b>	
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<b>5. Items for Discussion</b>	
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<b>6. Deferred Matters/Additional Business</b>	

**7. Adjournment**

Next meeting April 4, 2018



<b>TO:</b>	<b>CHAIR AND MEMBERS COMMUNITY AND PROTECTIVE SERVICES COMMITTEE MEETING ON FEBRUARY 21, 2018</b>
<b>FROM:</b>	<b>G. KOTSIFAS, P. ENG. MANAGING DIRECTOR, DEVELOPMENT &amp; COMPLIANCE SERVICES AND CHIEF BUILDING OFFICIAL</b>
<b>SUBJECT:</b>	<b>PROPOSED PUBLIC NUISANCE BY-LAW AMENDMENT TO ADDRESS ODOUR</b>

<b>RECOMMENDATION</b>
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That on the recommendation of the Managing Director, Development and Compliance Services and Chief Building Official:

- (a) the report and attached draft Public Nuisance By-law amendment (Schedule “A”) to address nuisance odours related to Anaerobic Digestion Facilities, Composting Facilities and Rendering Plants **BE RECEIVED**;
- (b) the attached draft by-law amendment (Schedule “A”) **BE REFERRED** to a public participation meeting to be held by the Community and Protective Services Committee on April 4, 2018 for the purpose of seeking public input on the draft by-law;
- (c) municipal enforcement activities **BE ENHANCED** through the hiring of one additional Municipal Law Enforcement Officer on a two-year, temporary basis with the budget not to exceed a maximum of \$90,000 per year with the source of funding from the Sanitary Landfill Site Reserve Fund; it being noted, that this amount and source of funding was previously approved by Council for enhanced Provincial compliance activities however further dialogue has resulted in complementary compliance and enforcement activities that are maintained within each level of government’s legal responsibilities to avoid duplication; and
- (d) Civic Administration **BE DIRECTED** to report back after one year of administration and enforcement of the Public Nuisance By-law regulations pertaining to odour.

<b>PREVIOUS REPORTS</b>
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Review of Impacts from Industrial Sources ( Focus on Odour) and Potential Municipal Actions ( Primarily South of Highway 401) PEC - August 28, 2017

Update & Next Steps – Review of Impacts from Industrial Sources (Focus on Odour) and Potential Municipal Actions (Primarily South of Highway 401), PEC - April 24, 2017

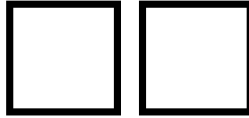
Comments - Orgaworld Canada Ltd, PEC - November 13, 2012

Various submissions and comments were made by delegations and participants at the Public Participation Meeting held on November 13, 2012

<b>BACKGROUND</b>
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Municipal Council, at its meeting held on September 5, 2017 resolved:

That, on the recommendation of the Managing Director, Development & Compliance Services and Chief Building Official and the Managing Director, Environmental & Engineering Services and City Engineer, the following actions be taken with respect to current and potential odour challenges from waste management facilities near the communities of Brockley, Shaver and Glanworth :



f) the Provincial Government's local MOECC compliance activities with respect to waste management and industrial facilities in south London BE ENHANCED through direct funding from the City of London, for a two-year period;

g) the source of funding for the MOECC's enhanced compliance activities noted in f), above, BE APPROVED up to a maximum of \$90,000 per year for two years from the Sanitary Landfill Site Reserve Fund; it being noted that the draw from the Reserve Fund may not be required should the service area generate a surplus position at year end;

h) a Pilot Project (May to August 2018) BE IMPLEMENTED by the City of London in order to test an odour detection device to enhance its monitoring capabilities and/or facilitate the imposition of charges for non-compliance;

m) the Civic Administration BE DIRECTED to report back to with proposed amendments to the City of London's Nuisance By-law to address the odor concerns raised by the public, including information with respect to additional resources that may be required to enforce the By-law.

This report addresses the above applicable resolution items from the Council Resolution noting that the others items contained within the August 28, 2017 report deal with matters under the jurisdiction of Civic Works Committee.

<b>DISCUSSION</b>
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The issue of odours is complex as the possible impacts of odours range from mere detection to a causing a public nuisance. Usually, the impact of odour is described in terms of five different dimensions, which are commonly referred to as the acronym "FIDOL":

- the **F**requency that an odour is detected during a given time period
- the **I**ntensity of the odour
- the **D**uration of the period in which the odour remains detectable
- the **O**ffensiveness or strength of the odour
- the **L**ocation or source of the odour

Municipal Law Enforcement Services primarily address negative externalities and quality of life issues predominantly in response to citizen complaints. Based on provincial legislative authority conferred to municipalities to address public nuisance and quality of life issues, numerous by-laws are currently in place and actively enforced. The courts have described public nuisance as conduct that amounts to an attack upon the rights of the public generally to live their lives unaffected by inconvenience, discomfort and other forms of interference. Section 128 of the *Municipal Act, 2001* provides that the City may prohibit and regulate with respect to public nuisances, and that the opinion of Council is not subject to review by the courts if Council's opinion is arrived at in good faith.

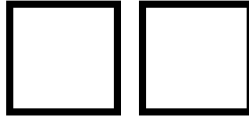
The Municipal Act (sec 10.2) sets out broad authority to a municipality to pass by-laws respecting the following matters:

5. Economic, social and environmental well-being of the municipality, including respecting climate change.
6. Health, safety and well-being of persons.
8. Protection of persons and property, including consumer protection.

The Municipal Act, 2001 authorizes a municipality to pass by-laws regulating public nuisances.

*128. (1) Without limiting sections 9, 10 and 11, a local municipality may prohibit and regulate with respect to public nuisances, including matters that, in the opinion of council, are or could become or cause public nuisances. 2001, c. 25, s. 128 (1); 2006, c. 32, Sched. A, s. 68.*

*(2) The opinion of council under this section, if arrived at in good faith, is not subject to review by any court.*



Section 129 of the Municipal Act, 2001 authorizes a municipality to pass by-laws to prohibit and regulate with respect to odour.

**129.** *Without limiting sections 9, 10 and 11, a local municipality may,*  
 (a) *prohibit and regulate with respect to noise, vibration, odour, dust and outdoor illumination, including indoor lighting that can be seen outdoors; and*  
 (b) *prohibit the matters described in clause (a) unless a permit is obtained from the municipality for those matters and may impose conditions for obtaining, continuing to hold and renewing the permit, including requiring the submission of plans.*

As noted in the August 28, 2017 PEC report, there are several Canadian municipalities which have attempted to address odour within their municipal by-law regime. Although many different approaches are used, not any one approach is the ultimate solution. Civic Administration undertook further research of American municipal ordinances specific to odour and detection methodology.

Many ordinances reference the use of a field olfactometer for odour detection. This device is used to measure and quantify odour strength in the surrounding ambient air. Readings are taken by the user sniffing the air through the device and making a determination whether they detect an odour or not. The device comes equipped with carbon filters which are able to filter out odorous particles from the air. The unit of measurement for odour is called the dilution to threshold ratio (D/T) which is the volume of clean air divided by the volume of odorous air. A D/T value of 0 means that the user will be sniffing 100% carbon filtered air without any odour particles in the sample. The higher the D/T value at which the smell is detected, the more powerful the odour. In attending and reviewing presentations at scientific odour conferences and a review of odour ordinances, any odour detected at a D/T value of seven or higher can be considered a public nuisance for regulatory purposes.

Field olfactometers allow enforcement officers to confidently monitor odour strength at specific locations within the community. A standard operating procedure will be prepared to implement processes for random odour monitoring, scheduled monitoring and monitoring in response to citizen complaints. Random testing will include taking odour readings in the area of municipal facilities, such as the City's Landfill W12A and the Dingman Pumping station for the purposes of data collection and continuous improvement of odour mitigation. City facilities will be exempt from municipal enforcement.

As part of the program, a select number of MLEOs will be tested as to their ability to detect and differentiate various strengths of odours. Reporting and data gathering standard operating procedures will be developed and implemented.

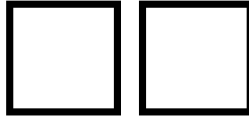
The proposed Nuisance By-law amendment includes two key definition categories focusing on the source of the odour and the location of the odour.

To address sources of the odour the following definitions are proposed:

- “Anaerobic Digestion Facility” means a facility where anaerobic processes are used to digest organic waste and includes an “anaerobic digestion facility” for which an approval under the Environmental Protection Act has been issued;
- “Composting Facility” means a facility where aerobic processes are used to process non-hazardous organic products to be used as a soil conditioner, and includes an “aerobic composting facility” for which an approval under the Environmental Protection Act has been issued, but does not include composting incidental to a residential use, an institutional use, nor an agricultural use;
- “Rendering Facility” means a facility at which dead animals are processed into hides, meat, bone, meal, meat meal or inedible fats;

To address the receiver of the odour, the following definition is proposed:

- “Sensitive Receptor” means any location, external to the Facility site, where routine or normal activities occurring at reasonably expected times could experience adverse effects from unreasonable odour discharges from the Facility, including one or a combination of:
  - a) private residences or public facilities where people sleep, including dwellings, hotels, motels, nursing homes, hospitals, trailer parks, and camping grounds;



- b) institutional facilities (including schools, churches, community centres, day care centres, and recreational centres);
- c) outdoor public recreational areas (including trailer parks, play grounds, and picnic areas); and
- d) other outdoor areas where the public congregates (including commercial shopping centres, and office buildings).

The amendment includes a “deeming provision” describing an unreasonable odour:

- at a Sensitive Receptor, odour is detected in a sample of ambient air after it is diluted with at least seven equally sized samples of odour-free air for two samples not less than fifteen minutes apart within a one-hour period, as measured by any instrument, device or method designated by the Manager of Municipal Law Enforcement to be used in the determination of the unreasonableness of an odour.

The draft amendment includes a fine set at a daily maximum of \$50,000 for the first offence plus a special fine of \$50,000. For subsequent offences, the daily maximum fine is set at \$100,000 plus a maximum special fine of \$100,000. The Municipal Act permits special fines designed to eliminate or reduce any economic advantage or gain from contravening the by-law. This range of fines is used by the courts as a result of a conviction resulting from a Part III Information. The City will also seek a new set fine order for the issuance of Part I’s (tickets).

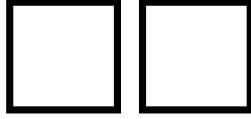
Civic Administration previously recommended an Enhanced MOECC Compliance Initiative with the local MOECC office with direct municipal funding for a two year period (refer to item (f) and (g) in the above resolution). This item was further discussed with MOECC local officials to determine the overall practicality, jurisdictional requirements and other implications to address the direction of Municipal Council and the intended outcomes of enhanced compliance activities. During these discussions, the City prepared amendments to the Public Nuisance By-laws including compliance and enforcement measures (e.g., Part I set fines and Part III Information submitted to the courts). It was determined that compliance and enforcement activities can run in parallel. Each level of government has distinct compliance and enforcement powers on the matter of odours and a separate municipal program is a better representation of the enhancement directed by Municipal Council.

Enforcement of the above Public Nuisance By-law amendment will require additional enforcement resources as response to odour complaints requires an enhanced response protocol to undertake odour detection measurements at the location of the sensitive receptor. In order to implement this enforcement program, one addition Municipal Law Enforcement Officer will be required on a two year temporary basis. The cost of this position including office equipment and vehicle will be funded by the previously approved Sanitary Landfill Site Reserve Fund which was slated for the Enhanced MOECC Compliance proposal. There will be no impact on the approved municipal budget.

<b>CONCLUSION</b>
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Civic Administration recommend that a Public Participation Meeting (PPM) be held on the proposed amendments to the Public Nuisance By-law to address nuisance odours. In order to meet a timeline of implementing an odour enforcement protocol for the spring of 2018, this PPM is tentatively scheduled for April 4, 2018.

<b>PREPARED BY:</b>	<b>RECOMMENDED BY:</b>
<b>O. KATOLYK, MLEO ( c ) CHIEF MUNICIPAL LAW ENFORCEMENT OFFICER</b>	<b>GEORGE KOTSIFAS, P. ENG. MANAGING DIRECTOR, DEVELOPMENT AND COMPLIANCE SERVICES &amp; CHIEF BUILDING OFFICIAL</b>

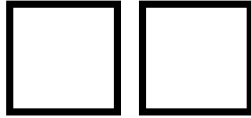


cc. Kelly Scherr, City of London EES  
Jay Stanford, City of London EES

Orgaworld Canada Ltd, Michael Leopold, General Manager  
2940 Dingman Drive, London Ontario N6N 1G4

StormFisher Environmental Ltd., Brandon Moffatt, P.Eng, MBA, Vice President  
Development & Operations, 1087 Green Valley Road, London, Ontario N6N 1E4

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Schedule "A"

Bill No.  
2018

By-law No. PH-18-

A by-law to amend By-law PH-18 entitled, "A by-law to prohibit and regulate public nuisances within the City of London."

WHEREAS section 5(3) of the *Municipal Act, 2001* S.O. 2001, c.25 ("*Municipal Act, 2001*"), provides that a municipal power shall be exercised by by-law;

AND WHEREAS subsection 10(2) of the *Municipal Act, 2001* provides that a municipality may pass by-laws respecting: 5. Economic, social and environmental well-being of the municipality; 6. Health, safety and well-being of persons; 8. Protection of persons and property;

AND WHEREAS section 128 of the *Municipal Act, 2001* provides that, without limiting sections 9 and 10, a municipality may prohibit and regulate with respect to public nuisances, including matters that, in the opinion of Council, are or could become or cause public nuisances, and the opinion of Council under this section, if arrived at in good faith, is not subject to review by any court;

AND WHEREAS, in the opinion of Council, unreasonable odour from certain Facilities is or could become or cause a public nuisance;

AND WHEREAS section 129 of the *Municipal Act, 2001* provides that, without limiting sections 9 and 10, a municipality may prohibit and regulate with respect to odour;

AND WHEREAS section 429 of the *Municipal Act, 2001* provides that a municipality may designate continuing offences, and may establish special fines in addition to the regular fine for an offence which are designed to eliminate or reduce any economic advantage or gain from contravening the by-law;

NOW THEREFORE the Municipal Council of The Corporation of the City of London enacts as follows:

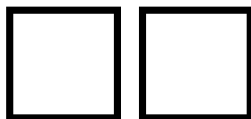
1. Section 1 of By-law PH-18 is amended by inserting the following new definitions after the definition of "Dwelling":

**"Facility"** means an "Anaerobic Digestion Facility", a "Composting Facility", or a "Rendering Facility";

**"Anaerobic Digestion Facility"** means a facility where anaerobic processes are used to digest organic waste and includes an "anaerobic digestion facility" for which an approval under the *Environmental Protection Act* has been issued;

**"Composting Facility"** means a facility where aerobic processes are used to process non-hazardous organic products to be used as a soil conditioner, and includes an "aerobic composting facility" for which an approval under the *Environmental Protection Act* has been issued, but does not include





composting incidental to a residential use, an institutional use, nor an agricultural use;

**“Rendering Facility”** means a facility at which dead animals are processed into hides, meat, bone, meal, meat meal or inedible fats;

2. Section 1 of By-law PH-18 is amended by inserting the following new definition after the definition of “Municipality”:

**“Manager of Municipal Law Enforcement”** means the Chief Municipal Law Enforcement Officer;

3. Section 1 of By-law PH-18 is amended by inserting the following new definition:

**“Sensitive Receptor”** means any location, external to the Facility site, where routine or normal activities occurring at reasonably expected times could experience adverse effects from unreasonable odour discharges from the Facility, including one or a combination of:

- (a) residences and facilities where people sleep (including dwellings, hotels, motels, nursing homes, hospitals, trailer parks and camping grounds);
- (b) institutional facilities (including schools, churches, community centres, day care centres and recreational centres);
- (c) outdoor public recreational areas (including trailer parks, play grounds and picnic areas); and
- (d) other outdoor areas where the public congregates (including exterior areas of commercial shopping centres and office buildings).

4. Section 2, subsection 2(1) and subsection 2(2) of By-law PH-18 are amended by renumbering them as section 2.1, and subsections 2.1(1) and 2.1(2) respectively.

5. Section 3 of By-law PH-18 is amended by renumbering it as section 2.2.

6. Section 4, subsection 4(1) and subsection 4(2) of By-law PH-18 are amended by renumbering them as section 2.3, and subsections 2.3(1) and 2.3(2) respectively.

7. By-law PH-18 is amended by inserting the following new section 2.4 after subsection 2.3(2):

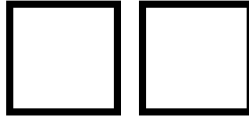
**“2.4. NUISANCE ODOURS – Composting Facility, Anaerobic Digestion Facility, Rendering Facility**

2.4(1) No owner, operator, occupant or tenant of a Facility shall make, cause or permit an unreasonable odour to be emitted that is detectable at a Sensitive Receptor.

2.4(2) Without limiting the generality of subsection 2.4(1), the following shall be deemed to be unreasonable odour:

- (a) at a Sensitive Receptor, odour is detected in a sample of ambient air after it is diluted with at least seven equally sized samples of odour-free air for two samples not less than fifteen minutes apart within a one-hour period, as measured by any instrument, device or method designated by the Manager of Municipal Law Enforcement to be used in the determination of the unreasonableness of an odour.

2.4(3) The provisions in subsection 2.4(1) shall not apply to odours arising from any City-owned or City-operated Facility.”



8. Section 8 of by-law PH-18 is deleted and replaced with new section 8 and subsections 8(1) and 8(2):

**“8. PENALTY**

8(1) Every person who contravenes any provision of this By-law is guilty of an offence, and on conviction is liable to:

- (a) a maximum fine of \$10,000; and
- (b) for convictions under subsections 2.3 (1), 2.3(2), or 5(4), a minimum fine of \$500.

8(2) (a) Subsection 2.4(1) of this By-law is a continuing offence.

- (b) Despite subsection 8(1), every person who contravenes subsection 2.4(1) of this By-law is guilty of an offence and on conviction is liable to a maximum regular fine of \$10,000 per day, plus a maximum special fine of \$100,000 per day.”

9. This by-law shall come into force and effect on the day it is passed.

PASSED in Open Council on \_\_\_\_\_, 2018.

Matt Brown  
Mayor

Catharine Saunders  
City Clerk

First Reading -  
Second Reading -  
Third Reading -

<b>TO:</b>	<b>CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING OF MAY 24, 2017</b>
<b>FROM:</b>	<b>KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL &amp; ENGINEERING SERVICES AND CITY ENGINEER</b>
<b>SUBJECT</b>	<b>INTERNATIONAL WATER INDUSTRY POSITION STATEMENT ON NON-FLUSHABLE AND 'FLUSHABLE' LABELLED PRODUCTS</b>

**RECOMMENDATION**

That, on the recommendation of the Managing Director, Environmental & Engineering Services & City Engineer, the International Water Services Flushability Group and Canadian Water and Wastewater Association position statements on non-flushable and 'flushable' labelled products **BE ENDORSED**.

**PREVIOUS REPORTS PERTINENT TO THIS MATTER**

None.

**2015-19 STRATEGIC PLAN**

The following report supports the Strategic Plan through a focus on Building a Sustainable City by Working together to protect all aspects of our natural environment including woodlands, wetlands, river and watercourses, and air quality as our city grows.

**BACKGROUND**

**Purpose**

This report seeks Municipal Council's support for the Canadian Water and Wastewater Association (CWWA) and International Water Services consortium (IWS) position statements on flushable/non-flushable product labelling.

**Context**

The global use of products marketed as "flushable" wipes has increased dramatically in recent years and has added an estimated \$250 million in operational costs to wastewater utilities across Canada. Several technical committees attempting to develop standards to protect wastewater systems have been unsuccessful so far.

## DISCUSSION

Improperly labelled wipes flushed into the municipal sewer systems can lead to backups and overflows into homes, businesses and the natural environment. Many products labelled as “flushable” do not disintegrate and are not biodegradable in wastewater systems. Associated utility costs include increased maintenance and repairs as well as property and environmental cleanup. When combined with other sewer discharge problems, such as fats, oils and grease (FOG), homes are also at risk of experiencing a backup from clogs in their own private drainage systems.

London has recognized these concerns and is presently communicating sewer system performance and cost concerns to the public through education and promotion programs:

- [Your Toilet is Not a Garbage Can](#)
- [Your Turn](#)
- [Washing Initiative to Protect Our Environment \(WIPE\)](#)

These programs are included on the City web site and are visible at public and environmental awareness events (Home Show, festivals, etc.)

Recognizing that more actions beyond public education is required, the City of London hosted the first International Standards (ISO) meeting in 2014 to develop standards for labelling and disposal of “flushable” products. Unfortunately this work has been suspended; between ISO and the Association of Nonwoven Fabrics Industry (INDA) there is not an agreement on the wastewater industry recommendations to strengthen the tests that evaluate the disintegration of these products in wastewater systems. Similarly, attempts to reach agreement on an updated INDA guideline have not been successful.

In response to these results, the IWS was created. It is an informal coalition of currently 300 stakeholders in 25 countries supporting IWS and the CWWA position statements that are willing to continue to pursue a legislated standard. The position statements make the interests of wastewater utilities clear. The [IWS statement](#) is included as Appendix “A” and the CWWA statement as Appendix “B”.

A set of tests agreed upon by the IWS to define characteristics of what is “flushable” and will not harm wastewater infrastructure is to be proposed to the Federal Government. Preliminary discussions have already taken place with Industry Canada, the Ministry of Government Consumer Services and the Competition Bureau. Any developed Federal testing and labelling standard (whether international or North American) would require adoption within Canada as a Canadian Standard to be enforceable.

The proposed IWS work maintains the past ISO goal to develop a Canadian national standard. However, funding is required to continue this work. The proposed contribution for a city the size of London is \$1,000. The financial contribution would be part of an initial \$150,000 effort on the research and development of ‘flushable’ test methods using 3<sup>rd</sup> party laboratories to confirm reliability of the test methods and for material analyses, as noted in Appendix C. Funding for London’s contribution is available within the Sewer Operating Budget.

Approval of the recommendations in this report will result in London being added to the growing list of world-wide supporters (including other municipalities across Canada) of the IWS and CWWA position statements, provision of \$1000 to support technical work, and the continued involvement of City technical staff in standard development.

<b>CONCLUSION</b>
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Supporting the IWS and the CWWA position statements and development of a flushable standard will help ensure wastewater utilities and supporting organizations have strong representation in the development of Federal testing and labelling standards for “flushable” wipes. To continue the work towards a standard a financial contribution of \$1000 would be provided.

**Acknowledgements**

This report was prepared with the help of Tony Van Rossum, P.Eng. Environmental Services Engineer and Barry Orr, Sewer Outreach and Control Inspector of the Wastewater Treatment Operations Division.

<b>PREPARED BY:</b>	<b>REVIEWED AND CONCURRED BY:</b>
<b>GEORDIE GAULD, DIVISION MANAGER WASTEWATER TREATMENT OPERATIONS</b>	<b>JOHN LUCAS, P. ENG. DIRECTOR, WATER AND WASTEWATER</b>
<b>RECOMMENDED BY:</b>	
<b>KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR ENVIRONMENTAL &amp; ENGINEERING SERVICES AND CITY ENGINEER</b>	

Support of the International Wastewater Industry position statement May2017CWC Report fnl

TVR

- Attach:
- Appendix “A” – International Water Industry Position Statement on Flushable/non-flushable labelled products
  - Appendix “B” Canadian Wastewater Industry Statement on Flushable/Non-flushable Products
  - Appendix “C” Support and Funding for a Canadian Standard for Flushable Consumer Products

## APPENDIX A

### International water industry position statement on non-flushable and 'flushable' labelled products

To prevent problems with sewers, pipe and toilet blockages plus the human and environmental cost of sewer flooding and pollution, the organisations signing this statement below agree that:

- Only the 3Ps – Pee, Poo and toilet Paper – should be flushed.
- Currently, all wipes and personal hygiene products should be clearly marked as “Do Not Flush” and be disposed of in the bin or trashcan.
- Wipes labelled “Flushable” based on passing a manufacturers’ trade association guidance document should be labelled “Do Not Flush” until there is a standard agreed by the water and wastewater industry.
- Manufacturers of wipes and personal hygiene products should give consumers clear and unambiguous information about appropriate disposal methods.

- Looking to the future, new innovations in materials might make it possible for certain products to be flushed, if they pass a technical standard which has been developed and agreed by the water and wastewater industry\*. Preferably this standard would be developed under the banner of the International Standards Organisation (ISO).
- Key requirements for any standard include that the product:
  - a) breaks into small pieces quickly;
  - b) must not be buoyant;
  - c) does not contain plastic or regenerated cellulose and only contains materials which will readily degrade in a range of natural environments.

*\*and in compliance with local legislative requirements*

### Déclaration du secteur de l'industrie internationale de l'eau sur les produits étiquetés non jetables et «jetables» dans les toilettes.

Pour éviter les problèmes environnementaux et économiques provoqués par l'obstruction des toilettes, des égouts et canalisations, les organisations signataires de cette déclaration ont convenu que:

- Seuls les urines, les selles et les papiers toilette doivent être jetés dans les toilettes.
- Actuellement, toutes les lingettes et les produits d'hygiène personnelle doivent être clairement étiquetés comme «non jetables dans les toilettes» et jetés dans la poubelle
- Les lingettes étiquetées «jetables dans les toilettes» et qui sont basées sur l'ancien document d'orientation de l'association commerciale des fabricants devraient être étiquetées «non jetables dans les toilettes» jusqu'à ce qu'une norme acceptable soit élaborée pour le secteur de l'eau et de l'assainissement.
- Les fabricants de lingettes et de produits d'hygiène personnelle

devraient donner aux consommateurs une information claire et sans ambiguïté sur les méthodes appropriées d'élimination.

- À l'avenir, de nouvelles innovations dans les matériaux pourraient permettre à certains produits d'être jetables dans les toilettes, s'ils se conforment à la norme technique élaborée et approuvée par l'industrie de l'eau potable et des eaux usées\*. De préférence, cette norme sera élaborée sous l'égide de l'Organisation internationale de normalisation (ISO).
- Les exigences requises pour cette norme stipulent que le produit:
  - a) se brise en petits morceaux rapidement;
  - b) ne flotte pas;
  - c) ne contient pas de plastiques ou de cellulose régénérée et ne contient que des matériaux qui se dégradent facilement dans le milieu naturel.

*\*Et en conformité avec les exigences législatives locales*

### Declaración sobre la posición del sector internacional del agua respecto a los productos no aptos para desechar por el inodoro y aquellos etiquetados como aptos

Para evitar los problemas medioambientales y económicos provocados por obstrucciones y daños en los equipos de las redes de alcantarillado y estaciones depuradoras, las organizaciones y entidades operadoras de aguas residuales que firman esta declaración acuerdan que:

- Por el inodoro sólo deben desecharse la orina, heces y papel higiénico (las 3Ps del Inglés: Pee, Poo and -Toilet-Paper).
- Actualmente, todas las toallitas y productos de higiene personal deben estar claramente etiquetados como “No tirar al inodoro” y ser desechados en la papelera o basura.
- Las toallitas y productos etiquetados como “Aptos para tirar por el inodoro” basados en una guía de recomendaciones de las asociaciones de fabricantes deben ser etiquetados como “No tirar por el inodoro” hasta que se acuerde un estándar técnico con el sector del agua.
- Los fabricantes de toallitas y productos de higiene personal deberían proporcionar a los consumidores información clara

y concisa sobre los métodos de desecho apropiados.

- Mirando al futuro, las nuevas innovaciones en materiales podrán hacer posible que algunos productos sean etiquetados como “Aptos para tirar por el inodoro” una vez cumplan un estándar técnico que haya sido desarrollado y acordado con el sector del agua. Este estándar debería elaborarse preferiblemente en el marco de la Organización Internacional de Estandarización (ISO, por sus siglas en Inglés).
- Los requerimientos clave para cualquier futuro estándar incluyen que el producto:
  - a) se fragmente en pedazos rápidamente;
  - b) no flote;
  - c) no contenga plástico o celulosa regenerada y sólo contenga materiales que se degraden fácilmente en una variedad de entornos naturales.

*\*y en cumplimiento con los requerimientos de la legislación local*

## APPENDIX B

### CWWA Statement on Flushable/Non-flushable Products

#### Executive Summary

All around the world, water/wastewater utilities (municipal and/or regional governments) have the task to treat and deliver drinking water to homes and businesses and then collect and treat the associated wastewater. We must do so in a way that ensures safe drinking water, protects the local environment and does so in the most economically-efficient manner to ensure systems are sustainable, viable and affordable.

Our wastewater collection systems were designed to convey what we refer to as the “3Ps” - Pee, Poop and Paper (toilet paper). Other items entering our collection systems cause tremendous problems with sewer and equipment clogs or damage, and effect our ability to deal with the final sludge from our treatment. These products cost local utilities 250 million dollars every year in additional maintenance, repairs, replacements and transportation. Clogs can cause overflows that threaten the local environment and wildlife.

As the water/wastewater utilities (municipal and/or regional governments), we continue to educate our citizens on the 3Ps and discourage the use of toilets as garbage cans for paper towels, fats/oils/grease, medications, hygiene products etc. Meanwhile, some manufacturers are marketing wipes and other products labeled ‘flushable’ and are encouraging users to flush their products into toilets. At the same time, other products commonly used in a bathroom are being labeled bio-degradable or disposable, leading to their disposal into a toilet.

Water and wastewater organizations that represent the water/wastewater utilities, municipal and/or regional government agree:

- Until a wastewater industry approved standard for Flushability is established, only the 3Ps – should be flushed.
- All products designed to come in contact with human waste and/or related germs while in the bathroom that have a high likelihood of being flushed into a toilet (including wipes and personal hygiene products) should be clearly marked as ‘non-flushable’. Such labelling should:
  - Use the words “**Do Not Flush**” and a clearly understood symbol
  - Be clearly visible to the consumer at point of purchase
  - Be clearly visible for user at point of dispensing
  - Include instructions for the product to be disposed of in the bin or garbage/trash
- We do not accept INDA/EDANA’s (manufacturer trade groups) Guidance Document 3 (GD3) or any other manufacturing industry’s determination of ‘Flushability’ at this time. Until there is a standard agreed upon by the wastewater utility industry, all such products should be labeled as “**Do Not Flush**” as laid out above.
- Key requirements for a Wastewater Utility Industry standard include that the product:
  - a) breaks into pieces quickly;
  - b) must not be buoyant;
  - c) does not contain plastic or regenerated cellulose and only contains materials which will readily degrade in a range of natural environments.

ORGANIZATION NAMES:





# Ontario Onsite Wastewater Association

SUPPORTING GROUPS:



environmental  
defence  
INSPIRING CHANGE



FRESHWATER™  
FUTURE

Ensuring the Healthy Future of Our Waters



THE COMPLETE WATER MAGAZINE



Atlas  
Dewatering Corporation



NORTON ENGINEERING

World Water & Wastewater Solutions

# SUSTAINABLE JOES™



Institute for Catastrophic  
Loss Reduction

Building resilient communities



## APPENDIX C



### Support and Funding for a Canadian Standard for Flushable Consumer Products

All of us in the wastewater sector understand the harmful impact that so-called flushable products have on our municipal wastewater systems. From additional maintenance, to equipment damage, to clogs and system failures to contamination of sludge, this issue is costing Canadian municipalities over \$250 million each year. The inappropriate labeling of products and counter-education of our customer's needs to be addressed. Currently, there are no standards, regulations or official definitions for the use of the term 'flushable'. A solution is needed that supports jobs and free trade, but not at the expense of our wastewater systems. MESUG and CWWA have combined forces to address this situation for Canadian utilities, but we need your support.

MESUG, the Municipal Enforcement Sewer Use Group, is a non-incorporated group of municipal enforcement professionals working together to address common issues regarding sewer use in Canadian municipalities. MESUG spearheaded this effort to bring awareness and then invited CWWA to be a partner to assist with financial administration and national/international outreach. CWWA, the Canadian Water and Wastewater Association, is a registered not-for-profit corporation that serves as the national professional association for our municipal sector. Together, MESUG and CWWA have been working on this issue for a few years, and working at it from various angles.

An ISO (international standard) initiative was commenced in 2014 by Canada through ISO's Technical Committee (TC) 224. Considerable progress was made on the development of a Technical Specification regarding the quality and characteristics of products that might be considered "flushable" and how products, flushable and non-flushable, might be clearly labeled. This international committee consisted of both utility representatives as well as those in the wipes manufacturing industry. This work was nearing completion when it was halted by a challenge from the manufacturers concerning test methods.

Over the same timeframe, INDA, the US-based trade association for non-woven products, sought collaboration with the major North American wastewater associations (CWWA, NACWA, WEF and APWA), to review and improve their voluntary Code of Practice and their Guidance Document for Assessing Flushability (GD3) of their products. A task group of wipes industry and municipal utility representatives worked to develop a more stringent fourth edition of the INDA Guidance Document – GD4, but this work halted by the end of 2016 when the manufacturers failed to accept proposals for new tests and pass/fail criteria provided by the wastewater associations.

INDA and the utility associations did however come to agreement on a new voluntary Code of Practice with better guidelines for labeling of any product that could likely be flushed – although we did not agree that any products could be considered flushable yet. You can obtain the new Code of Practice at: <http://www.inda.org/code-of-practice-download/>.

So this leaves us with the original question of "what is flushable?" With the suspension of the ISO work and collaboration with INDA failing, the wastewater associations joined together to form the **International Water Services Flushability Group (IWSFG)**. This informal coalition put together a position statement on non-flushable and flushable labelled products which is now supported by wastewater services in 25 countries and by over 300 stakeholders. You can see the position statement and the entire list at <http://bit.ly/MultiLangFlushabilityStatement>. The IWSFG is also developing a flushable product standard that would be acceptable to wastewater services.

#### How You Can Help:

Any developed standard (whether international or North American) would require adoption within Canada, as a Canadian Standard, to be enforceable. The ISO and continuing IWSFG work has paved the way, and saved much time, on the development of a Canadian national standard. However, funding is required to continue this work and move us forward toward the implementation of a standard into legislation.

We are requesting Canadian wastewater utilities to contribute to a common fund for the development, adoption and implementation of a Canadian Standard for ‘Flushability’. Previous quotes from standards associations estimate a cost in the range of \$150,000 over 18 months to develop a Canadian standard. Additional funds would be required to support lobbying efforts and the process to have such a voluntary standard adopted as an enforceable regulation. Given that the annual cost to Canadian utilities for responding to inappropriately flushed products is assessed at \$250 million, the cost-benefit ratio of this investment is clearly evident.

- Suggested donation levels, donation instructions and project details are attached

CWWA, as a registered and audited corporation, will provide the financial administration for the collection of the funds, the issuance of invoices as required, and the provision of receipts. All funds accepted will be documented by CWWA and held as restricted funds to be used only for the purposes outlined in this request. These funds will be overseen by a project subcommittee consisting of William Fernandes, the CWWA Vice President, Neil Thomas and Mike Darbyshire, both past CWWA Presidents. CWWA will be prepared to commence accepting donations by June 5, 2017 in line with the Window on Ottawa event.

**Conclusion:**

Thus far, the manufacturers have, in their own interests, decided what is ‘flushable’ in our sewer systems without any agreement from our wastewater professionals. MESUG and CWWA have put in a lot of time and effort into getting this ‘flushables’ issue this far, but now we need the help and support of our fellow municipalities to develop an enforceable standard. Let’s collectively put an end to the treatment of our sewer systems as garbage cans. If you believe that you are not being impacted by this issue, then please take a second glance. We are all impacted, as our systems are all fairly similar. (<https://www.youtube.com/watch?v=h0Egfc89-Q>)

If you have any questions or would like more information, please do not hesitate to call any one of us. This will be one of the best returns on investment that can be made, not only financially, but also environmentally, and something we will all be proud of.

Sincerely,

Jennifer Leno  
 MESUG Chairperson  
 905-372-7332  
[jleno@cobourg.ca](mailto:jleno@cobourg.ca)

Barry Orr  
 MESUG Spokesperson  
 519-963-0999  
[borr@london.ca](mailto:borr@london.ca)

Robert Haller  
 CWWA Executive Director  
 (613) 747-0524 ext.1  
[rhaller@cwwa.ca](mailto:rhaller@cwwa.ca)

### **Canadian Standard for Flushability Campaign**

Suggested donation levels are:

<b>Utility members (Population served)</b>	<b>Suggested Donation level</b>
> 1 million	\$10,000
> 500,000 to 1 million	\$5,000
> 100,000 to 500,000	\$1,000
up to 100,000	\$500
<b>Associate Members</b>	
Private sector	\$1,000

Show your leadership with your logo on the supporting organizations page on the CWWA website.

Payments are to be made to the Canadian Water and Wastewater Association with a note to direct funds to flushable standard campaign.

Canadian Water and Wastewater Association  
1010 Polytek Street Unit 11  
Ottawa, ON, K1J 9H9

Contact Account Receivable Clerk Louisa Spina for payment details, electronic banking, invoices and receipts.

Louisa Spina, CWWA Accounts Receivable  
(613)747-0524 ext 226  
lspina@cwwa.ca

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Funding will be directed in a two-stage approach:

Immediate (Short Term) Expenses:

- 1.) Research and final development of 'flushable' test methods;
- 2.) Retention of formally qualified 3<sup>rd</sup> party laboratories to confirm reliability of the test methods and confirmation of the wastewater approved pass/fail criteria; and
- 3.) Retention of qualified Fibre Analysis testing laboratories to analyze the materials used in 'flushable' products that do not biodegrade and contribute to microfiber issues in the aquatic environment.

Long Term Expenses:

- 1.) Education and Outreach programs such as "Toilets Are Not Garbage Cans"; and
- 2.) The expense to move the adoption of the standard into enforceable regulation.

<b>TO:</b>	<b>CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON DECEMBER 4, 2017</b>
<b>FROM:</b>	<b>KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL &amp; ENGINEERING SERVICES AND CITY ENGINEER</b>
<b>SUBJECT</b>	<b>PUBLIC EDUCATION AND COMMUNICATION PROGRAM: TOILETS ARE NOT GARBAGE CANS</b>

**RECOMMENDATION**

That, on the recommendation of the Managing Director, Environmental & Engineering Services & City Engineer, this report on approaches to educate and communicate to the public on what should and should not go into wastewater treatment plants, **BE RECEIVED** for information.

**PREVIOUS REPORTS PERTINENT TO THIS MATTER**

“International Water Industry Position Statement on Non-Flushable and ‘Flushable’ Labelled Products”, Civic Works Committee, May 24, 2017.

**2015-19 STRATEGIC PLAN**

The following report supports the Strategic Plan through a focus on *Building a Sustainable City* by working together to protect all aspects of our natural environment including woodlands, wetlands, river and watercourses and air quality as our city grows.

**BACKGROUND**

**Purpose**

The following report has been prepared in response to item b) of the following resolution of Municipal Council at its May 30, 2017 meeting:

- “5. *That the following actions be taken with respect to the International Water Services Flushability Group and Canadian Water and Wastewater Association position statement on ‘non-flushable’ and ‘flushable’ labelled products:*
  - a) *the International Water Services Flushability Group and Canadian Water and Wastewater Association position statements on ‘non-flushable’ and ‘flushable’ labelled products BE ENDORSED; and,*
  - b) *the Civic Administration BE REQUESTED to review and report back with respect to approaches to educate and communicate to the public with respect to what should and should not go into the waste treatment plants.”*

**Context**

The global use of products marketed as “flushable” wipes has increased dramatically in recent years and has added an estimated \$250 million in operational costs to wastewater utilities across Canada. Many products labelled as “flushable” do not disintegrate and can lead to backups and overflows into homes, businesses and the natural environment. When combined with other sewer discharge problems, such as

fats, oils and grease (FOG), homes are also at risk of experiencing a backup from clogs in their own private drainage systems. The International Water Service Flushability Group (IWSFG) has published draft specifications for public comment and are in the process of considering comments and reissuing the specifications.

## DISCUSSION

Improperly labelled wipes flushed into the municipal sewer systems can lead to backups and overflows into homes, businesses and the natural environment. Blockages caused by these wipes lead to increased maintenance and repairs costs as well as property and environmental damage. When combined with other sewer discharge problems, such as fats, oils and grease (FOG), homes are also at risk of experiencing a backup from clogs in their own private drainage systems.

The City of London has long recognized these concerns and has an ongoing community outreach program that communicates how the actions taken by Londoners impact the performance of the sewer system and ultimately impacts the environment. This outreach program is consistent of various educational websites, pamphlets for both home owners and business owners, as well as a series of educational videos that are available for view on the City of London's YouTube channel. These initiatives are described in the following sections.

### Web Content

#### ▪ **Your Turn**

Fats, oils and grease (FOG) cause London's sewer system major grief when they are poured down the sink or toilet. Sewers can become blocked when this FOG hardens. Backups can then occur which can lead to basement flooding. The City of London developed the "Your Turn" pollution prevention pilot project which encourages property owners to pour FOG waste into a supplied biodegradable cup, as shown below, to harden and then dispose of in their solid waste collections.



Figure 1: "Your Turn" cups for household cooking oils and fats

The City of London's "Your Turn" initiative has been adopted by other municipalities (i.e., Sarnia, Sudbury, Windsor and Essex County). "Your Turn" Cups have also partnered with the London Fire Department to educate about oil fires. The cups are available at London Public Libraries and EnviroDepots.

Web URL: <http://www.london.ca/residents/Sewers-Flooding/Sewage-Treatment/Pages/Your-turn.aspx>

- **Washing Initiative to Protect Our Environment**

Best practices in restaurants and food preparation sites can protect our environment and reduce costs for businesses by preventing grease blockages within drains. The City of London Wastewater Operations division launched this initiative to help restaurants reduce the amount of fats, oils and grease entering the sanitary sewer system from day-to-day operations by supplying training, education and preventative maintenance regarding proper disposal and preparation methods.

Web URL: <http://www.london.ca/residents/Sewers-Flooding/Sewage-Treatment/Pages/Wipe-program.aspx>

### **Residential Pamphlets:**

The following residential pamphlets are attached in Appendix 'A', Residential Best Practices Pamphlets.

- **Toilets are Not Garbage Cans**

Flushing the wrong things down your toilet can block sewer pipes. It is also extremely important to keep medicines and household wastes out of the toilet.

Web URL: <http://www.london.ca/residents/Sewers-Flooding/Sewage-Treatment/Documents/toilet-08-FINALREVires.pdf>

- **Storm Sewers**

Only rain down the drain. Storm water drains directly into the nearest creek, river or lake. This water is NOT treated.

Web URL: <http://www.london.ca/residents/Sewers-Flooding/Sewage-Treatment/Documents/stormsewer-06-FINALREVires.pdf>

- **Sinks are Not Garbage Cans**

Sewer pipes blocked by grease are an increasingly common cause of sewage back-ups in homes as well as causing raw sewage discharges to our environment.

Web URL: <http://www.london.ca/residents/Sewers-Flooding/Sewage-Treatment/Documents/sinks-not-garbage-cans.pdf>

- **Pools, Spas and Hot Tubs**

The chemicals you put down your storm drain go directly into our rivers and creeks.

Web URL: <http://www.london.ca/residents/Sewers-Flooding/Sewage-Treatment/Documents/pool-spa-06-FINALREVires.pdf>

- **Car Wash**

Why only rain should go down the drain. When you wash your car on your driveway or street, the soapy, dirty water runs into our creeks and river.

Web URL: [http://www.london.ca/residents/Sewers-Flooding/Sewage-Treatment/Documents/carwash\\_14\\_FINALREV\\_2013ires.pdf](http://www.london.ca/residents/Sewers-Flooding/Sewage-Treatment/Documents/carwash_14_FINALREV_2013ires.pdf)

- **Food Waste Grinders**

Added organic waste to our sewer system means added loads to treat at waste facilities. This directly increases operating costs and in the end, increases homeowner costs.

Web URL: <http://www.london.ca/residents/Sewers-Flooding/Sewage-Treatment/Documents/Grinder-09-FINAL-ires.pdf>



## **Business Pamphlets:**

The following business pamphlets are attached in Appendix 'B', Business Best Practices Pamphlets.

- ***Restaurant Grease***

Why you should dispose of grease properly for the food preparation business includes best practices. Cleaning food wastes and oil out of grease interceptors is required on a regular basis. The cleanout record sheet (provided on the City of London website) should be placed near the grease interceptor. Grease removal devices need to be maintained daily. The grease removal device cleanout record sheet (provided on the City of London website) needs to be filled in daily.

Web URL: <http://www.london.ca/residents/Sewers-Flooding/Sewage-Treatment/Documents/pamphlet-restaurantgrease.pdf>

- ***Outdoor Festivals Good Vendors***

Best practices for proper disposal of liquid wastes.

Web URL: <http://www.london.ca/residents/Sewers-Flooding/Sewage-Treatment/Documents/pamphlet-foodvendors.pdf>

- ***Construction Site Management***

Best practices for drainage, sediment and erosion control during construction.

Web URL: <http://www.london.ca/residents/Sewers-Flooding/Sewage-Treatment/Documents/pamphlet-construction.pdf>

- ***Best Practices for Dental Offices***

Proper waste disposal for dental offices.

Web URL: <http://www.london.ca/residents/Sewers-Flooding/Sewage-Treatment/Documents/pamphlet-dental.pdf>

- ***Best Practices for Automotive Services***

Best practices can be adopted to prevent motor oil, solvents, gasoline, etc. from entering the sewer system. Cleaning of interceptors is required on a regular basis. The oil/ grit cleanout record sheet (provided on the City of London's website) should be kept in the reception area on the wall for easy inspection.

Web URL: <http://www.london.ca/residents/Sewers-Flooding/Sewage-Treatment/Documents/Pamphlet-AUTO-SERVICE-STATIONS.pdf>

- ***Stormwater Oil and Grit Separators***

Best practices for business and multi-residential property owners.

Web URL: <http://www.london.ca/residents/Sewers-Flooding/Sewage-Treatment/Documents/pamphlet-oilandgrit%20separators.pdf>

## **Residential Web Videos:**

A series of public information videos for residents, titled "Protect Our Environment," has been created explaining the consequences of improperly disposing of household wastes. The videos educate the viewers on proper disposal methods. The videos in this series can be found on the City of London's YouTube channel and are highlighted below.

Web URL: <https://www.youtube.com/playlist?list=PL78B8A699ACD347EB>

- **Toilets are Not Garbage Cans**

The first video in the Protect Our Environment series explains why toilets are not the place to dump wipes, personal hygiene products, food, medicine, solvents, etc., and explain the consequences of improper disposal. The video also highlights proper disposal methods.



**Figure 2:** Public Outreach Information Video "Toilets are Not Garbage Cans"

- **Sinks are Not Garbage Cans**

Similar to the first featured video, the "Sinks are Not Garbage Cans" information video highlights the importance of not disposing of waste (i.e., fats, oils, grease, etc.) down sinks. Proper disposal of these household wastes helps to prevent/ avoid clogging of pipes and sewers.



**Figure 3:** Public Information Video "Sinks are Not Garbage Cans"

- **Protect our Storm Sewers**

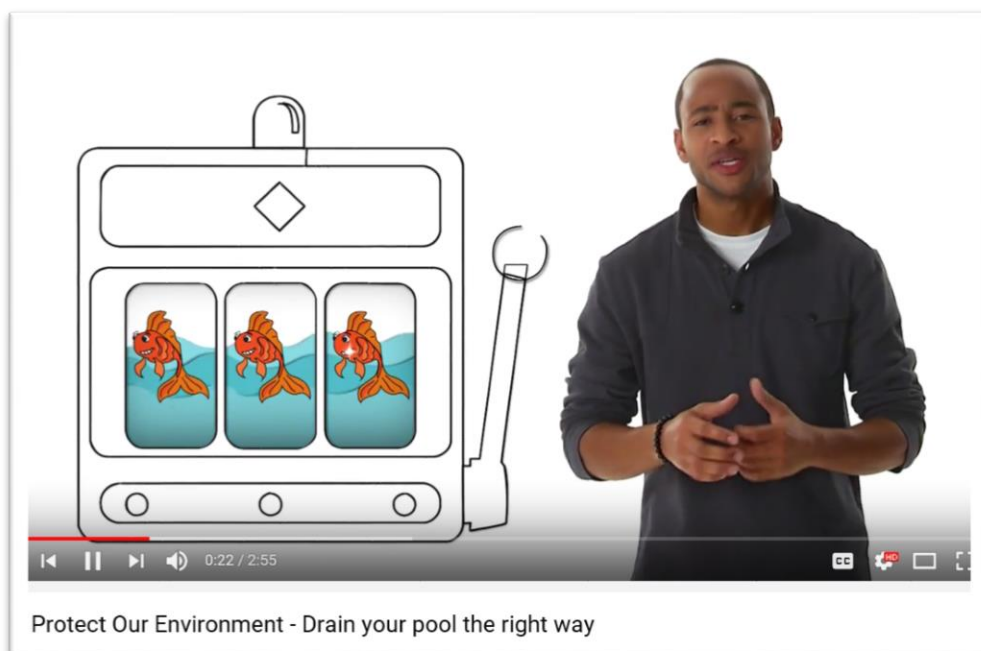
The third video in the Protect Our Environment series explains where unwanted waste (i.e., household wastes, trash, oils, etc.) in our storm sewers ends up and the effects this waste has on our natural environment and wildlife.



**Figure 4:** Public Information Video "Storm Sewers"

▪ ***Drain Your Pool the Right Way***

The last video in the homeowner series explains the consequences of improperly draining pool and hot tub water and the consequences this chlorinated water has on the natural environment and fish species. Proper disposal methods are discussed.



**Figure 5:** Public Information Video "Drain your Pool the Right Way"

**Business Web Videos**

Similarly, a series of videos directed at business owners was also created. The videos discuss best practices, waste management techniques and disposal methods for the following waste issues:

- Restaurant Grease;
- Oil and Grit;
- Construction Sites; and
- Auto Service Centres

The four videos within this series can be viewed on the City of London's YouTube channel. The weblink to this playlist is available below.

Web URL: [https://www.youtube.com/playlist?list=PL981myVISwVN\\_f\\_0Ne-9MxHDAHO\\_TIZCI](https://www.youtube.com/playlist?list=PL981myVISwVN_f_0Ne-9MxHDAHO_TIZCI)

### **Public Outreach Events**

All educational information highlighted in this report is available on the City of London website (weblinks provided) and has been featured in various displays at local community and environmental awareness events (i.e., Home Show, festivals, etc.) and in outreach programs with schools such as Western University and Fanshawe College. A World Environment Day special event on June 5, 2017 featured a special screening of The Water Brothers episode "The Big Leak" featuring City Staff member Barry Orr. The Water Brothers, Tyler and Alex Mifflin, attended the event that also included educational displays and a panel discussion on current and emerging water related issues.

### **Moving Forward**

The International Water Services Flushability Group (IWSFG) is a coalition of water service associations from Australia, Canada, Japan, New Zealand, Spain and United States to develop specifications for what is "flushable" and will not harm wastewater infrastructure. The City of London participates as a water services associate as part of this group and with active involvement by several City staff. The IWSFG has published draft specifications for public comment and are in the process of considering comments and reissuing the specifications. City staff will continue to support the IWSFG in the development of a flushable specification.

Web URL: <http://iwsfg.org/iwsfg-flushability-guidelines/>

## **CONCLUSION**

The City of London is a leader in wastewater related public education and outreach. Helping the public to understand what should and should not be discharged to our wastewater system decreases the risk of backups and reduces maintenance costs.

City staff will continue to support the work of the International Water Services Flushability Group with the goal of a flushable specification. Nationally we would continue to support the Municipal Enforcement Sewer Use Group (MESUG) and the Canadian Water and Wastewater Association (CWWA) so that the specification can be included in legislation for Canada.

### **Acknowledgements**

This report was prepared with the help of Tony Van Rossum, P.Eng. Environmental Services Engineer, Barry Orr, Sewer Outreach and Control Inspector of the Wastewater Treatment Operations Division and Monica McVicar, E.I.T., Wastewater and Drainage Engineering.

<b>PREPARED BY:</b>	<b>REVIEWED AND CONCURRED BY:</b>
<b>GEORDIE GAULD, DIVISION MANAGER WASTEWATER TREATMENT OPERATIONS</b>	<b>SCOTT MATHERS, P. ENG. MPA DIRECTOR, WATER AND WASTEWATER</b>
<b>RECOMMENDED BY:</b>	
<b>KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR ENVIRONMENTAL &amp; ENGINEERING SERVICES AND CITY ENGINEER</b>	

Cc: Tony Van Rossum  
Barry Orr  
Monica McVicar

Attach: Appendix 'A' – Residential Best Practices Pamphlets  
Appendix 'B' – Business Best Practices Pamphlets

**3RD REPORT OF THE**  
**ADVISORY COMMITTEE ON THE ENVIRONMENT**

Meeting held on February 7, 2018, commencing at 12:19 PM, in Committee Room #4, Second Floor, London City Hall.

**PRESENT:** S. Ratz (Chair), K. Birchall, M. Bloxam, S. Brooks, S. Hall, M. Hodge, L. Langdon, G. Sass, N. St. Amour and D. Szoller and J. Bunn (Secretary).

**ABSENT:** R. Harvey, J. Howell, T. Stoiber and A. Tipping.

**ALSO PRESENT:** T. Arnos, T. Copeland, M. McKillop, D. Pavletic and J. Stanford.

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**I. CALL TO ORDER**

1. Disclosures of Pecuniary Interest

That it BE NOTED that no pecuniary interests were disclosed.

**II. SCHEDULED ITEMS**

2. City of London's Pollution Prevention and Control Plan (PPCP)

That it BE NOTED that the ~~attached~~ presentation from M. McKillop, Environmental Services Engineer, related to the City of London's Pollution Prevention and Control Plan (PPCP), was received.

**III. CONSENT ITEMS**

3. 2nd Report of the Advisory Committee on the Environment

That it BE NOTED that the 2nd Report of the Advisory Committee on the Environment, from its meeting held on January 10, 2018, was received.

4. 1st Report of the Agriculture Advisory Committee

That it BE NOTED that the 1st Report of the Agricultural Advisory Committee, from its meeting held on January 17, 2018, was received.

5. 1st Report of the Waste Management Working Group

That it BE NOTED that the 1st Report of the Waste Management Working Group, from its meeting held on January 18, 2018, was received.

6. Public Information Centre #2 - Schedule B Environmental Assessment - East London Servicing Study

That it BE NOTED that the Notice of Public Information Centre #2 from K. Oudekerk, Wastewater Treatment Operations, City of London and T. Mahood, CH2M Hill Canada Limited, related to the Schedule B Environmental Assessment for the East London Servicing Study, was received.

**IV. SUB-COMMITTEES & WORKING GROUPS**

None.

**V. ITEMS FOR DISCUSSION**

7. Event Considerations for ACE in 2018

That it BE NOTED that the Advisory Committee on the Environment held a general discussion related to possible events to participate in, or host, in 2018.

8. Sub-Committee List

That it BE NOTED that the Advisory Committee on the Environment (ACE) held a general discussion related to the membership of the ACE Sub-Committees.

9. Work Plan

That the following actions be taken with respect to the Advisory Committee on the Environment (ACE) Work Plans:

- a) the revised, attached 2018 Work Plan for the Advisory Committee on the Environment BE FORWARDED to the Municipal Council for consideration; and,
- b) the revised, attached 2017 Advisory Committee on the Environment Work Plan Summary BE FORWARDED to the Municipal Council for their information.

**VI. DEFERRED MATTERS/ADDITIONAL BUSINESS**

10. (ADDED) West London Dyke Erosion Control - Municipal Class Environmental Assessment - Notice of Public Information Centre

That it BE NOTED that the Notice of Public Information Centre from C. Gorrie, Stantec Consulting Ltd. and S. Bergman, Stantec Consulting Ltd., related to the West London Dyke Erosion Control Municipal Class Environmental Assessment, was received.

11. (ADDED) Budget Adjustment - Event Funds

That the money, in the amount of \$10.75, left-over from the Urban Agriculture event held by the Advisory Committee on the Environment (ACE) in 2016 BE DEPOSITED into the ACE 2018 budget.

**VII. ADJOURNMENT**

The meeting adjourned at 1:50 PM.

**NEXT MEETING DATE: March 7, 2018**

**2ND REPORT OF THE  
ENVIRONMENTAL AND ECOLOGICAL PLANNING  
ADVISORY COMMITTEE**

Meeting held on January 18, 2018, commencing at 5:04 PM, in Committee Rooms #1 & #2, Second Floor, London City Hall.

**PRESENT:** S. Levin (Chair), E. Arellano, A. Boyer, C. Dyck, P. Ferguson, S. Hall, B. Krichker, C. Kushnir, S. Madhavji, K. Moser, S. Sivakumar, N. St. Amour, J. Stinziano, C. Therrien, R. Trudeau and I. Whiteside and H. Lysynski (Secretary).

**ABSENT:** E. Dusenge and C. Evans.

**ALSO PRESENT:** Councillor M. van Holst; C. Creighton, J. MacKay and A. Macpherson.

---

**I. CALL TO ORDER**

1. Disclosures of Pecuniary Interest

That it BE NOTED that no pecuniary interests were disclosed.

**II. ORGANIZATIONAL MATTERS**

2. Election of Chair and Vice Chair for the term ending November 30, 2018

That it BE NOTED that the Environmental and Ecological Planning Advisory Committee elected S. Levin and S. Hall as Chair and Vice Chair, respectively, for the term ending November 30, 2018.

**III. SCHEDULED ITEMS**

3. Environmental Assessment Process

That it BE NOTED that the Environmental and Ecological Planning Advisory Committee received the ~~attached~~ presentation from B. Armstrong, Ministry of the Environment (retired) and B. Krichker, with respect to the Environmental Assessment process.

4. Residual Waste Disposal and Resource Recovery Strategies

That it BE NOTED that the Environmental and Ecological Planning Advisory Committee received the ~~attached~~ presentation from J. Stanford, Director, Environment Fleet and Solid Waste and W. Abbott, Project Manager, Solid Waste Management, with respect to the Residual Waste Disposal and Resource Recovery Strategies.

**IV. CONSENT ITEMS**

5. 1st Report of the Environmental and Ecological Planning Advisory Committee

That it BE NOTED that the 1st Report of the Environmental and Ecological Planning Advisory Committee from its meeting held on December 21, 2017, was received.

6. Municipal Council Resolution - 11th Report of the Environmental and Ecological Planning Advisory Committee

That it BE NOTED that the Municipal Council resolution adopted at its meeting held on December 12, 2017, with respect to the 11th Report of the Environmental and Ecological Planning Advisory Committee, was received.

**V. SUB-COMMITTEES & WORKING GROUPS**

None.



## VI. ITEMS FOR DISCUSSION

### 7. Workplan

That the following actions be taken with respect to the Environmental and Ecological Planning Advisory Committee Workplan:

- a) the ~~attached~~ 2018 Work Plan for the Environmental and Ecological Planning Advisory Committee BE FORWARDED to the Municipal Council for consideration; and,
- b) the ~~attached~~ 2017 Environmental and Ecological Planning Advisory Committee Workplan Summary BE FORWARDED to the Municipal Council for information.

### 8. Issues for Investigation

That a Working Group consisting of S. Madhavji (lead), P. Ferguson, S. Levin, K. Moser and C. Therrien, BE ESTABLISHED to review the proposed issues for investigation as provided by S. Madhavji; it being noted that once the proposed issues for investigation have been completed, they will be added to the 2018 EEPAC Workplan.

## VII. DEFERRED MATTERS/ADDITIONAL BUSINESS

### 9. (ADDED) Green Standards for Light Pollution and Bird-Friendly Development

That the proposed Green Standards for Light Pollution and Bird-Friendly Development BE REFERRED back to the Working Group for finalization and to report back at the next EEPAC meeting.

### 10. (ADDED) Portion of 3614 and 3630 Colonel Talbot Road and 6621 Pack Road

That it BE NOTED that the communication dated January 15, 2018, from C. Creighton, Land Use Planner, Upper Thames River Conservation Authority, with respect to the application by Sifton Properties Limited, relating to the properties located at a portion of 3614 and 3630 Colonel Talbot Road and 6621 Pack Road, was received.

### 11. (ADDED) Representative for the Dingman Creek Environmental Assessment Stakeholder Committee

That B. Krichker and R. Trudeau BE APPOINTED to the Dingman Creek Environmental Assessment Stakeholder Committee.

### 12. (ADDED) EEPAC Review of the Colonel Talbot Property Subject Lands Status Report and Environmental Impact Statement

That the following actions be taken with respect to the Working Group comments relating to the application by Sifton Properties Limited, relating to the properties located on a portion of 3614 and 2630 Colonel Talbot Road and 6621 Pack Road:

- a) the ~~attached~~ Working Group comments BE FORWARDED to N. Pasato, Senior Planner, for consideration; it being noted that the Environmental and Ecological Planning Advisory Committee (EEPAC) believes that the work to-date is incomplete and that a hydrogeological study needs to be completed;
- b) the proponent BE ADVISED that, with respect to the hydrogeological study referenced in clause a) above, the EEPAC is willing to review; it being noted that the EEPAC has the expertise;
- c) the proponent BE ADVISED that the Environmental Impact Statement only dealt with impacts from Phase 1; it being noted that the scope of the analysis should be the entire site and all phases as an Environmental

Impact Statement will be required for all phases of the development;

- d) the proponent BE REQUIRED to work with adjacent landowners to coordinate studies and works so that overland flows post development support the ecological features and functions of the Natural Heritage System in the area;
- e) N. Pasato, Senior Planner, BE ADVISED that in the opinion of EEPAC this represents piece meal planning for the natural heritage areas of the subject lands and may negatively impact other applications; and,
- f) the proponent BE ADVISED that The London Plan includes a connectivity goal to work with and around other plans.

13. (ADDED) East London Servicing Study

That it BE NOTED that the ~~attached~~ Public Information Centre #2 for the Schedule B Environmental Assessment relating to the East London Servicing Study, was received.

**VIII. ADJOURNMENT**

The meeting adjourned at 7:20 PM.

**NEXT MEETING DATE: February 15, 2018**



London  
CANADA

P.O. Box 5035  
300 Dufferin Avenue  
London, ON  
N6A 4L9

January 31, 2018

L. Maitland  
Planner I

I hereby certify that the Municipal Council, at its meeting held on January 30, 2018 resolved:

15. That, the following actions be taken with respect to the 2nd Report of the Advisory Committee on the Environment (ACE) from its meeting held on January 10, 2018:

- a) D. Szoller BE APPOINTED to the Urban Agriculture Steering Committee as the Advisory Committee on the Environment representative, as per the Terms of Reference for the Urban Agriculture Steering Committee; and,
- b) clauses 1 to 7 and 9 to 13, BE RECEIVED. (15/3/PEC)

C. Saunders  
City Clerk  
/lm

cc. Chair and Members, Advisory Committee on the Environment



File: O-8844  
Planner: T. Macbeth  
Telephone: 519-661-2489 extension 5102  
Fax: 519-661-5397  
Email: tmacbeth@london.ca  
Website: www.london.ca

February 13, 2018

## **NOTICE OF APPLICATION TO AMEND THE OFFICIAL PLAN (THE LONDON PLAN)**

The Municipal Council for the City of London is considering an amendment to The London Plan (Official Plan) within the lands shown on the map attached. The requested change is described below. We are advising you of this application to invite your comments.

### **APPLICANT:**

City of London

### **LOCATION:**

Lands south of Exeter Road, north of Dingman Drive, east of White Oak Road, and west of Marr Drain (drainage ditch located to the west of the Provincial Ministry buildings) - see attached map.

### **PURPOSE AND EFFECT:**

The purpose and effect of the requested Official Plan Amendment is to initiate a "White Oak/Dingman Secondary Plan". The Secondary Plan is to establish Place Types in *The London Plan* for the "Future Community Growth" lands within this White Oak/Dingman area. Application may also amend the 1989 Official Plan from "Urban Reserve – Community Growth" to other residential and/or commercial land use designations.

### **POSSIBLE AMENDMENT:**

Possible amendment to *The London Plan* to change the Place Type from "Future Community Growth" to other Place Types, including "Neighbourhoods", "Green Space", and/or "Shopping Area". Also possible amendment to the Official Plan (1989) to change the Land Use Designation from "Urban Reserve – Community Growth" to other land use designations including residential, open space, and/or commercial land uses. Council may also consider a special policy to recognize transition between Industrial and non-Industrial land uses within the Secondary Plan area.

### **HOW TO COMMENT:**

Your opinion on this application is important. Please call in, mail, e-mail or fax your comments to The City of London Planning Services, P.O. Box 5035, London, ON, N6A 4L9, Attention Travis Macbeth **by March 5, 2018**, if possible. **Please Note:** Personal information collected and recorded at the Public Participation Meeting, or through written submissions on this subject, is collected under the authority of the Municipal Act, 2001, as amended, and the Planning Act, 1990 R.S.O. 1990, c.P.13 and will be used by Members of Council and City of London staff in their consideration of this matter. The written submissions, including names and contact information and the associated reports arising from the public participation process, will be made available to the public, including publishing on the City's website. Video recordings of the Public Participation Meeting may also be posted to the City of London's

website. Questions about this collection should be referred to Cathy Saunders, City Clerk, 519-661-2489 extension 4937. Please ensure you refer to the file number or municipal address of the item on which you are commenting.

If a person or public body does not make oral or written submissions at a public meeting or make written submissions to the City of London before the proposed amendment is adopted, the person or public body may not be entitled to appeal the decision of the Council of the City of London to the Ontario Municipal Board, or may not be added by the Board as a party to the hearing of an appeal unless, in the opinion of the Board, there are reasonable grounds to do so.

A neighbourhood or community association may exist in your area. If it reflects your views on this proposal, you may wish to select a representative of the association to submit comments on your behalf.

Your representative on City Council, Ward 12 Councillor Harold Usher (office phone number 519-661-2489 extension 4012, or e-mail [husher@london.ca](mailto:husher@london.ca)) would be pleased to discuss any concerns you may have with this application.

### **PUBLIC MEETING:**

The appropriateness of the requested Official Plan amendment will be considered at a future meeting of the Planning & Environment Committee. You will receive another notice inviting you to attend this meeting.

If a person or public body does not make oral or written submissions at a public meeting or make written submissions to the City of London before the proposed amendment is adopted, the person or public body may not be entitled to appeal the decision of the Council of the City of London to the Ontario Municipal Board, or may not be added by the Board as a party to the hearing of an appeal unless, in the opinion of the Board, there are reasonable grounds to do so.

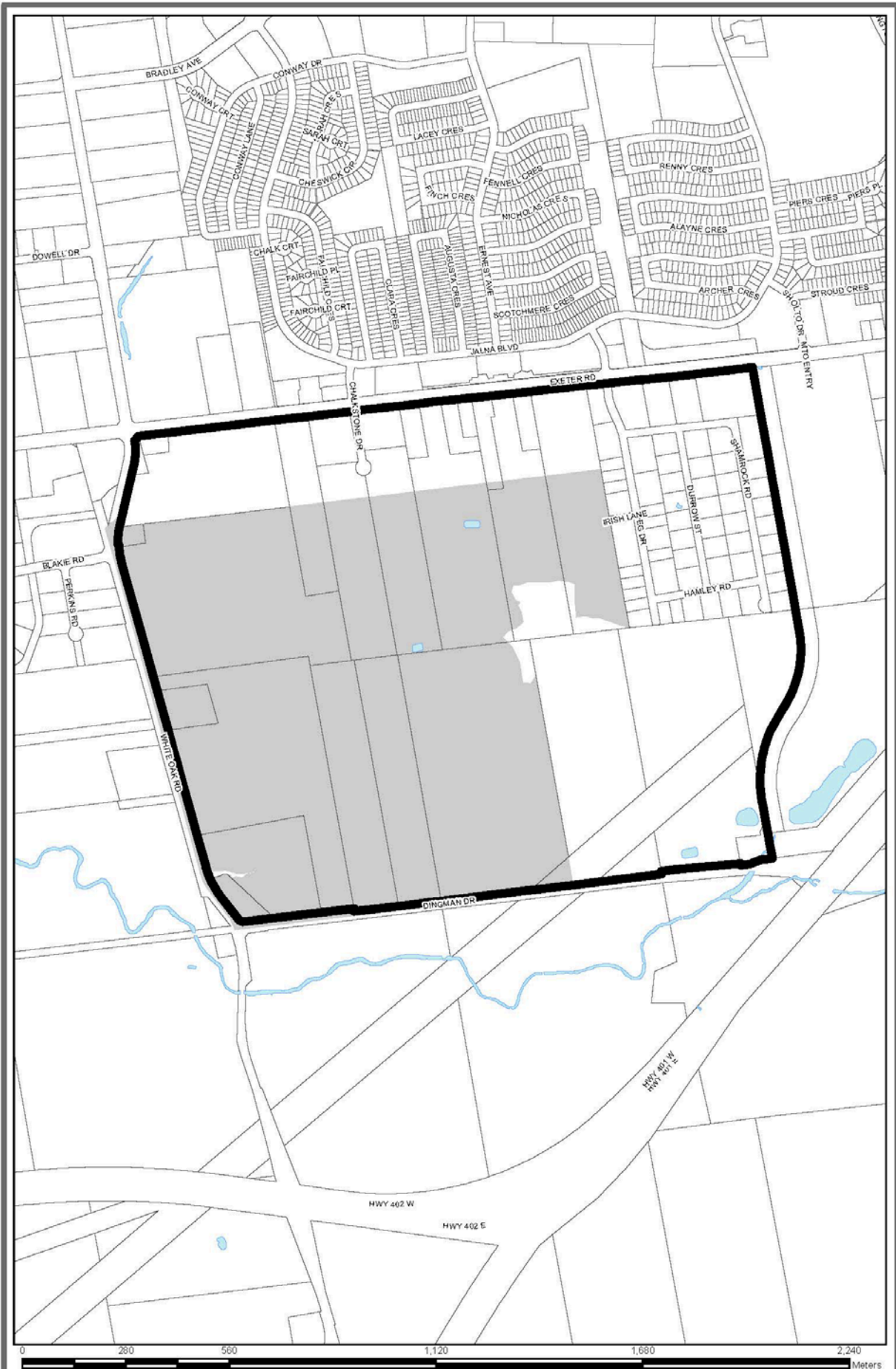
### **FOR INFORMATION:**

If you wish to view additional information or material about the requested Official Plan amendment, it is available to the public for inspection at Planning Services, 206 Dundas St., London, ON, Monday to Friday, 8:30a.m.-4:30p.m.

**For more information, please call Travis Macbeth at 519-661-2489 extension 5102, referring to File Number "O-8844".**

### **TO BE NOTIFIED:**

If you wish to be notified of the adoption or refusal of a request to amend the Zoning By-law, you must make a written request to the City Clerk, 300 Dufferin Avenue, P.O. Box 5035, London, ON N6A 4L9. You will also be notified if you address the Planning & Environment Committee at the public meeting about this application and leave your name and address with the Secretary of the Committee.



**LOCATION MAP**

Subject Site : White Oak/Dingman Area  
 File Number: O-8844  
 Planner : Travis Macbeth  
 Date : 2018/01/30



Scale : 1:12,500

**Legend**

-  Subject Site
-  Future Community Growth - London Plan
-  Urban Reserve Community Growth - 1989 Official Plan



London  
CANADA

# City of London Planning Services COMMUNITY INFORMATION MEETING

Travis Macbeth

Tel: 519-661-2489 ext. 5102 | Fax: 519-661-5397

Email: [tmacbeth@london.ca](mailto:tmacbeth@london.ca) | Website: [www.london.ca](http://www.london.ca)

## WHAT

This meeting is to start the White Oak-Dingman Secondary Plan process. This is an Official Plan Amendment to the London Plan. The meeting will provide an opportunity for the City to share project information with the community (including “terms of reference” for the project) and to seek input from the community on your goals and visions for the development of the “Future Community Growth” lands within this Secondary Plan area.

## WHERE

City Hall – Committee Room #1  
300 Dufferin Avenue  
Second Floor

## WHEN

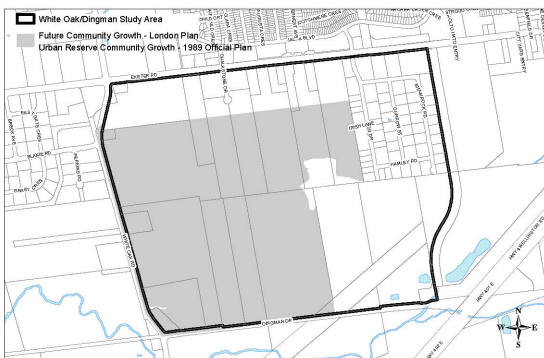
Wednesday, March 7, 2018  
From: 7:00 p.m. to 9:00 p.m.

## WHO

Everyone – your opinion is important in preparing this Plan. The Plan will develop the vision for the lands, including Future Community Growth lands, in the White Oak-Dingman Area. Representatives from City of London Planning Services are seeking community input on the future growth and development of these lands.

## HOW TO GIVE COMMENTS

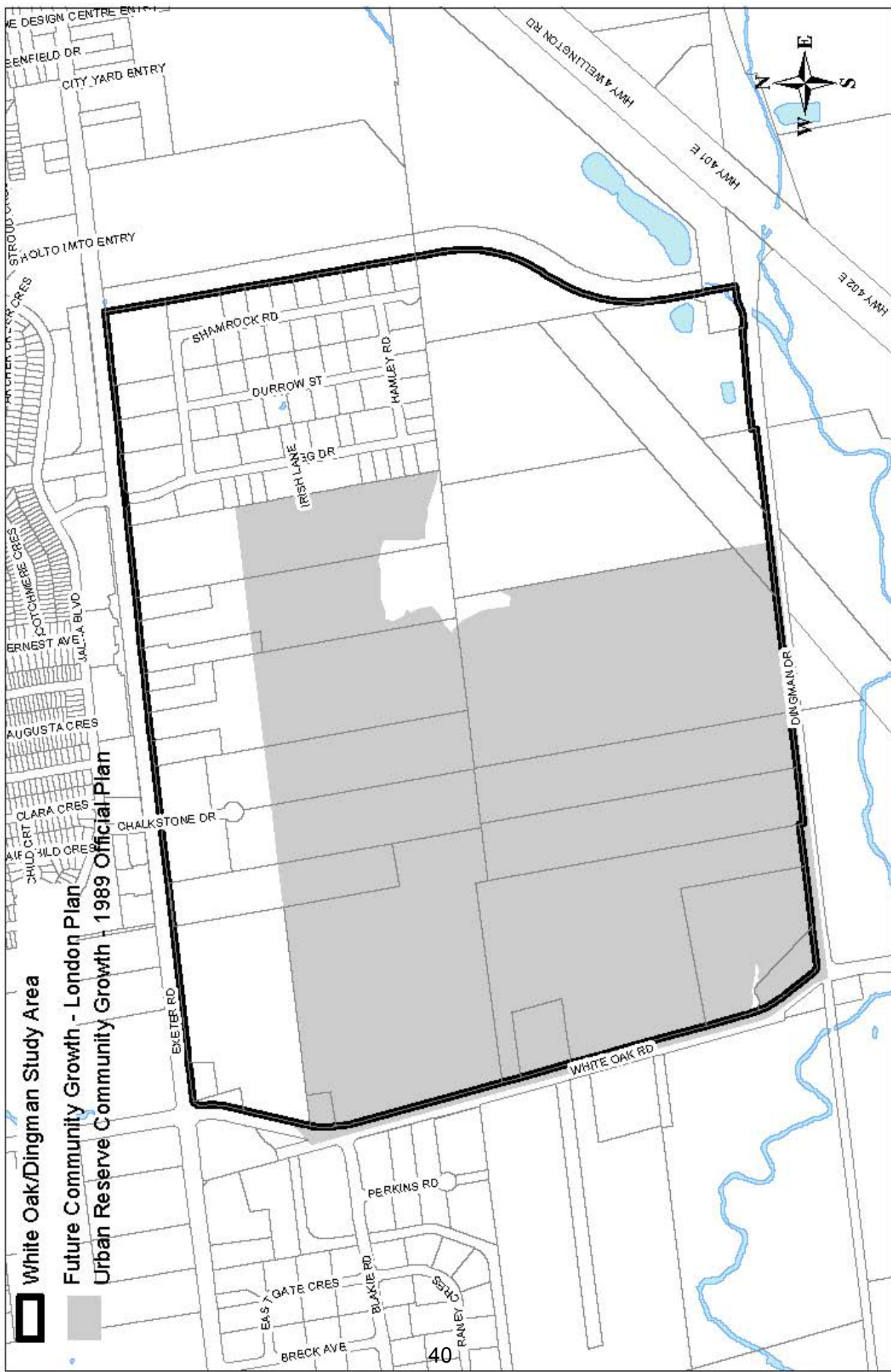
Please call, email, fax, or mail your comments to:  
City of London Planning Division  
206 Dundas Street, London, ON  
N6A 1G7  
Attention: Travis Macbeth



(See over for enlarged area map)

Please note: This is a community meeting to provide the community with an opportunity to obtain information about the White Oak-Dingman Secondary Plan project. There will be a future public participation meeting required under the Planning Act, held at the Planning and Environment Committee, which will give you an opportunity to comment to City Council on the Secondary Plan.

Personal information collected at this meeting is collected under the authority of the Planning Act, R.S.O. 1990, and may be used for the purpose of informing you of future information meetings and statutory public meetings related to this Secondary Plan.



**White Oak/Dingman Study Area**

**Future Community Growth - London Plan  
Urban Reserve Community Growth - 1989 Official Plan**



## **Resilient Cities Conference: Preparing London for a Rapidly Changing Future**

**November 18<sup>th</sup>, 2017 - London Public Library**

**Final Report** (*as of February 26, 2018*)

### **Tangible outcomes of the conference...**

- Event attendance estimated to be over 250 individuals.
- The keynote speaker was excellent in terms of knowledge, experience working in the field of urban resilience and optimism. His main message- Cities becoming resilient is now a movement around the world and there is every reason for London to join this movement.
- In total, over 20 exceptional speakers from London and southern Ontario were brought together.
- High level of interest in almost all workshops and exhibits.
- Involvement of many different partners was excellent.
  - 6 community partners not including the City of London
  - 5 City of London Advisory Committees contributed financially. 2 other Advisory Committees – Diversity & Housing expressed interest.
  - London Environmental Network provided significant organizational and promotional support.
  - The London Public Library provided the location & rooms at no charge. Three library staff were actively involved in the organization. They were very pleased with the turnout and atmosphere of the event.
- Volunteers played an integral role in making sure everything ran smoothly. (Approximately 20 in total)
- The event tied in well with the city's Neighbourhood Decision Making day.
- See the Appendices for details including workshop attendance, a list of community partners and the planning committee members.

### **Considerations for future events...**

- Reduce the number of workshop options, to manage expenses and administrative time to organize these.
- Financial commitments from other advisory committees take time to arrange and need to be requested well in advance.
- Continue to investigate partnerships in planning future events to help manage the time commitments required from committee volunteers.
- Review ways to capture the information and spirit of the conference to disseminate to individuals who were not in attendance – in a manner that does not require significant resources, works within privacy guidelines and can be available online.

### **Moving forward...**

- ACE looks forward to future City of London plans related to resiliency.
- Discussions continue between ACE, the London Environmental Network and the London Public Library regarding plans for event(s) in 2018.
- Continue to monitor and encourage resiliency planning via ACE work plan for 2018.

## Appendix A: Workshop Overview

<b>Resilient Cities Conference: Preparing London for a rapidly changing future</b>					
9:00 - 10:00am	<b>Keynote - Wolf Performance Hall</b> – 'What makes a Resilient City? How the 100 Resilient Cities initiative is helping Toronto to prepare for a rapidly changing future' - Elliott Cappell (Chief Resilience Officer of Toronto)				
10:00 - 10:20am	<b>Break</b>				
<b>Rooms</b>	<b>Stevenson &amp; Hunt A 1st Floor</b>	<b>Stevenson &amp; Hunt B 1st Floor</b>	<b>Tonda 1st Floor</b>	<b>Wellington Room 2nd Floor</b>	<b>Dundas Room 2nd Floor</b>
10:20 - 11:20am	Indigenous Resilience: Re-awakening Ancestral Wisdom <b>Speaker: Andrew Judge</b>	Black Creek Community Farm: Building Resilience through Urban Agriculture <b>Speaker: Leticia Boahen</b>	Future Proofing Mobility - Through Shared and Active Transportation <b>Speaker: Lorenzo Mele</b>	Climate Change and Health – A Local Perspective <b>Speaker: Randy Walker</b>	Renewable Energy Panel <b>Speakers: Terry Nother &amp; Gary Zavitz</b>
11:30 - 12:30pm	The Future of Food <b>Speaker: Natasha Arsenijevich</b>	Resilient City Case Study: Curitiba, Brazil <b>Speaker: Luis Patricio</b>	London's Emergency Management Program; From Tornadoes to Trainwrecks <b>Speakers: Henry Klausnitzer &amp; Andre-Luc Beaugard</b>	Pathway Thinking for Community Energy Planning <b>Speaker: Shane O'Neill</b>	Equity, Poverty, Living Wage <b>Speaker: Dr. Chris Mackie</b>
12:30 - 1:30pm	<b>Lunch</b>				
1:30- 2:30pm	Local Financing of the Resilience Revolution <b>Speaker: Andre Vashist</b>	Valuing Nature's Services in Urban Environments <b>Speaker: Paul Ronan</b>	The Role of Youth in Food Sovereignty <b>Speaker: George Akomeah</b>	Food is Food, Not Waste <b>Speakers: Carrie Warring, Ellen Lakusiak, Paul van der Werf</b>	Passive Solar Design and Retrofits <b>Speaker: Marianne Griffith &amp; Tom Davis</b>
2:45 - 3:45pm	Future Proofing London - City-building for Resiliency <b>Speaker: John Fleming</b>	Urban Agroforestry: the Food Forest City <b>Speaker: Dr. Gabor Sass</b>	Climate Adaptation for Cities: Lessons from the Maritimes <b>Speaker: Dr. Brennan Vogel</b>	Divestment from Fossil Fuels: A Realistic Goal <b>Speaker: Alex Leonard</b>	Engaging Citizens in their Community <b>Speakers: Jacqueline Fraser &amp; Wes Kinghorn</b>
<b>4:00 pm - onwards: Pints &amp; Politics on Resilient Cities at the Fox and the Fiddle, 355 Wellington St.</b>					

## Appendix B: Attendance

Total estimated attendance was 250+

On average, it was estimated there were about 190 individuals at a time attending workshops with approximately 15- 45 people per room.

Keynote Speaker – Estimated 200-250 attendees.

Time	Workshop	Room	Attendees
10:20-11:20	Climate Change and Health	Wellington Room	27
11:30-12:30	London's Emergency Management Plan	Tonda Room	12
10:20-11:20	Future Proofing Mobility	Tonda Room	31
11:30-12:30	Pathway Thinking for Community Energy Planning	Wellington Room	20
10:20-11:20	Indigenous Resilience	Stevenson & Hunt A	45
11:30-12:30	The Future of Food	Stevenson & Hunt A	45
10:20-11:20	Renewable Energy Panel	Dundas Room	45
11:30-12:30	Equity, Poverty, Living Wage	Dundas Room	60
10:20-11:20	Black Creek Community Farm	Stevenson & Hunt B	40
11:30-12:30	Resilient City Case Study: Curitiba	Stevenson & Hunt B	42
Time	Workshop	Room	Attendees
1:30-2:30	Valuing Nature's Services	Stevenson & Hunt B	50
2:45-3:45	Urban Agroforestry	Stevenson & Hunt B	65
1:30-2:30	Role of Youth in Food Sovereignty	Tonda Room	12-15
2:45-3:45	Climate Adaptation for Cities	Tonda Room	12-15
1:30-2:30	Local Financing	Stevenson & Hunt A	29
2:45-3:45	Future Proofing London	Stevenson & Hunt A	52
1:30-2:30	Food is Food, Not Waste	Wellington Room	36
2:45-3:45	Divestment from Fossil Fuels	Wellington Room	16
1:30-2:30	Passive Solar Design and Retrofits	Dundas Room	50
2:45-3:45	Engaging Citizens	Dundas Room	25



## Appendix D: Committee List

	<b>Role(s)</b>
Skylar Franke	Spokesperson, LEN Rep, Promotion
Gabor Sass	Spokesperson, ACE rep
Susan Ratz	ACE rep, admin, accounting
Diane Szoller	Media, ACE rep
Susan Hall	Lunch Coordinator, ACE rep
Mary Ann Hodge	ACE rep
Carrie Warring	ACE & Health Unit rep
Carolyn Doyle	Library rep - Poster contact
Patsy Morgan	Library rep - Registration Contact / Meeting Room Bookings
Cathy McLandress	Library rep
Leah Derikx	Volunteer Coordinator
Yuriko Tokuda	Booth Coordinator
Alex Leonard	Promo Video

## Appendix E: Partners

Advisory Committee on the Environment

City of London

London Public Library

London Environmental Network

London Community Foundation

Thames Regional Ecological Association

Trees & Forests Advisory Committee

Cycling Advisory Committee

Transportation Advisory Committee

Agricultural Advisory Committee

Middlesex London Health Unit

Urban League of London

## Appendix F: Exhibitors

	<b>Booths</b>
<b># (not tied to location)</b>	<b>Organization Name</b>
1	LEN
2	City of London – Environmental Services
3	
4	
5	Visual Artists
6	Cycling Advisory Committee
7	TREA
8	Info Booth
9	Health Unit
10	Library
11	Urban Roots London
12	Growing Chefs
13	ReForest London
14	City of London - Neighbourhood Decision Making
15	FUAL

## Appendix G: Media & Promotion

### Methods used to promote the conference...

- Via London Environmental Network - Dedicated website page, enewletters and numerous social media posts
- Promotions via conference organizing committee partners
- Via London Public Library – Poster Design, Info & Registration website page, advertising in The Spectrum, info to branch libraries
- City of London – mention in enewletter, poster distribution to numerous City facilities (arenas, community centres etc)
- Email and FB outreach to numerous London Organizations and community groups, neighbourhood associations.
- Poster Distribution - by volunteers at shops around the city and post-secondary sites
- Media releases and follow-up - in particular support from London Free Press with two print articles
- Numerous event postings such as Tourism London, Snapd, Scene, Pillar Network, London Fuse, Our London, Kijiji etc.
- Donated postcard printing by City and postcard distribution to numerous venues such as On the Move Organics, Veg Fest via the Library's booth, Western Fair Market, Covent Garden Market, Western Fair via FUAL's booth, the school boards etc.



## Appendix H: Feedback from Conference Response Cards from Attendees

### Conference Highlight...

- great topics
- Gary Zavitz
- amazing key note
- andrew judge
- the wonderful presenters and discussion
- pathway thinking for community energy planning
- so many great options - almost too many to choose from
- valuing nature and engaging citizens
- info tables
- the mix of finance and green biz actual & possible
- John Fleming
- transportation session
- meeting like minded people
- Andrew Judge's sessions being held 1st to open and prepare for the day
- all the workshops
- meeting people/side conversation
- black creek community farm
- Future proofing London
- Indigenous resilience session - amazing!
- Indigenous resilience talk
- diversity of core subjects
- future proofing london
- finance session from verge
- Paul ronan - 1:30-2:30
- keynote and john fleming, black creek community farm
- local financing of the resilience revolution
- paul ronan, keynote, andrew judge, networking
- urban forests
- the wealth of ideas and how much is happening in London itself
- UBI, community farming
- seeing people come together to work towards a common goal
- resilience - past, present and future
- zero energy was great, more of that next year
- food waste
- keynote speaker + passive solar system
- ancestral wisdom
- workshops
- manned info booths
- I'm just super happy this event took place, more please
- really enjoyed the brazilian session
- plenary - but the whole thing was great

## **Future Topic Suggestions...**

- more time to followup for attendees to network or connect
- energy storage systems
- london becoming 100% renewable energy sources
- wildlife
- community engagement
- foraging, gardening
- Charrettes [a meeting in which all stakeholders in a project attempt to resolve conflicts and map solutions]
- would love to see more interactive sessions and discussion
- more engaging, interaction, round circle discussion vs. presentations
- diversity/disability
- trees as an economic engine for prosperity
- large scale retrofitting initiatives
- how to influence government policy
- community building
- so many choices had to be made today to visit one seminar and not another. Many would like an opportunity to do it again!
- London environmental successes
- employment and resilience
- how personal growth and contemplation births community change and positive advancement
- more indigenous resilience
- future city - sifton's project
- more on the london plan
- more around urban development to get people excited - examples to learn from
- engaging businesses
- more of everything you covered
- not so much future topics but taping/youtube of all the sessions I missed by taking in these excellent sessions
- londons rivers and ponds
- technology
- garbage reduction - in many different case studies of other cities
- green initiatives
- how to redo older homes for energy and composting
- waste management
- green building and design
- renewable energy
- the role of environmental assessments
- what politically active groups are available and commitment required
- transit based topics, buses, light rail, bike lanes
- great already
- more of the same - next step

## **How Attendees Heard About The Event...**

- Facebook - 17
- Friends / Word of Mouth – 16
- LEN Website / Enewsletter – 6
- Other – 6
- Library – 3
- Posters – 2

## Appendix I:

### Notes from Keep Stop Start Post It Note Exercise Available in each Workshop Room

#### Room 1

##### STOP

- Giving drivers the biggest say (we need to think about access for people living in or on the brink of poverty)
- Stop thinking there is a huge crevasse between urban and rural food growing

##### CONTINUE

- Push for BRT (despite complaints of reduced space for driving along Richmond Street)
- Build protected bike lanes. I have fallen from my bike twice this month because the road had a puddle of water on it and was not even.
- BRT
- Fill potholes on sides of the road
- BRT
- Continue supporting Urban Agriculture initiatives despite common criticism

##### OPPORTUNITIES

- Universal basic income
- Make Wellington/Waterloo cycle friendly
- Pedestrian walk audit
- We gardeners and foragers have been doing this for a long time – government and bureaucrats need to learn to trust and let the power come down to us
- I wish that mass producers of food waste are mandated to
  - a) move excess food to need (people)
  - b) move waste food to livestock
  - c) move waste food to energy and fertilizer
- I wish for society to be led by a process that encourages sustainability and not only profits
- I wish for farmers to be respected and their livelihood ensured and farming encouraged
- I wish for an effective community system to move food from point of excess to point of need
- I wish that food is never wasted
- I wish we are always fed
- Downtown community vegetable gardens for therapy, rehabilitation, addiction treatment, education, community engagement, etc. a bonus is vertical farming downtown
- Cyclist modal counts
- Dundas cycle tracks
- Turn wide sidewalks into walkways with bike paths
- Start demonstration projects in many of the urban agricultural strategy programs
- As London grows food security will become more difficult during war and depression. In Greece the country mandated that each village family take on one Athenian child as villages were self-sustainable and resilient
- I wish for the use of food growth and supplements that have only a positive impact on humanity, the environment, the economy

- I wish for the gifts of nature (including food) are for all people
- I wish for London to prepare a food stock pile (non-perishable) for emergency purposes
- I wish for local farmers feeding London
- I wish that London will get to food sustainability and even exceed and grow all food locally, sustainably

## Room 2

### STOP

- Stop collecting fallen leaves off lawns
- Stop heavy Industry
- Stop single use plastics
- Stop or change the way the municipality works with developers –require rather than encourage
- Stop sucking (no more plastic straws)
- Control urban sprawl
- Ban plastic
- No more plastic bags
- Stop cutting trees for development – develop around them as much as possible
- No more urban sprawl, grow up, not out and preserve wild and agricultural lands
- Stop urban sprawl altogether

### CONTINUE

- Community consultation
- Build on infill, stop using up farmland and natural areas
- Food literacy will make our community more resilient
- Include health as a prominent piece of any resiliency planning, particularly local food and healthy eating Conferences
- More public awareness
- Urban agricultural and public food forests
- More community support
- The growth and development of food forests – Go! Gabor Sass
- Grow community development of grassroots and collaborate across agencies and across governance bodies – advocacy liaison
- Keep improving transit

## OPPORTUNITIES

- Educate people about composting – just collecting it won't be enough, everyone has to do their part
- Allow backyard chickens and goats!
- Start promoting social responsibility programs in companies and businesses
- Foster smart commute and energy-saving corporate strategies
- Mandatory rainwater collection
- Establish a resiliency office with an 'officer' to lead
- Lower monthly bus ticket prices as an incentive
- Gardening programs in public schools
- Backyard chickens
- Improve the public transportation and integrate it with Western and Fanshawe
- Be more mindful of urban planning design for more bikes/pedestrian areas and green spaces
- Residential composting and composting at community gardens
- Green bin program!
- Work as a leader with surrounding rural communities and smaller cities to have a SWO region
- Resiliency framework
- Make it easier for people to sell food they produce locally
- Residential compost program
- Reserve three land trust areas that are protected to create 10 acres of urban farm demonstrations
- Hemp crops
- Easier permits for household renewables
- Outreach to students to keep talent
- Permaculture workshops /land to start a community farm
- More green jobs
- Year round greenhouses
- Winter maintenance on the TVP, help year round cycling

## Room 3

### STOP

- Building/urban sprawl without energy/future considerations be mandatory

### CONTINUE

- Supporting citizen groups
- Community improvements
- Green and public space improvements
- Outreach

## OPPORTUNITIES

- Share that heat warming chart with the public
- Compost collection
- Have LID workshops for residences and other properties
- Preserve wetlands
- Have community workshops to have LID areas added to parks – encourage public involvement
- More community gardens
- Divest from fossil fuels
- Algae power
- Garbage burning power (Sweden)
- Geothermal commercial buildings and subdivision building codes
- Battery regeneration program
- Recycling downtown
- Put a bounty on squirrels
- Compost in neighbourhoods

## Room 4

### STOP

- Urban sprawling
- Considering the current status quo as the status quo
- Stop thinking inside the box
- Stop thinking we can build a complete plan in light of rapid change: adaptability first
- Avoid costly and constraining investments
- Stop development charge tax giveaways in downtown – use money to subsidize energy saving retrofits – re development charges – may be able to continue under strict conditions that encourage very green building

### CONTINUE

- Supporting urban farming
- Neighbourhood engagement through voting like today's Neighbourhood decision making project
- Community engagement in environmental planning projects
- Continue incorporating the potential impact of disruptive technology into Future City planning ie autonomous vehicles, microgeneration and storage of energy

## OPPORTUNITIES

- Bike paths to Port Stanley
- Mobile markets – take the food to the people
- Make community gardens welcoming to newcomers to Canada
- City wide composting – compost pickup for apartments and businesses
- Decentralize composting programs
- Allow dogs on buses
- Link people wanting to grow things with people with property they are not using (yard sharing)
- Encourage Western to abandon their incubation mentality and encourage students to explore the city
- Free public pools

- Community composting
- Ensure decision making decisions are transparent – decision to ban chickens was not based on draft policy so supporters did not have a say in final decision
- The Hub
- Community home energy audits
- \$1 bus fare days on bad air days
- Subsidize LTC to run buses to industrial areas at shift changes
- Start brown bin collection
- City – provider of investment fund to provide low-cost/no-cost loans for Green Energy investments by low and middle income people
- Start providing ‘alternative permitting’ paths
- Guidance for new non-traditional building approaches
- Organic waste collection program (green bins)
- Remove bylaws that are barriers to uniformity in growing plants/food/animals
- Stop development charge rebates in downtown (building is booming) and use money to encourage homeowners to do retrofits for energy efficiency
- Start urban food forest creation
- Try innovative approaches to get the community more engaged (ex 8-80 Cities)
- If it takes 10,000 hours of doing something to be considered an expert, London has many expert gardeners and forgers, trust us
- If we become more self-reliant, we will learn new skills, to take care of ourselves – at the same time we need to learn to be co-operative. That way we will learn from each other, and the more self-reliant people will have more skills. With the greater self-reliance and the co-operation we can achieve so much more than a population that is waiting for our city leaders to tell us what to do. It is far better for 400,000 people problem-solving than the few sitting around a horseshoe. In this way, people learn new skills to take care of themselves. These people will be less of a burden on our society.

## Room 5

### STOP

- Government focus on the middle class, not the poor
- Fewer government universal benefits (like childcare), more to those in need
- Stop trying to do too many things at once, concentrate on those things where tangible progress can be measured.
- Stop using plastic bottles, bags and takeout containers

## CONTINUE

- Improve increasing the liaison capacity amongst city and residents
- Mobilize like today, annual community driven resiliency conferences
- Community facilitation
- Making safe bike lanes

## OPPORTUNITIES

- Facilitate greater dialogue and partnership between business and community organizations.
- Where are the business owners today?
- Replace minimum wage with guaranteed income
- Green boxes for organic waste
- Provide bus stops with winter protection systems, this would promote more use of public transportation
- Assist homeowners installing solar PV to connect to London Hydro
- Levy residents to provide part-time teachers with sustainable wages, they provide the city with direct benefits
- All new developments should be fitted with solar panels. Policies/bylaws for retrofitting condos and apartments would be helpful.
- Continue to promote the exchange of information and ideas, such as this conference
- Festivals downtown (more please!)



## ACE SUB-COMMITTEES

*Updated Feb 7/2018 by Susan Ratz*

<b>Sub-Committee</b>	<b>Status</b>	<b>Members</b>
Waste Management	Active	Janice (chair), Mary Ann, Ken, Mike, Thomas S.?, Tom, Natalie, Dave
Built Environment	Active	Ken, Lois, Mike, Diane, Dave, Sarah
Energy	Active	Diane, Ken, Lois, Mike, Tom Arnos, Thomas S., Allan
Sustainability & Resilience	Ad Hoc	Ken, Susan Hall, Gabor, Susan R, Diane, Brennan Vogel
Natural Environment	Ad hoc	Diane, Maureen, Gabor, Natalie, Susan H, Susan R

## **Proposed Event Plans for ACE in 2018**

Submitted Feb 27, 2018

### **Green Talk Series**

- Library will lead coordination.
- A series of 3 weekly 'Green Talks' held in November, similar to the Nature in the City events.
- Proposed location – Stevenson & Hunt Room at the Central Library
- Proposed ACE support
  - Provide direction on workshop focuses. Ie. Food Waste, Urban Agriculture, Pollination
  - Identify speakers for topics chosen including outreach to specific groups such as the Urban Ag Steering Committee and the London-Middlesex Food Policy Council for suggestions and support.
  - Provide 1 ACE member to facilitate the above.
  - Assist with speaker expenses up to \$1,000

### **River Summit**

- A Friday/Saturday event held mid-October.
- London Environmental Network (LEN) would lead coordination.
- A number of workshops and activities would be offered over the 2 days.
- Proposed ACE support
  - Organizing committee support (1-2 members)
  - Assist with speaker expenses up to \$500

# Green Standards For Light Pollution & Bird-Friendly Development

## Recommendations for the City of London

Prepared for the City of London by the Ecological and Environmental Planning Advisory Committee, the Advisory Committee on the Environment (ACE), and the Animal Welfare Advisory Committee (AWAC).

### 1 Definitions

**Definitions were derived from pre-existing standard documents of other municipalities within Ontario<sup>1-5</sup>. For the purpose of this document, terms shall be defined as follows:**

- **Architectural lighting** – outdoor lighting to illuminate landscaping features (e.g. trees, stones, or water), building facades, etc. (excepting signage)
- **Automatic timing device** - any device which controls light fixtures to automatically turn on and off at designated times
- **City** – the City of London, Ontario
- **Council** - the elected municipal council of the City
- **Curfew** - a time defined by the City when outdoor lighting must be reduced or switched off
- **Cut-off shielding** - a luminaire having a light distribution in which zero lux intensity occurs at or above and angle of 90° nadir
- **Decorative lighting** - see *vanity lighting* (below)
- **Diode** - a device allowing one-directional flow of current
- **Direct light** - light directly emitted from the installed light fixture or off of its internal reflector or luminaire
- **Emergency conditions** - lighting that is only switched on during an emergency, exit paths during an emergency situation, or security lighting used solely during alarms

- **Glare** - undue brightness from a light source. Light emitted from fixtures which diminish a bystander's ability to see and/or causes discomfort
- **Grandfathered** - existing light fixtures which may be exempt from these recommendations (Section 6)
- **Hardscape** - permanent human-made elements of an outdoor landscape design
- **Horizontal illuminance** - Amount of light energy landing on a horizontal surface (e.g. the ground)
- **IESNA** - Illuminating Engineering Society of North America or any successor organization
- **Indirect light** - light which is scattered or reflected off of other surfaces
- **Lamp** - any artificial source of light
- **LED (Light Emitting Diodes)** - a popular modern type of lamp
- **Light fixture** - a complete lamp assembly which includes lamp, housing, reflector, mounting bracket, and/or pole socket
- **Light pollution** - any adverse consequence of artificial light including, but not limited to, glare, light trespass, sky glow, energy waste, compromised safety and security, and impacts on the nocturnal environment
- **Light trespass** - any light which falls beyond the property it is intended to illuminate
- **Lumen** - a measurement unit that quantifies the amount of light produced by a lamp or emitted from a luminaire (distinct from 'watt', a measure of power consumption). Conversion to lux is possible
- **Luminaire** - see *Light fixture* (above)
- **Lux** – an international unit used to measure light intensity. Conversion to lumen is possible
- **Official Plan** - the City of London and Planning Area's Official Plan, revised periodically
- **Outdoor lighting** - any outdoor installed or portable luminaire used for flood lighting, general illumination, or advertisement
- **Outdoor recreational facilities** - an outdoor space or venue used for sporting events or entertainment purposes within the city
- **Over-illumination** - lighting of an area beyond that which human vision is able to differentiate

- **Owner** - the registered owner according to the land registry office or the person in the actual occupation of the land sold to the Director in accordance with the Veterans' Land Act (Canada)
- **Point illuminance** - Amount of light energy measured at a given point
- **Shielded luminaire** - refers to luminaires with an adjustable mounting device allowing aim in any direction and contains a shield, louver, or baffle to reduce direct view of lamp
- **Sky glow** - any brightening of the nighttime sky caused by light directed and/or reflected upwards and/or sideways that reduces the ability to view the night sky
- **Sufficient daylight** - adequate natural lighting such that exterior artificial lighting is not required (approximately 30 minutes after sunrise or 30 minutes prior to sunset)
- **Vanity lighting** - lighting for the purpose of drawing attention. For example, lighting to illuminate landscaping features (e.g. trees, stones, or water), building facades, etc. (excluding signage)
- **Ventilation grate** - street grates or grills which disperse air from structures under roadways and/or sidewalks to reduce heat gain in the summer and allow for passive heating in winter
- **Visual markers** - a physical design visible within a bird's optical wavelength to indicate a barrier is present

## 2 Purpose and Justification

The City of London plans to become one of the greenest cities in Canada by reducing its impacts on the environment and its carbon footprint (direction 4, The London Plan)<sup>1</sup>. Specifically, The London Plan contains the goals of minimizing bird strikes on buildings and reducing negative environmental impacts of light pollution<sup>1</sup>. In Canada, it is estimated that 25 million birds die annually from collisions with buildings<sup>22</sup>. The purpose of this document is to provide guideline recommendations for by-law development to achieve these goals. Many specifications in this document are derived from pre-existing guidelines of other Ontario municipalities<sup>2-9</sup>, as well as from the Illuminating Engineering Society of North America (IESNA).

### 2.1 Environmental Impacts

Light pollution impacts the behaviour and survival of birds, mammals, amphibians, fish, and arthropods, and diminishes ecological health both locally and nationally<sup>10</sup>. Specific threats to wildlife include disruption of movement and migration<sup>11-14</sup>, changes in communication and reproductive behaviours (e.g. songbird call times)<sup>15</sup>, shifts in species diversity, altered interactions among species<sup>16,17</sup>, disruption of foraging behaviour, and increased mortality<sup>18-21</sup>.

### 2.2 Carbon Footprint and Cost

Goals of the current London Community Energy Action Plan<sup>23</sup> include an 80% reduction in greenhouse emissions by 2050 and energy cost savings. Policy and design standards to reduce

wasted lighting energy are crucial if the City of London is to achieve these goals. Reducing wasted energy is an easy way for the City of London to reduce its carbon footprint; total wasted light energy in the United States is estimated between 80 and 225 kg of CO<sub>2</sub> annually<sup>24</sup>. The negative economic impacts of light pollution on health, wildlife, and astronomy are estimated at \$7 billion each year in the United States<sup>10</sup>.

### 3 General Information

#### 3.1 Light Pollution

The City of London’s Advisory Committee on the Environment (ACE), Environmental and Ecological Protection Advisory Committee (EEPAC), and Animal Welfare Advisory Committee (AWAC) (or ‘we the committees’) collectively recognize that it is beneficial to protect dark skies through responsible city lighting policies. We the committees recognize that other Ontario municipalities have outdoor lighting ordinances to reduce glare and light intrusion while promoting energy conservation and healthy neighbourhoods.

Light pollution has been defined as “excessive or obtrusive artificial light caused by bad lighting design”<sup>10</sup>. Proper lighting design and illumination standards can reduce light pollution by<sup>20</sup>:

- Preventing lighting in specific areas
- Limiting lighting duration
- Reducing light trespass
- Reducing light intensity

#### 3.2 Bird-Friendly Design

Bird-friendly design is critical for city-wide progressive green development standards. Designs to reduce bird mortality may be similar to light pollution reduction strategies, with further inclusion of non-reflective glass and ventilation grates. In accordance with The City of London’s Humane Urban Wildlife Conflict Policy, the City of London can take the following measures to reduce bird fatalities:

- Placement of bird-friendly exterior light fixtures in conjunction with glass design elements
- Adoption of a migratory bird policy<sup>8</sup>
- Provision of a comprehensive list of design-based development strategy options to architects, planners, urban designers, building owners and managers, tenants, and homeowners that can be applied to new or existing buildings
- A campaign that promotes awareness of the dangers the urban environment poses to migrating birds such as the City of Toronto’s “Lights Out Toronto” event
- Bird-friendly ventilation grates with a porosity no greater than 2 cm<sup>2</sup> or covered with netting to prevent injured birds from falling through

- If transparent noise barriers must be used, they shall have visual markers for birds to perceive and avoid them
- Eliminate reflective glass and mirrors from exterior landscape and building design. Birds are unable to distinguish between reflected and real habitat, which results in increased collision mortality

## 4 Lighting Design Criteria

**All general recommendations found in Section 4.1 are applicable to all newly installed lighting fixtures. Specific design details can be found in the following sections categorized by site usage type (residential, non-residential, special consideration sites). These recommendations and criteria are amalgamated from the design guideline recommendations of the Model Lighting Ordinance<sup>2</sup>, and various Ontario municipalities (e.g. Toronto, Burlington, and Richmond Hill).**

### 4.1 Hours of Operation

Recommendations for luminance and timing of lighting are intended to reduce or eliminate unnecessary light pollution. The IESNA and other documents typically use a light curfew to achieve this. The city of London's curfew begins **at and ends at .** Facilities requiring a curfew adjustment (e.g. restaurants, bars, sports stadiums, hospitals) will be evaluated on a case-by-case basis. During curfew, outdoor lighting must adhere to Section 4.2, bullet 5 option A or B. All residential and non-residential areas, including illuminated signs, are subject to the curfew<sup>36</sup>. Some site uses may warrant a curfew extension (e.g. recreation or entertainment) (see Section 6, General Exemptions).

### 4.2 Universal Outdoor Light Fixture Requirements

The general recommendations laid out below apply to all properties and lots.

- All outdoor light fixture installations must use shielded or cut-off fixtures
- No installed light fixtures will emit light above 90° from a direct downward plane
- Light fixture mounts/poles must have a non-reflective finish to reduce glare
- Maximum lumen levels for different light fixture heights must conform to Table 4.2
- All outdoor installed lighting (unless stated otherwise in Section 4.5) must incorporate one of the following:

A. An automatic switch (or automatic timing device) to extinguish all outdoor lighting curfew. These switches can include photoelectric, astronomic, programmable, or building automation switches. The switch must include a backup power device (battery or other)

B. Occupancy sensors/timers/motion sensors

- Light trespass at the property line will not exceed 11.6 lumens / ft<sup>2</sup> for commercial/industrial property boundaries or 5.8 lumens / ft<sup>2</sup> for residential property boundaries. In the case of a mixed residential/commercial boundary, the value for the residential shall take precedence
- Adjustable, or swivel fixtures, are prohibited
- Pole heights cannot exceed: 20 feet = 20 feet 20 feet 20 feet 20 feet 4 and should not exceed height of adjacent structures. Large parking lots and parking garages with >10 parking spaces are exempt from this recommendation. If a non-residential zone light fixture must be installed higher due to safety considerations, cut-off shielding greater than 90° must be installed
- Glare onto adjacent properties, roadways, and pedestrian thoroughways is prohibited. This may require the use of additional shielding
- All light sources (a.k.a bulbs, diodes) must be directed in such a way so that the light source is not directly visible from adjacent properties
- Openings in buildings which will contribute to light spillage must be blocked or shielded to transmit less than 10% light during the overnight hours (11 PM - 6 AM )
- The use of lasers, search lights, strobe lights, twinkle lights, or chasing lights are prohibited unless used for emergency services

Mounting Height		Maximum Single Light Fixture
Feet	Meters	Lumens
6	1.83	500 – 1000
8	2.44	600 – 1600
10	3.05	1000 – 2000
12	3.66	1600 – 2400

### 4.3 Residential

All residential zones (R1 through R11) must adhere to the requirements listed above. If the residential zone is combined with a non-residential zone, the property is strongly encouraged to meet both residential (Section 4.3) and non-residential (Section 4.4) guidelines. Residential guidelines are as follows:

- Maximum single fixture lumen allowance at a main entrance will not exceed 1,260 lumens.



- Maximum lumen allowance for each additional fixture (excluding main entrance, driveway/parking (Section 4.5.2), and motion sensed security lighting (Section 4.5.7), is 315 lumens / fixture.
- In residential buildings with 5 or more stories, shielded directional fixtures with motion-sensors for security are not to exceed 1,260 lumens each.

Additional design criteria for specific types of sites or property uses (including parking lots and security lighting, which may be utilized for residential properties) are included in Section 4.5.

#### 4.4 Non-Residential

For all non-residential sites, Table 4.4 must be followed. Site total lumen allowance will be determined by number of parking spaces (if site has fewer than 10) or total square footage of hardscape. These site lumens may be divided among all light fixtures on the property, so long as they adhere to the universal guidelines noted above (Section 4.2) and any specific site guidelines below. Some specific types of site usage (e.g. sale lots or service stations) will have additional design considerations or may receive additional lumen allowance (Section 4.5).

		<b>Lumen Allowance</b>		
<b>Light Zone Code</b>	<b>City of London Property Zone Code(s)</b>	Lumens / parking space (for sites <= 10 parking spaces)	Lumens / ft <sup>2</sup> of hardscape (sites > 10 parking spaces)	
LZ-0	AG ER OS UR	350	0.5	
LZ-1	AGC DC HER OC RO RRC T TGS	490	1.25	
LZ-2	AC GI OF ASA HS OR BDC LI RSC CC NF NSA CF CSA OB CR	630	2.5	

LZ-3	DA	RF	SS	840	5
	EX	RSA			
	HI	RT			

Values obtained from the IESNA. This table is intended for non-residential zones only.

LZ0 - “Recommended default zone for wilderness areas, parks, and preserved, and undeveloped rural areas.”

LZ1 - “Recommended default zone for rural and low-density residential areas” (may include business parks).

LZ2 - “Recommended default zone for light commercial business districts and high density or mixed-use residential districts” (may include churches, schools, recreation facilities, light industrial zoning).

LZ3 - “Recommended default zone for large cities’ business district” (may include business zone districts, commercial mixed-use, and heavy industrial zones).

#### 4.5 Specific Use Design Considerations and Lumen Allowance Additions

The following sections have been provided for specific-use zones and may be applicable to residential or non-residential areas.

##### 4.5.1 Entertainment Venues and Events

Entertainment venues and specific events are to be evaluated individually on a case by case basis.

##### 4.5.2 Parking Lots and Garages

Lighting in parking lots and garages are primarily for the safety of pedestrians. Parking structure lighting should be modulated so that they transition to match, but not exceed, adjacent roadway lighting levels at exits/entrances. All parking lots must adhere to maximum lumens at property line as described in Section 4.2.

In general, all parking lots shall have an average horizontal illuminance of no more than 25 lux with a maximum point illuminance not to exceed 40 lux. In the individualized case that a parking lot requires enhanced security due to the threat of vandalism or personal safety, the average horizontal illuminance and maximum point illuminance may be no greater than 75 lux.

These recommendations apply to any and all residential, institutional, customer, employee, or general use parking lots.

##### 4.5.3 Outdoor Sales Lots

Sales lots are illuminated to draw attention to displayed products and/or for security purposes. The lighting requirements include a graduated illuminance level from the front row (between the roadway and the front row of merchandise) to the last row. In addition to the universal guidelines presented in Section 4.2, site maximum horizontal illuminance is not to exceed:

100 lux at the front row

50 lux at all other rows

20 lux at all pathways/drives on the property

In addition to the lumen allowance provided in Table 4.4, outdoor sales lots used exclusively for the sale of vehicles have an additional allowance of:

LZ-1, additional 4 lumens / ft<sup>2</sup> hardscape

LZ-2, additional 8 lumens / ft<sup>2</sup> hardscape

LZ-3, additional 16 lumens / ft<sup>2</sup> hardscape

These recommendations apply to every outdoor sales lot to be illuminated and are to be incorporated into the light fixture design in accordance to the lumen allowance for non-residential areas.

#### 4.5.4 Service Stations and Gas Stations

The purpose of lighting a service/gas station is to ensure patron safety and to draw attention and interest to the business. Over-illumination of the property is prohibited, and the illumination limits for property boundaries (Section 4.2) must be maintained. Installed fixtures are to be limited to a canopy whenever possible. In addition to adherence to the universal guidelines presented in Section 4.2, site average horizontal illuminance is not to exceed:

100 lux for pump island/under canopy

30 lux for service areas

20 lux for pathways/drives

In addition to the allowance provided in Table 4.4A, service stations/gas stations have additional allowed lumens:

LZ-1, 4000 additional lumens / pump

LZ-2, 8000 additional lumens / pump

LZ-3, 16,000 additional lumens / pump

These values are additional design criteria which need to be implemented in conjunction with the lumen allowance provided for non-residential sites.

#### 4.5.5 Sports Recreational Fields

Outdoor sports fields require lighting for clear illumination of players. Sports/recreational fields have been divided into 4 classes:

1. More than 5,000 attendance seats (e.g. universities, colleges, semi-pro players)
2. 1,500 – 5,000 attendance seats (e.g. small universities or colleges, high-attendance high schools)

3. 500 – 1,500 attendance seats (e.g. high schools, training clubs with spectator seats)
4. Less than 500 attendance seats (e.g. leagues, elementary schools, little league, social events)

Using this classification system, illumination levels and lighting equipment must adhere to the IESNA Recommended Practice for Sports and Recreational Area Lighting (RP-6, latest edition). Illuminance values, fixture positioning, pole height, and curfew timing mandated in the IESNA RP-6 shall take precedence over the requirements outlined in this document.

#### 4.5.6 Architectural and Vanity Lighting

Architectural lighting is used to highlight and attract attention to architectural features, heritage features, and municipal landscaping, monuments, or fountains. No fixture will be installed to emit light above the horizontal plane (e.g. directly upwards). No light fixture will be aimed at reflective or polished surfaces such as glass, smooth stone, glazed tile, etc. The maximum total illuminance shall not exceed 100 lux. Architectural/vanity lighting is must be extinguished at curfew, preferably by automatic switch (Section 4.2, bullet 5, option A).

Lumens from architectural light fixtures must be included in the site maximum lumen allowance for non-residential sites (Table 4.4).

#### 4.5.7 Security Lighting

Lighting to ensure the safety of pedestrians shall be used as required. Light fixtures for this purpose shall:

- Reduce brightness contrast
- Ensure no light is directed 90° above the horizontal
- Employ motion sensors (Section 4.2, bullet 5, option B)

These guidelines shall apply to all pedestrian trafficked areas and will be included in the site/lot lumen allowance.

#### 4.5.8 Other

- Vehicular and temporary emergency lighting required by Fire and Police departments, or other emergency services shall be exempt from the requirements of the By-law.
- Outdoor lighting utilizing fossil fuels, including torches, lanterns, and open flames.
- Lights used by contractors, providing the lights are located on the property where such work is taking place and only during hours where work is occurring.
- Specific instances where concern for public safety conflicts with the guidelines outlined in this document will be evaluated on a case-by-case basis.

## 5 Exemptions

### 5.1 Grandfathered Lighting

All existing light fixtures in place at the time of this policy shall be grandfathered. Grandfathered light fixtures which are determined to cause excessive glare or light trespass may be required to be shielded, redirected, or removed. Any modification, relocation, repair, or reinstallation of any grandfathered light fixture must meet the design criteria laid out below (Section 4). Should a property undergo a use or zoning change, all light fixtures must be updated to meet the design criteria in Section 4. All new fixtures installed after the date of this policy must meet the design criteria in Section 4.

### 5.2 General Exemptions

These guidelines do not take precedence over highway and road lighting bylaws.

#### 5.2.1 Recreational use - after 11 PM - limitation

Where an outdoor recreational use in an outdoor recreational facility continues after 11 PM, outdoor light fixtures required to be on in connection with that use are permitted, but only while that use continues.

#### 5.2.2 Entertainment event - after 11 PM - limitation

Where a concert, play or other entertainment event in a park or on other land owned by the Corporation and used for public purposes takes place or continues after 11 PM, outdoor light fixtures required to be on in connection with that event are permitted, but only while the event takes place or continues.

#### 5.2.3 Hospitals

All hospitals shall be exempt to not disturb citizen access to health care.

#### 5.2.4 Temporary Exemptions

Any person may submit a written request for temporary exemption from the recommendations by completing a written request form prepared by the City. The written request should include:

- Specific exemption request
- Type and use of exterior lighting involved
- Date(s) of the event
- Duration of the event
- Location of exterior lighting
- Size, wattage, and height of proposed lighting

The owner of the land upon which the prohibited light(s) will be placed shall apply to the city for an exemption. Plans for the location and fixture specifications for the specified light(s) shall be submitted with the application.

An exemption may be granted in whole or in part with terms and conditions. Any breach by the applicant of any of the terms or conditions will render the exemption null and void.

## 6 Bird-Friendly Design

**Mortality rates of birds are increasing due to collisions with buildings, especially during the migratory season. Each year nearly 25 million birds die in Canada from building collisions alone, making reflected light from buildings one of the most deadly threats to birds. With new guidelines in place, a building that emits reflected light which injures or kills birds is now a violation of the provincial Environmental Protection Act (EPA) and the federal Species At Risk Act (SARA). Due to these legal offenses, it is important for buildings to follow bird-friendly design guidelines across Canada.**

**The following strategies outline recommendations for achieving green standards for bird-friendly development, and are derived from the City of Toronto Green Development Standard: Bird-Friendly Development Guidelines (2007), City of Toronto Green Development Standard Version 2.0 (2015) and City of Toronto Bird-Friendly Development Guidelines Best Practices Glass (2016). These documents work together to reduce the threat of death from buildings by making glass less dangerous to birds and by mitigating light pollution. Options for creating visual markers, treating glass, and muting reflection shall be applied to 85% of glass features and windows for the first 12 m above grade (dimensions relate to typical tree height). Dimensions for visual markers and muting reflection applications are subject to building design and site conditions.**

### 6.1 Visual Markers

Visual markers are the most effective technique to reduce window strikes and shall be used on exterior surface glass, balcony railings, fly-through conditions and parallel glass within the first 12 m of the building. The distance between patterns or applications on glass must be a distance of 10 cm by 10 cm or less and at least 5 mm in diameter. Visual markers should have high contrast and be applied to low reflectance, exterior surface glass.

### 6.2 Glass Treatments

Glass treatments shall be applied above 12 m to the height of or anticipated height of the surrounding tree canopy and vegetation at maturity in sites close to natural areas such as ravines or woodlots. Glass treatments must also be applied to glass adjacent to or in the vicinity of elevated landscapes such as podium gardens and green roofs. Glass treatment options must also be applied to windbreaks, solariums and greenhouses in order to create sufficient visual markers for birds.

**Patterned or ‘fritted’ glass** refers to glass which contains opaque or translucent images or abstract patterns. The images are created by using dots in a variety of sizes and densities which are most effective on the exterior surface of the glass. Only non-reflective glass should be used when combined with fritted patterns. Pattern design should follow the outlines in 5.1: Visual Markers.

**Film products** refers to external film applications or laminates which contain images or patterns and can be designed to enhance the architectural design of the building.

**Decals** with no more than 5 to 10 cm of clear spaces between patterns can be used. Decals must be located on the exterior glass.

**Decorative Grilles and Louvres** refer to exterior grille features which if applied must be 10 cm by 10 cm or less.

**Fenestration Patterns** refer to multiple paned glass containing horizontal and vertical mullions. Panes must be no more than 28 cm with 10 cm or less the most effective visual marker.

**Art work** applied to the interior or exterior of windows can be used to provide sufficient visual markers while allowing for natural light.

### 6.3 Muting Reflections Options

**Awnings and overhangs** to mute images at ground floor level.

**Sunshades** refer to applications to reduce direct sunlight, while allowing indirect light into rooms. This feature mutes reflection thus reducing window strikes.

### 6.4 External Lighting

**Decorative Lighting** should be eliminated wherever possible. For existing buildings, decorative lighting should be projected downward and turned off during migratory season (September – November, March – May)

**Advertising Lighting** must be lit from above to reduce the volume of light being projected unnecessarily into the night sky.

**Event and Festival Lighting** such as spotlights and search lights must be prohibited during bird migration season.

**Roof Top Lighting** that should be prohibited. Vanity lighting may be allowed only if the following conditions are met:

- Exterior light fixtures are installed to prevent unnecessary light spillage.
- Vanity lighting is turned off from 11 PM - 5 AM year-round without exception utilizing an automatic device.

Overrides after hours may be provided by a manual or occupant sensing device with a limit of 30 min.

### 6.5 Interior Lighting

**Bird Friendly Operational Systems and Practices** refers to the use of operating and system practices by residents, tenants, building owners, and managers to help reduce migratory bird fatalities. The following strategies can be used:

- **Installation of interior task lighting** at work stations be the recommended light source during evening work hours, increasing energy efficiency, reducing light pollution, and

migratory bird fatalities. Overhead lighting be turned off at night and focused lighting such as task lighting be used during bird migration season.

- **Provision of shielding from interior generated light** with less than 10 % transmittance overnight for all fenestrations (windows, doors, skylights, curtained walls), for example blinds and curtains.
- **Motion-Sensitive Lighting** to be installed and retrofitted in lobbies, walkways, corridors, and operating systems that automatically turn off lights during after work hours.
- **Internal Location of Greenery:** Building owners and managers must locate greenery away from clear glass and minimize lighting levels through motion sensing lighting in ground floor lobbies, walkways and corridors and retrofit glass in these areas wherever possible with bird friendly window applications in order to meet the Bird Friendly Green Standard (birds drawn into cityscapes by light pollution seek safety by flying towards greenery and are extremely dangerous in these areas.)

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## 8 Contributors

### **Ecological and Environmental Planning Advisory Committee (EEPAC)**

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### **Advisory Committee on the Environment (ACE)**

Becki Schulz

Susan Hall

### **Animal Welfare Advisory Committee (AWAC)**

Wendy Brown

## **Advisory Committee on the Environment** **Terms of Reference**

### **Role**

While it is the legislative mandate of the Municipal Council to make the final decision on all matters that affect the Municipality, the role of an advisory committee is to provide recommendations, advice and information to the Municipal Council on those specialized matters which relate to the purpose of the advisory committee, to facilitate public input to City Council on programs and ideas and to assist in enhancing the quality of life of the community, in keeping with the Municipal Council's Strategic Plan principles. Advisory committees shall conduct themselves in keeping with the policies set by the Municipal Council pertaining to advisory committees, and also in keeping with the Council Procedure By-law.

### **Mandate**

The Advisory Committee on the Environment reports to the Municipal Council, through the Planning and Environment Committee. The Advisory Committee on the Environment provides input, advice and makes recommendations on environmental matters affecting the City of London.

The Advisory Committee on the Environment is responsible for the following:

to serve as an advisory, resource and information support group to the Planning and Environment Committee, the Municipal Council, and its Committees as required, and to the citizenry to encourage and promote sustainable programs and functions such as the following:

- remedial planning toward the clean-up of contaminated areas;
- waste reduction, reuse and recycling programs;
- water and energy conservation measures;
- climate change mitigation;
- to investigate such other aspects of environmental concerns as may be suggested by the Municipal Council, its other Committees, or the Civic Administration; and
- to initiate and/or receive submissions and/or delegations regarding any environmental concerns and to report with recommendations to the Planning and Environment Committee.

### **Composition**

#### **Voting Members**

Maximum of thirteen members consisting of:

- Nine members-at-large;
- One representative of the Environmental and Ecological Planning Advisory Committee
- One representative of the Thames Region Ecological Association
- One representative of an environmental and/or private sector interest group
- One representative of the Industrial/Commercial/Institutional sector

#### **Non-Voting Resource Group**

One representative from each of the following:

- Ministry of the Environment
- Middlesex-London Health Unit
- Thames Valley District School Board
- London District Catholic School Board
- City's Community Services Department
- City Ecologist
- City's Planning Division
- Planning, Environmental & Engineering Services Department
- London Hydro
- Youth Representative under age 18 for a period of 1 to 3 years; it being noted that once this representative turns 18 they will be eligible to become a voting member through the usual appointment process
- Institute for Catastrophic Loss Reduction, University of Western Ontario
- UWO Biotron

- One Post-Secondary Student

### Sub-committees and Working Groups

The Advisory Committee may form sub-committees and working groups as may be necessary to address specific issues; it being noted that the City Clerk's office does not provide secretariat support to these sub-committees or groups. These sub-committees and working groups shall draw upon members from the Advisory Committee as well as outside resource members as deemed necessary. The Chair of a sub-committee and/or working group shall be a voting member of the Advisory Committee.

### Term of Office

Appointments to advisory committees shall, in all but one case, be for a four-year term, commencing March 1 of the first year of a Council term and ending on February 28 or, in the case of a leap year, February 29 of the first year of the following Council term. In the case of the Non-Voting Post-Secondary Student Member, the term shall be for one year, commencing March 1 of each year and ending on February 28 or, in the case of a leap year, February 29 of the following year.

### Appointment Policies

Appointments shall be in keeping with Council Policy. Non-voting Post-Secondary Student Members shall be cooperatively nominated by the Fanshawe Student Union and the University Students' Council, Western University.

### Qualifications

The representatives of the organizations must be members or employees of the organizations they represent. Other members shall be chosen for their special expertise, experience, dedication and commitment to the mandate of the Committee. Non-voting representatives from local resource groups shall be members or employees of the organization they represent. Non-voting Post-Secondary Students shall be current students at either Fanshawe College, Western University, Brescia University College, Huron University College or King's University College.

### Conduct

The conduct of Advisory Committee members shall be in keeping with Council Policy.

### Meetings

Meetings shall be once monthly at a date and time set by the City Clerk in consultation with the advisory committee. Length of meetings shall vary depending on the agenda. Meetings of working groups that have been formed by the Advisory Committee may meet at any time and at any location and are in addition to the regular meetings of the Advisory Committee.

### Remuneration

Advisory committee members shall serve without remuneration.

From the General Policy for Advisory Committees:

- the role of an advisory committee is to provide recommendations, advice and information to the Municipal Council on those specialized matters which relate to the purpose of the advisory committee, to facilitate public input to City Council on programs and ideas and to assist in enhancing the quality of life of the community, in keeping with the Municipal Council's Strategic Plan principles

Authorization for expenditures shall be as follows:

- (i) the City Clerk, or his/her designate, shall have the authority to process all payments for standard items within the advisory committee's mandate, subject to budget availability, such as costs associated with **Council-approved events** (e.g. speaker's gifts, mailing costs, room rentals, refreshments, etc. for open houses and workshops), costs associated with workshops and conferences attended by members of an advisory committee which are relevant to that advisory committee's mandate, plaques issues by the London Advisory Committee on Heritage, interpreters for the special needs population and purchase of publications to assist in carrying out the advisory committee's mandate;
- (ii) expenses associated with communication and/or promotional efforts being undertaken by an advisory committee, within its mandate, are to be approved by Corporate Communications for consistency in messaging and proper branding, via the Committee Secretary, prior to those expenses being incurred. If Corporate Communications approves the content of those items, then the City Clerk, or his/her designate, shall have the authority to process those expenses, subject to budget availability. Expenses associated with communication and/or promotional efforts that are not to the satisfaction of Corporate Communications, shall require the approval of the Municipal Council, via the appropriate standing committee; and
- (iii) **financial grants/contributions or awards to third party individuals, organizations or groups shall be directed to the appropriate Civic Department** to be addressed through the approval and reporting processes already established by the Municipal Council for those situations, unless that authority is explicitly provided for by the Municipal Council in an advisory committee's mandate. If that authority has been explicitly provided for in an advisory committee's mandate, then the City Clerk, or his/her designate, shall have the authority to process those particular expenditures.