

4TH REPORT OF THE
ADVISORY COMMITTEE ON THE ENVIRONMENT

Meeting held on November 7, 2012, commencing at 12:21 p.m.

PRESENT: M. Baetens, (Chair), C. Baird, M. Bloxam, R. Gupta, J. Howell, T. Khan, L. Langdon, G. Sass, J. Shelley, D. Szoller, A. Youssef and J. Martin (Secretary).

ALSO PRESENT: T. Copeland, S. Galloway, J. Pitman, A. Van Rossum, R. Welker

REGRETS: M. Daignault

I YOUR COMMITTEE RECOMMENDS:

Thames River/Creek Survey Annual Report 1. That Civic Administration **BE REQUESTED** to provide the Thames River/Creek Survey Annual Report to the Advisory Committee on the Environment (ACE); it being noted the ACE received the attached presentation from A. Van Rossum, Environmental Services Engineer, with respect to the Thames River Annual Report.

II YOUR COMMITTEE REPORTS:

ReThink London 2. That the Advisory Committee on the Environment (ACE) received a presentation from S. Galloway, Manager, Urban Design, with respect to ReThink London.

Water, Sanitary and Storm Drainage Rate Structure Review – A New Funding Model 3. That the Advisory Committee on the Environment (ACE) received the attached presentation from R. Welker, Division Manager, Water Engineering Division, with respect to the water, sanitary and storm drainage rate structure review and a new funding model.

Conservation Ontario Whitepaper: Watershed Management Futures for Ontario 4. (8) That the Advisory Committee on the Environment (ACE) reviewed and received a communication dated October 10, 2012, from the Upper Thames River Conservation Authority, with respect to the Conservation Ontario Whitepaper: Watershed Management Futures for Ontario; it being noted the ACE requested its Committee Secretary to invite P. Donnelly, Urban Watershed Program Manager, to a future meeting with respect to this matter.

5. That the Advisory Committee on the Environment (ACE) received and noted the following:

3rd Report of the ACE (a) (1) the 3rd Report of the Advisory Committee on the Environment from its meeting held on October 3, 2012;

1st Report of the EEPAC (b) (2) the 2nd Report of the Environmental and Ecological Planning Advisory Committee from its meeting held on September 20, 2012;

2nd Report of the TAC (c) (3) the 2nd Report of the Transportation Advisory Committee from its meeting held on October 2, 2012;

1st Report of the TFAC (d) (4) the 1st Report of the Trees and Forests Advisory Committee from its meeting held on September 26, 2012;

Southwest Area Plan (e) (5) a Notice dated September 24, 2012, from H. McNeely, Senior Planner, with respect to an application submitted by The Y Group Investments & Management Inc., relating to the Southwest Area Plan;

2371 Highbury Avenue North (f) (6) a Notice dated October 19, 2012, from M. Corby Planner, with respect to an application submitted by The Y Group Investments & Management Inc., relating to the property located at 2371 Highbury Avenue North; and,

Huron Street
Watermain
Crossing Municipal
Class
Environmental
Assessment

(g) (7) a Notice from J. Blancher, Senior Waterworks Technologist and M. Oxlade, Environmental Coordinator, Stantec Consulting Ltd., with respect to the Huron Street Watermain Crossing Municipal Class Environmental Assessment.

Next Meeting

6. That the Advisory Committee on the Environment will hold its next meeting on December 5, 2012.

The meeting adjourned at 2:47 p.m.



CITY OF LONDON Thames River Monitoring

**Advisory Committee on the Environment
November 2012**

**Tony Van Rossum, P. Eng.
Environmental Services Engineer**

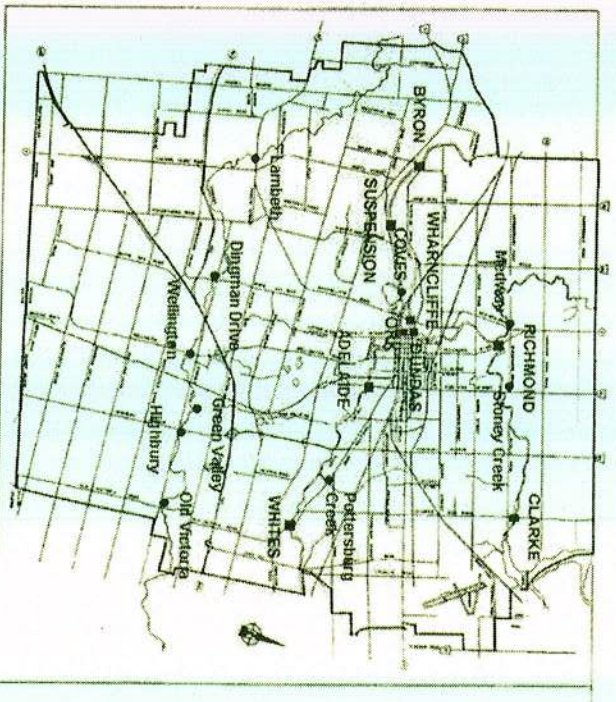


PRESENTATION OUTLINE

- 1. Monitoring Program**
- 2. Sewage Plants**
- 3. Issues**

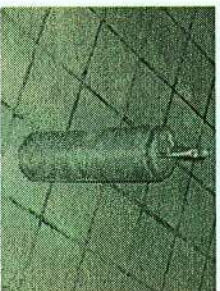
Wastewater Treatment Operations Monitoring Program

- Collect grab samples from 10 sites on the Thames River about 40 times per year
- Collect grab samples from 10 sites from Creeks about 12 times per year
- Collect 24 hour dissolved oxygen levels via a probe and data logger at 3 sites June to September
- Collect benthic samples during June to August in the Thames River and on the creeks



Sampling Equipment

- River sampler
- YSI Probe
- Surber and Eckman samplers

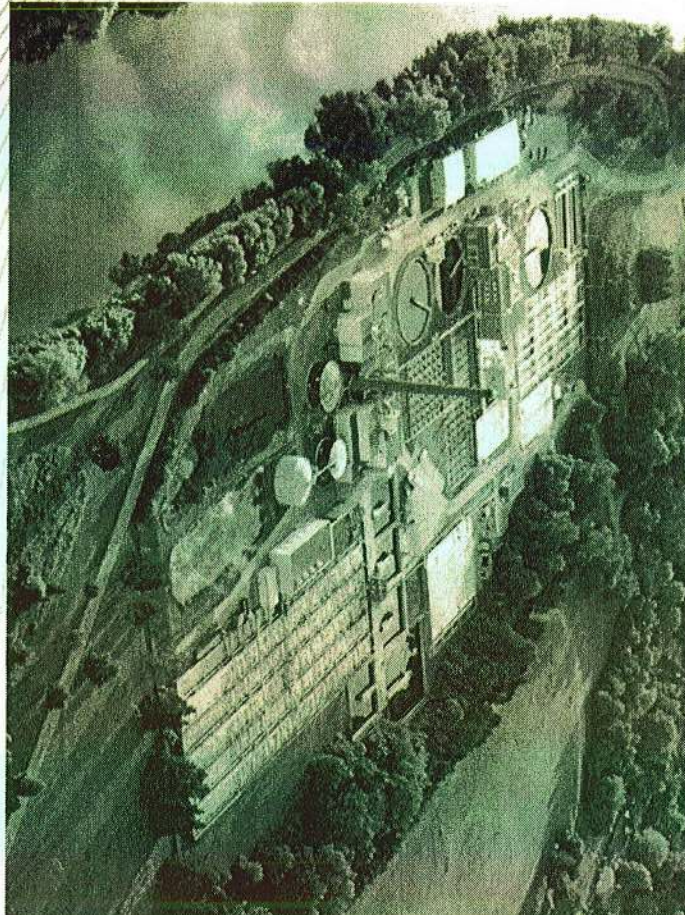


Sewage treatment capacity m³/d

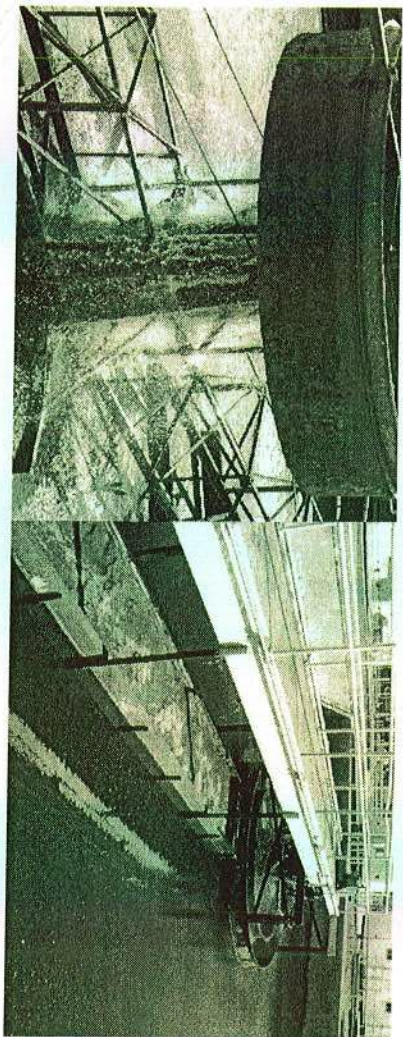
- | | |
|---------------|-----------|
| • Adelaide | • 36,400 |
| • Greenway | • 152,175 |
| • Oxford | • 17,250 |
| • Pottersburg | • 39,100 |
| • Vauxhall | • 20,900 |
| • Lambeth | • 564 |



Greenway



Greenway Final Clarifiers





ISSUES

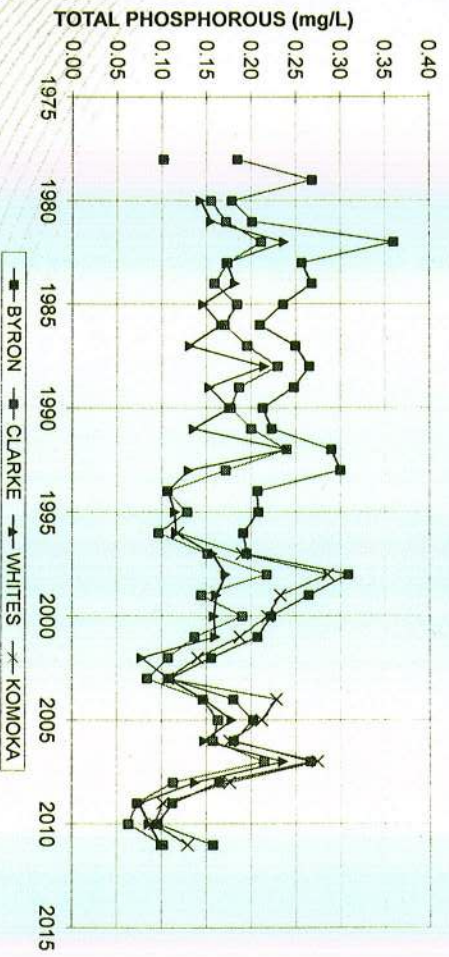
PARAMETER	MOE SURFACE WATER CRITERION	UPSTREAM		DOWNSTREAM (Komoka Bridge)		Average met Objective
		2011	3 Year average	2011	3 Year average	
Suspended Solids		19	16	19	17	
BOD	4.0	2.0	2.4	2.4	2.5	Y
Dissolved Oxygen	4.0	9.6	10.3	9.3	9.8	Y
Phosphorous	0.03	0.10	0.08	0.13	0.11	N
Un-ionized Ammonia	0.019	0.003	0.002	0.003	0.002	Y
Nitrates**	2.9	5.1	4.7	5.3	5.0	N



PARAMETER	Criterion	UPSTREAM		DOWNSTREAM (Komoka Bridge)		Average met Objective
		2005	3 Year average	2005	3 Year average	
Total Coliforms * xx	1,000	7,600	6,000	7,800	8,800	N
E. Coli * xx	100	176	162	150	148	N
Iron	0.30	0.03	0.02	0.04	0.02	Y
Manganese	0.050	0.013	0.013	0.005	0.005	Y
Aluminum	0.100	0.070	0.066	0.061	0.061	Y
Cadmium	0.0002	L0.0002	L0.0002	L0.0002	L0.0002	Y
Chromium	0.100	L0.001	L0.001	L0.001	L0.001	Y
Copper	0.005	0.001	0.001	0.002	0.002	Y
Nickel	0.025	0.002	0.003	0.003	0.004	Y
Lead	0.025	L0.001	L0.001	L0.001	L0.001	Y
Zinc	0.030	0.002	0.002	0.002	0.004	Y

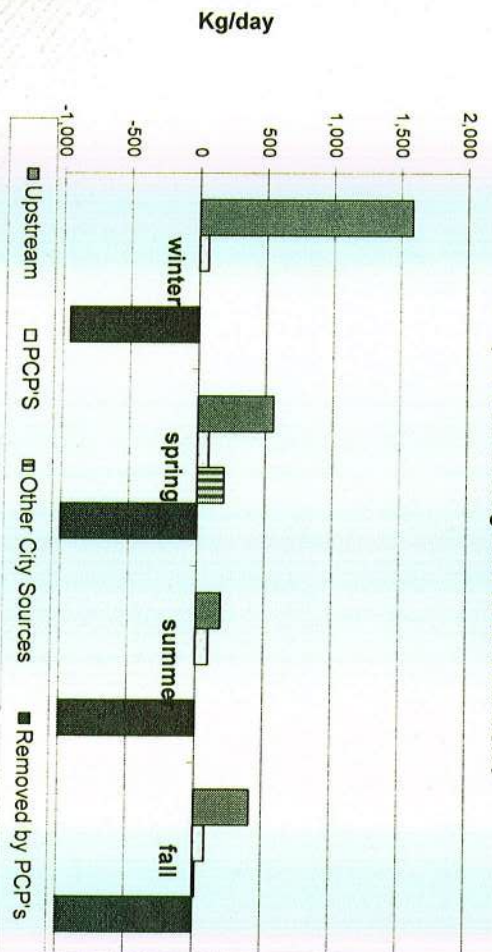
ISSUES

THAMES RIVER AT LONDON
ANNUAL AVERAGES



ISSUES

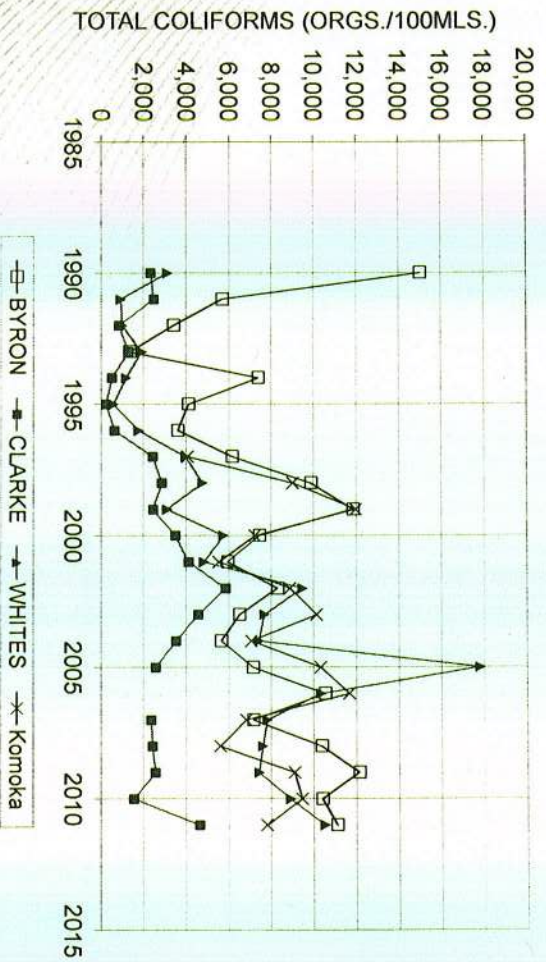
Phosphorous loading 2007 to 2011 inclusive



Issues

- Bacteriological Quality

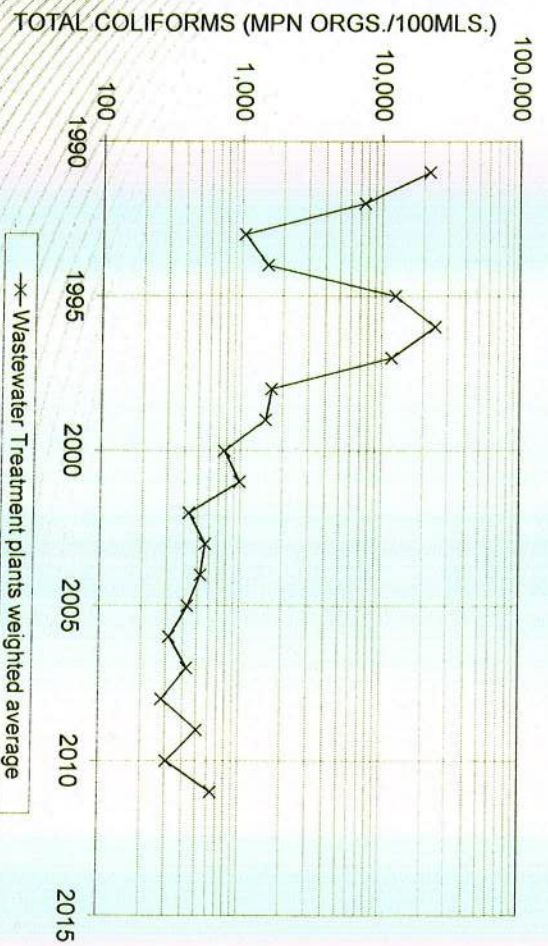
THAMES RIVER
DISINFECTION SEASONS



Issues

- Bacteriological Quality

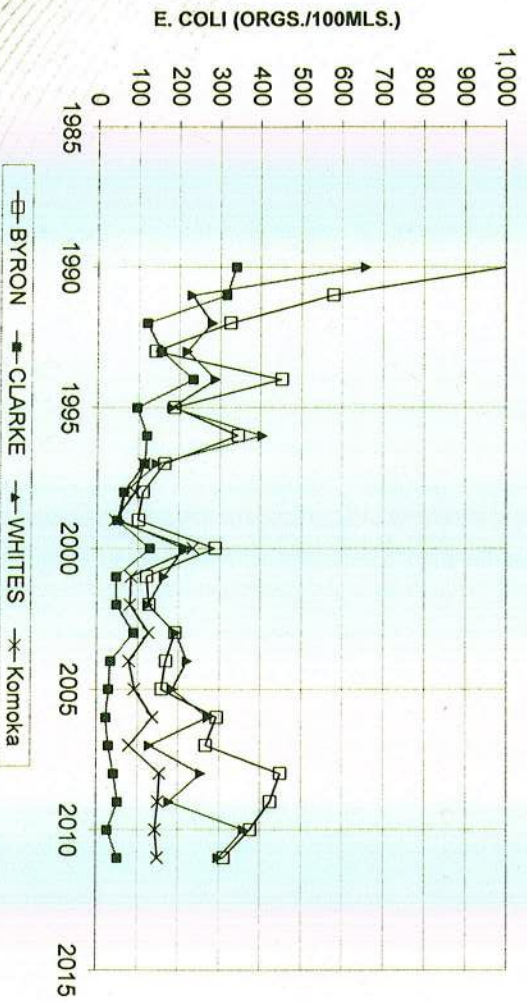
THAMES RIVER
DISINFECTION SEASONS



ISSUES

- Bacteriological Quality

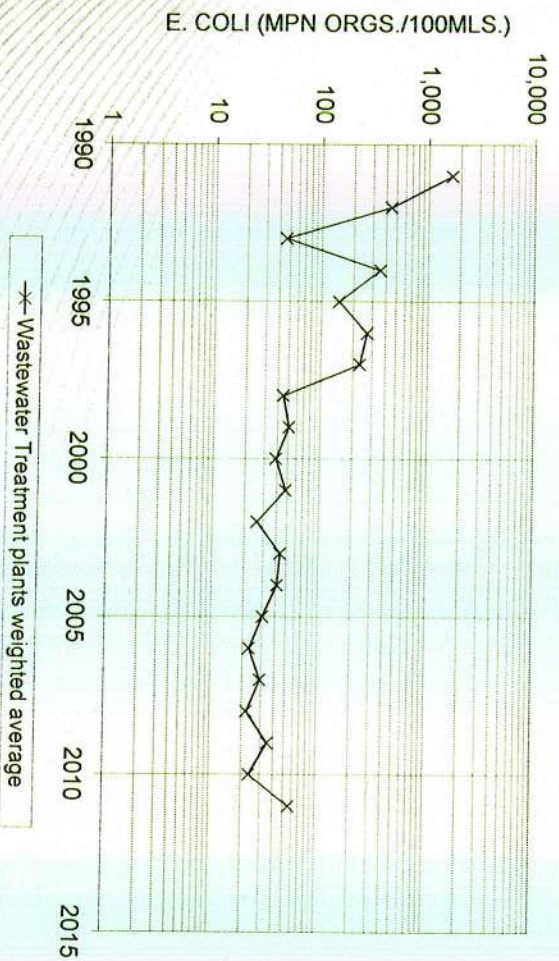
THAMES RIVER
DISINFECTION SEASONS



ISSUES

- Bacteriological Quality

THAMES RIVER
DISINFECTION SEASONS





London
CANADA

• Bypasses

ISSUES

City of London

Bypasses

	Treated ML	Raw Bypass		Secondary Bypass		% of raw bypasses to Treated flow	Rainfall yearly total (mm)
		ML	#	ML	#		
2002	75,150	225	32	567	11	0.30%	861
2003	74,385	285	99	365	40	0.38%	985
2004	77,304	375	106	679	47	0.48%	964
2005	75,150	225	74	566	26	0.30%	868
2006	83,075	201	99	862	33	0.24%	1,202
2007	71,874	24	36	227	19	0.03%	771
2008	78,979	219	70	1,033	38	0.28%	1,094
2009	74,557	158	60	901	22	0.21%	931
2010	70,426	47	38	123	17	0.07%	931
2011	84,793	375	94	1,630	31	0.44%	1,165
2012		4	6	41	5		
Average		194	65	636	26		

ML = Mega litres or million litres



London
CANADA

• Pollution Prevention and Control Plan

ISSUES

[http://www.london.ca/d.aspx?s=/Sewer And WasteWater/pollution_prevention.htm](http://www.london.ca/d.aspx?s=/Sewer_And_WasteWater/pollution_prevention.htm)

Project Background and Purpose

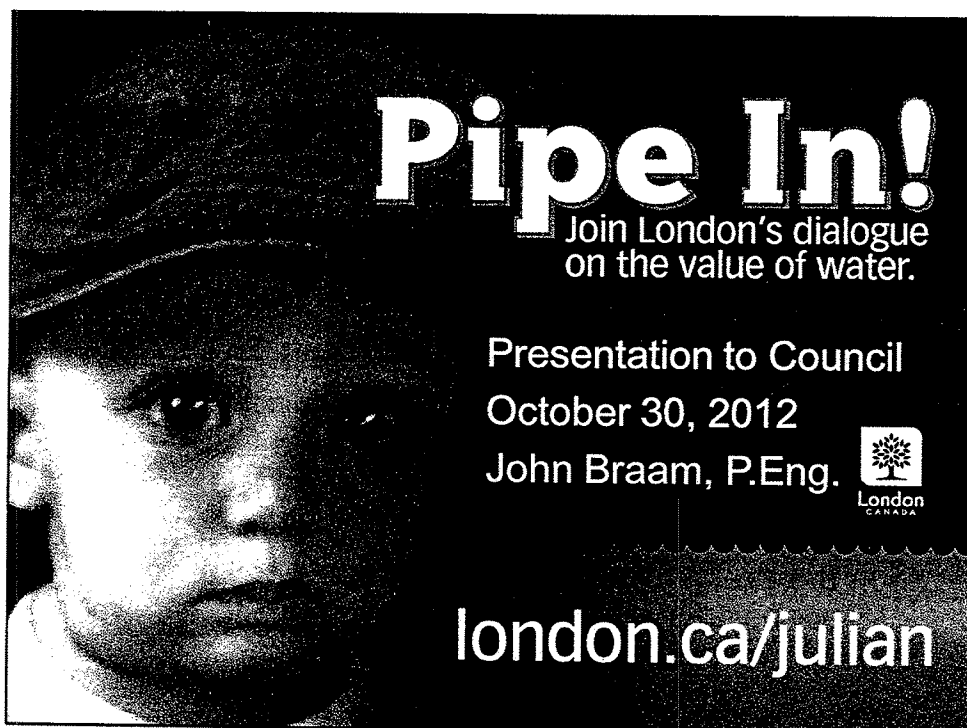
Raw wastewater can be discharged to the environment when sewer systems are overwhelmed by storm water during wet weather events. Under extreme conditions, sanitary sewage mixed with storm water can discharge directly into local waterways instead of going to a nearby wastewater treatment plant. The City recently completed a program to identify and document where raw wastewater discharges may occur within the City sewer system. Through the development of a Pollution Prevention and Control Plan (PPCP), the City of London will develop strategies to mitigate the impacts of these discharges.



Web site

http://www.london.ca/d.aspx?s=/Sewer_and_Wastewater/Sewagetreatment_index.htm


- Reports are included in the City web site
- Videos under “*Actions Individuals can take*”
- Videos under “*Information for businesses*”
- Videos on *History Of Sewage Treatment In London* and *Sewage Treatment*
- *Storm Sewers*



Pipe In!

Join London's dialogue
on the value of water.

Presentation to Council
October 30, 2012
John Braam, P.Eng.



london.ca/julian

Alignment of Goals, Objectives and Principles

- Financial stability and sustainability of our water and wastewater systems
- Protect our valued resources and promote conservation
- Promote economic development and jobs retention
- Enhance Customer Communication

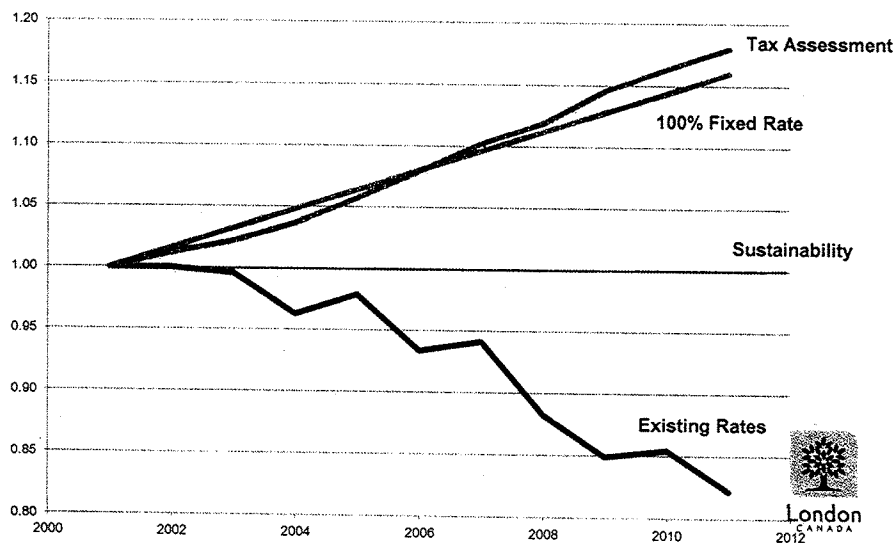


Main reasons to move forward

- Operate like a business (not-for-profit)
- Get to sustainability **sooner, saving** customers money
- Achieve fairness and equity among all 110,000 customers
 - Water - fire protection is unbalanced
 - Sanitary – large customers not paying enough of infrastructure cost
 - Storm – institutions and large commercial are being subsidized by residential



Revenue Base



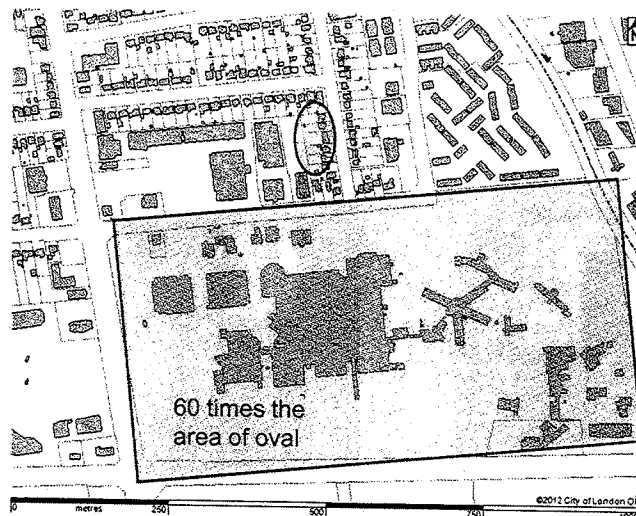
Road to Sustainability

Year	Water		Sanitary and Storm	
	Current *	Proposed **	Current *	Proposed
2013	8.0%	8.0%	7.0%	7.0%
2014	8.0%	8.0%	7.0%	7.0%
2015	8.0%	7.0%	7.0%	7.0%
2016	7.0%	3.0%	7.0%	5.0%
2017	6.5%	3.0%	4.0%	3.0%
2018+	3.0%	3.0%	3.0%	3.0%
Annualized	6.7%	5.9%**	5.8%	5.3%

Notes: * Rate increases identified in current 20 year financial plans
 ** New funding model for Water includes Fire Protection charge



Institutional Customers

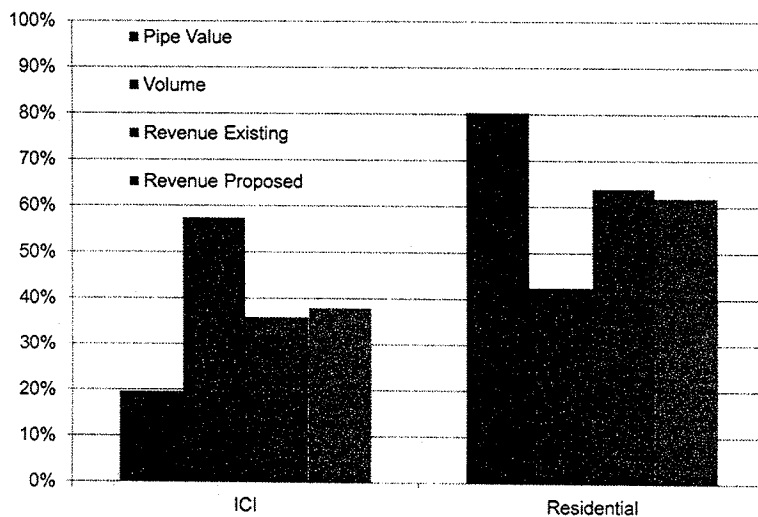


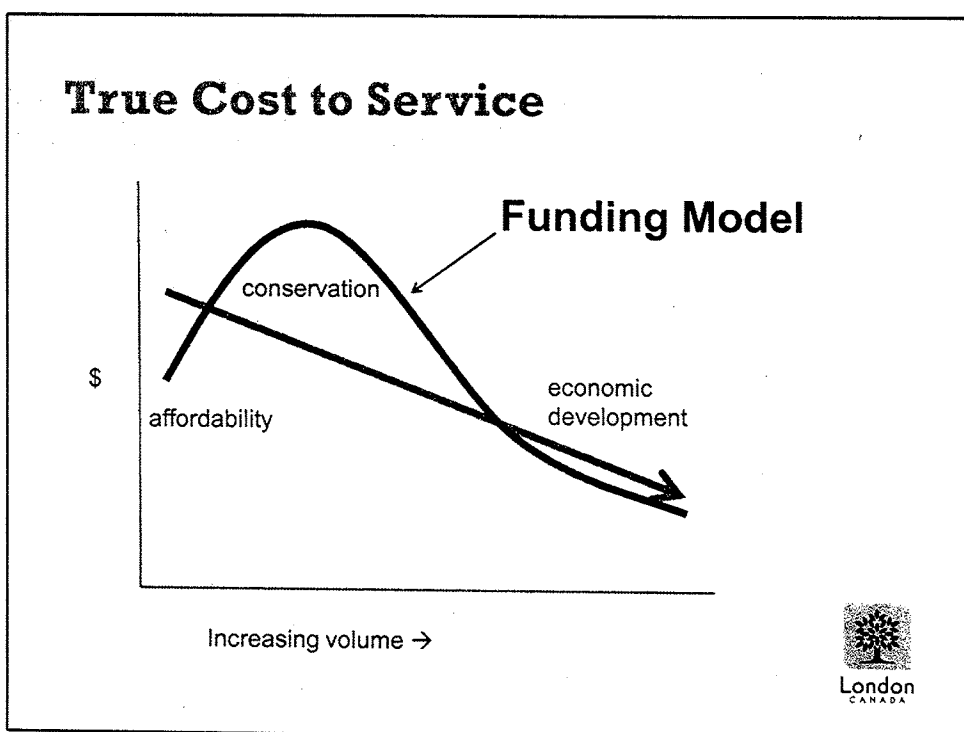
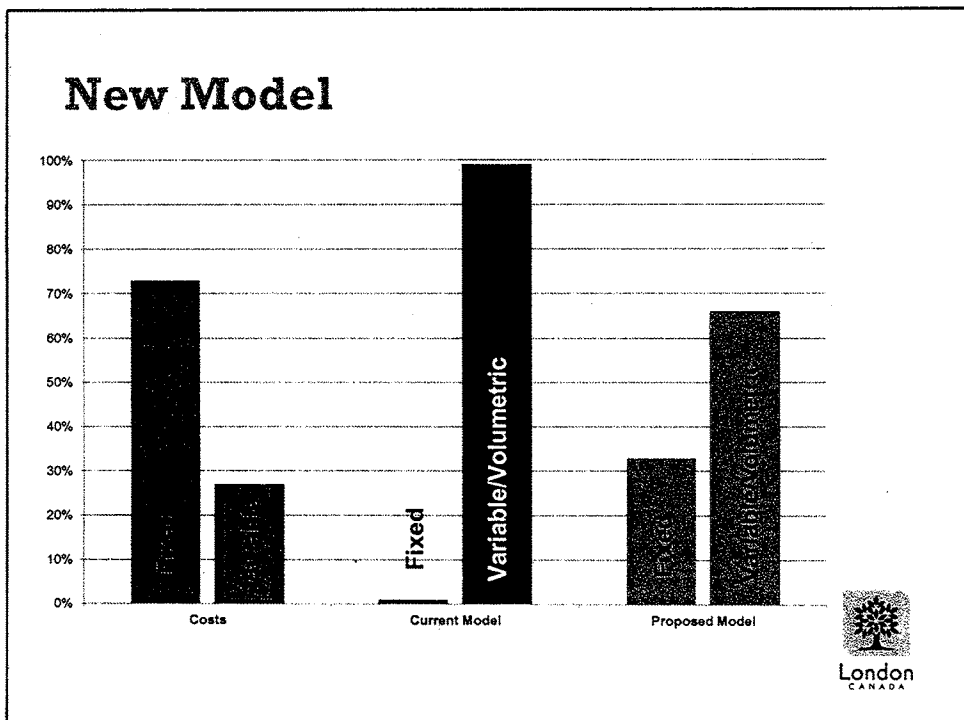
Largest impacts where we have inequities today

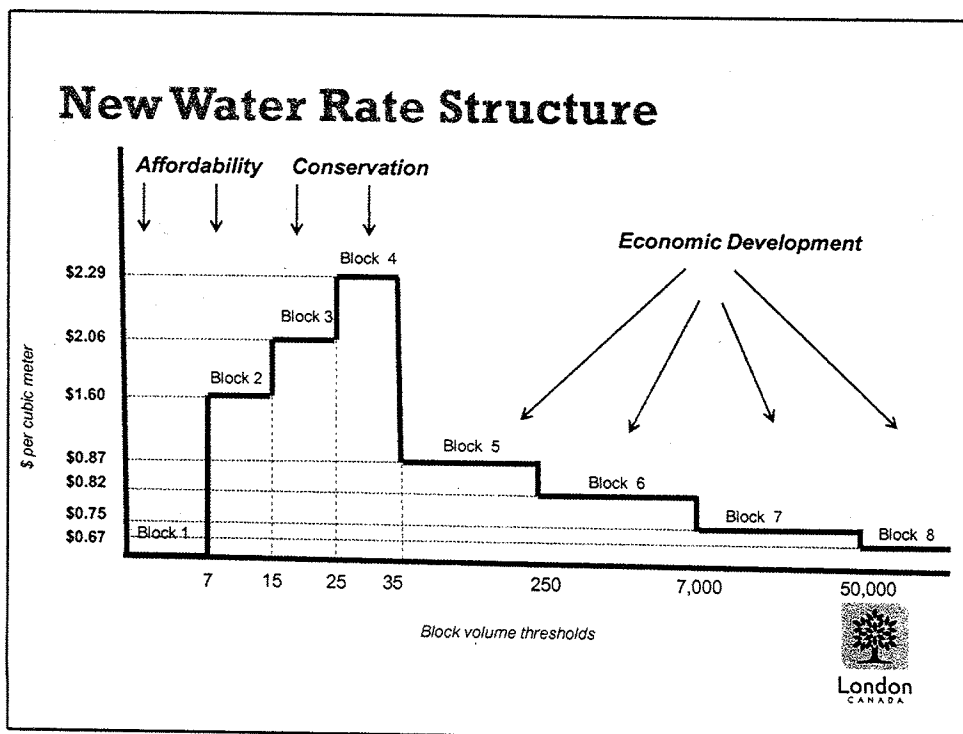
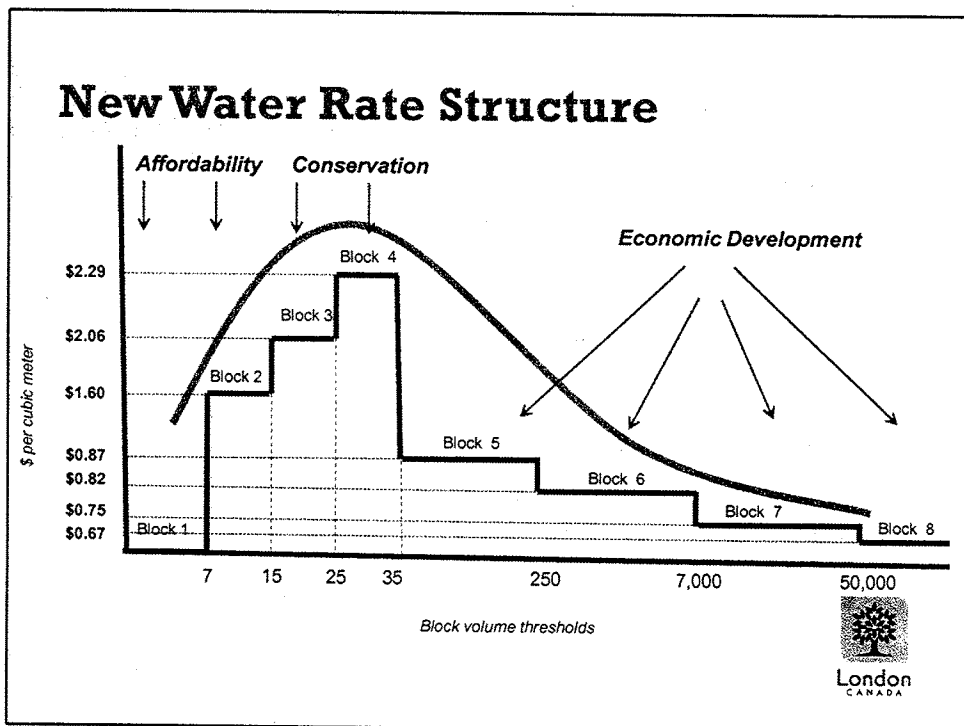
- Large institutional and commercial storm will go up – but water and sanitary will mitigate high volume users
- Lower volume ICI will be impacted by conservation rate – seeing some increases of \$50 per month – these include warehouses

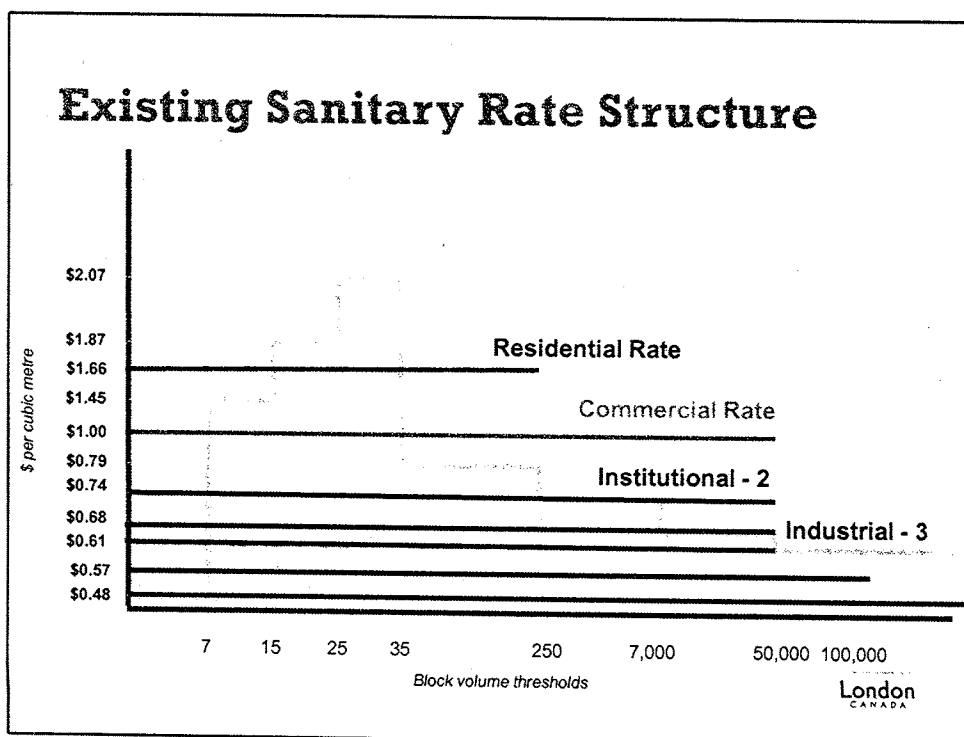
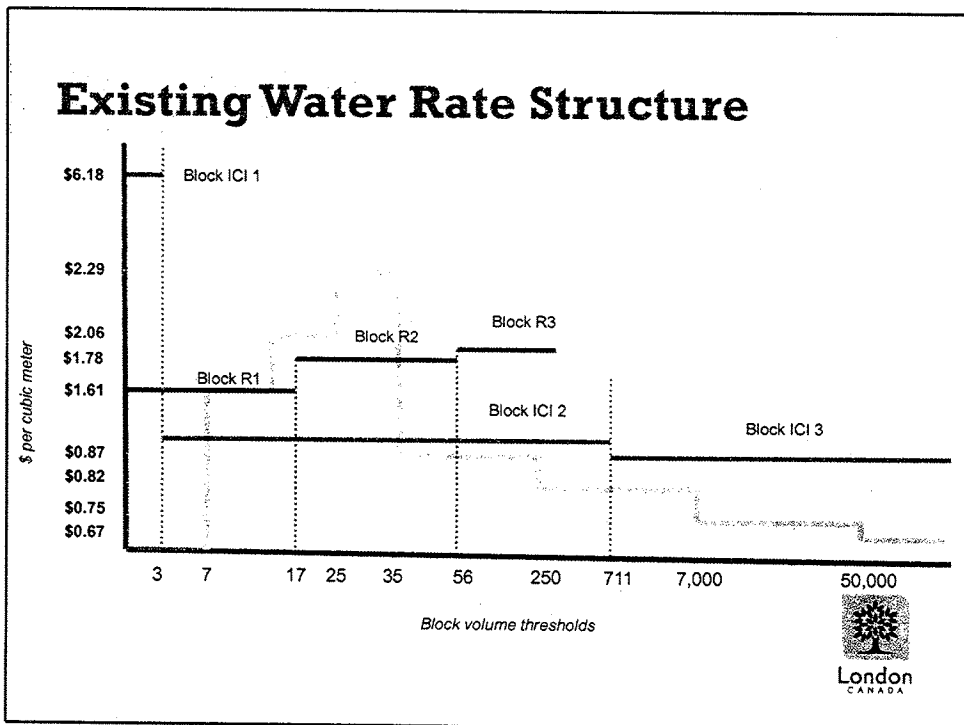


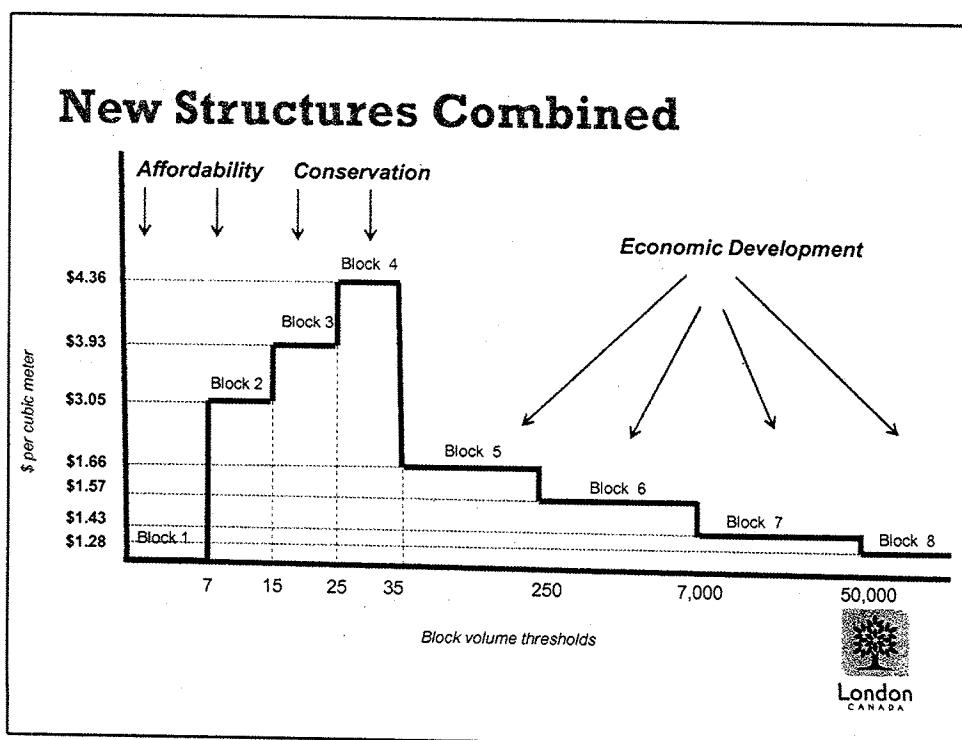
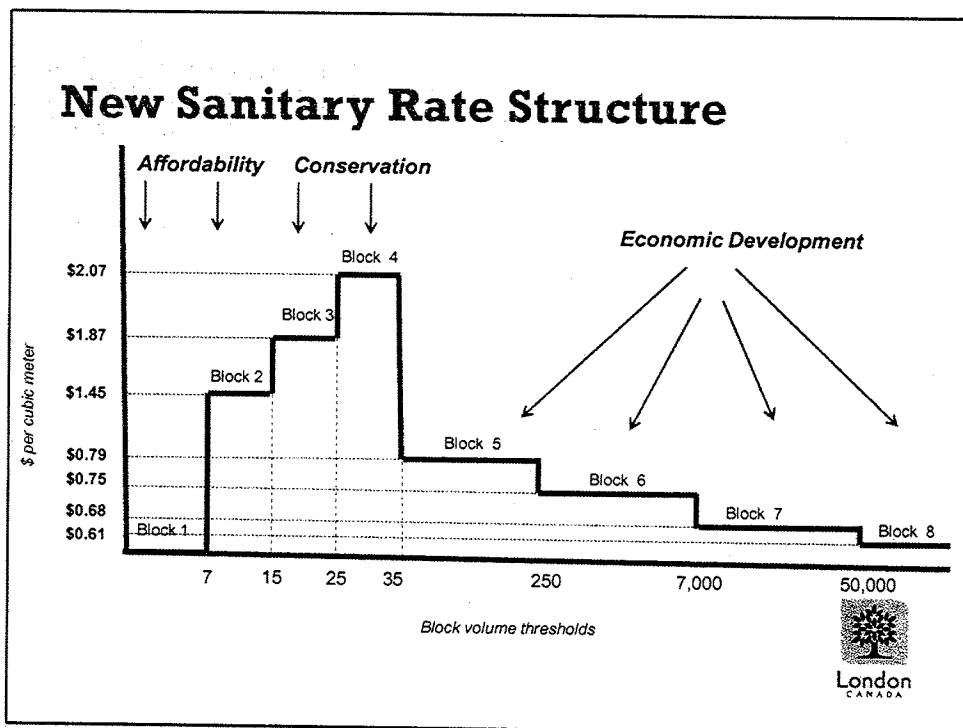
Re-Balancing – Not a big change

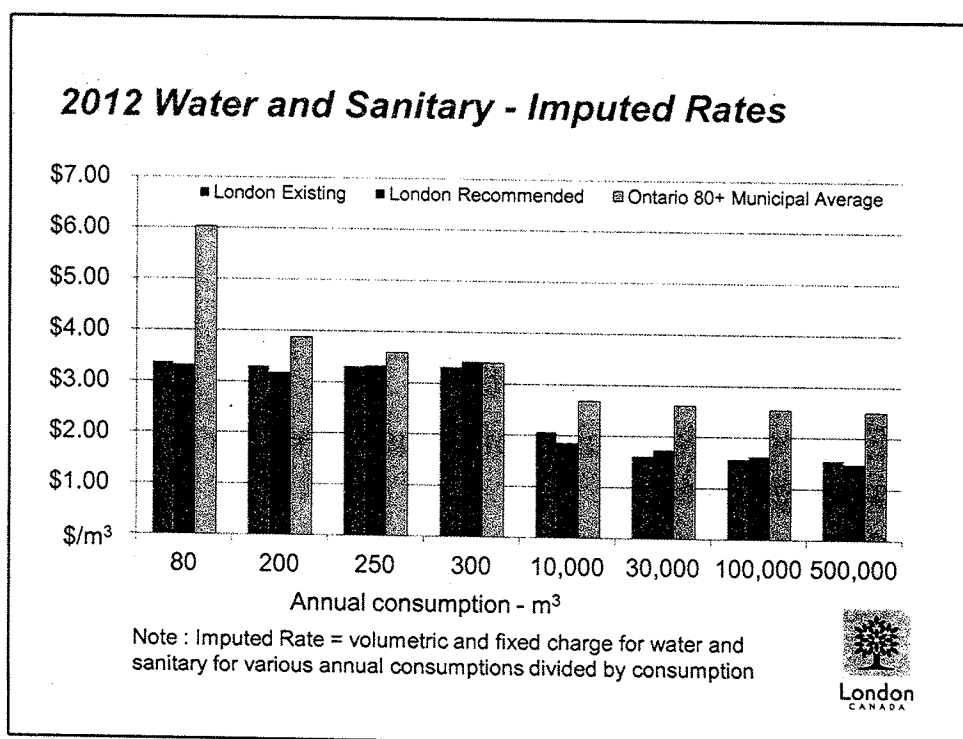
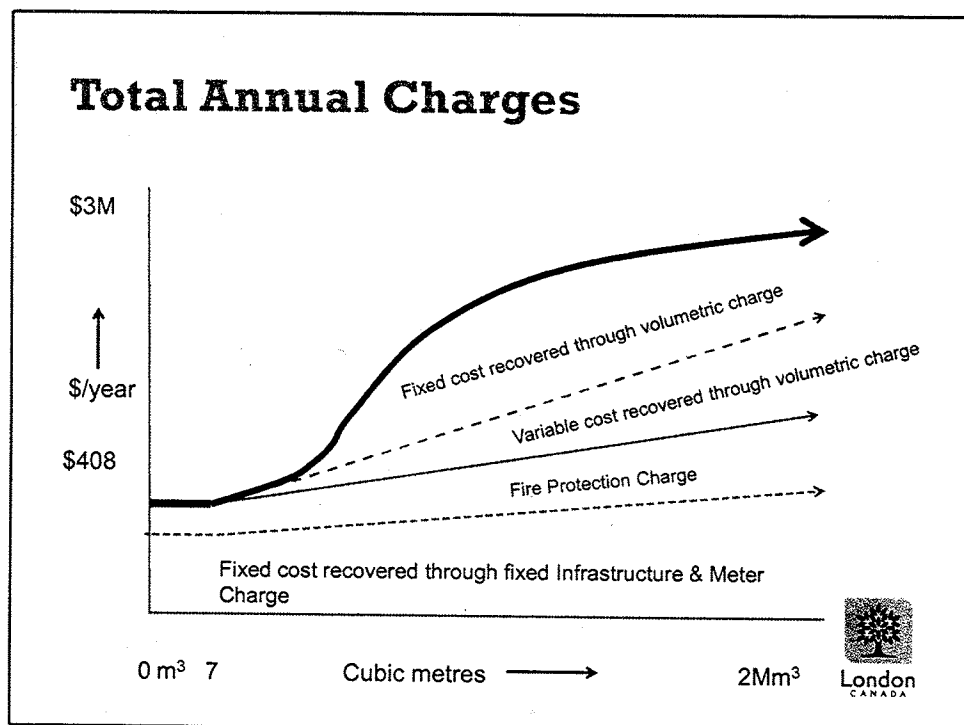












Accommodations

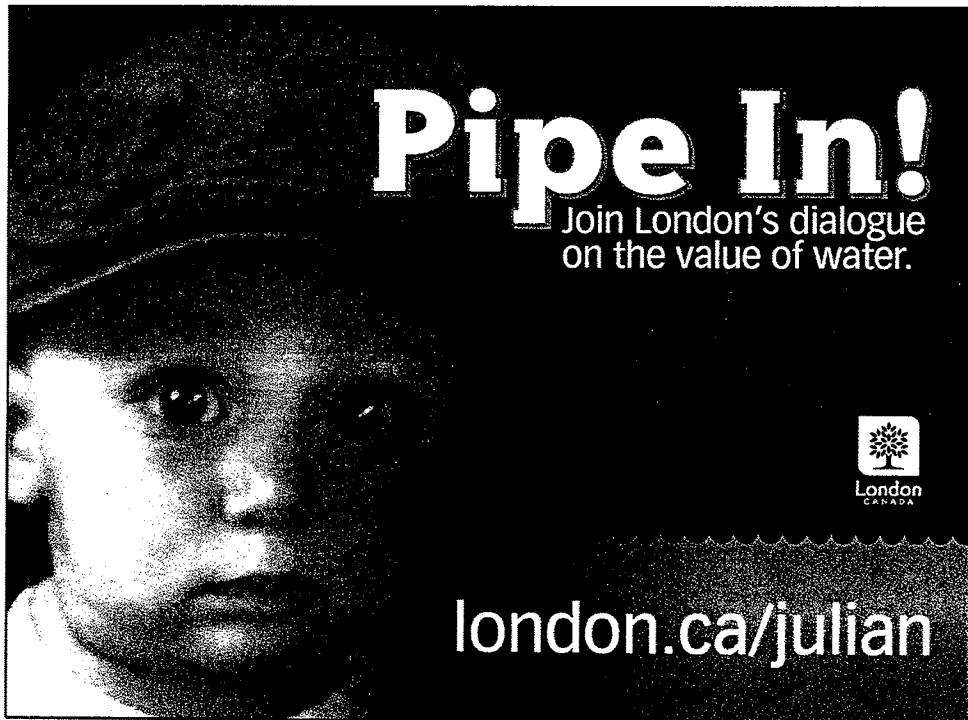
- Medium density bulk metered multi-family – divide building consumption by number of units to establish block rate
- Storm area reduction – based on Engineer's report with technical evaluation to reduce contributing area
- Irrigation Meters – eliminate sanitary charge
- Consider a phase-in period for "transitional" customers of 3 years for the storm charge



Summary


- Achieves Sustainability **sooner** and at a **lower cost** to customers
- Promotes economic development
- Encourages conservation
- Ensures affordability of valued and life saving services
- Simpler and more consistent
- Customers treated fairly and equitably





Pipe In!

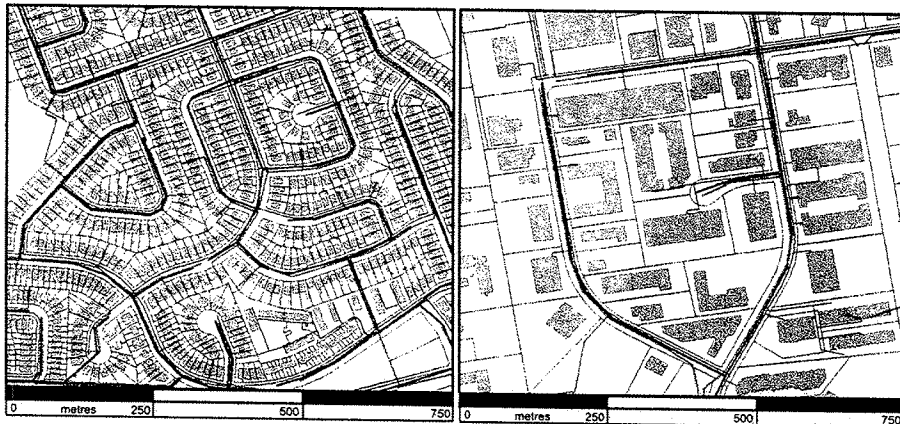
Join London's dialogue on the value of water.



london.ca/julian

What is Pipe Value?

Comparison of Residential and Industrial Pipe Distribution

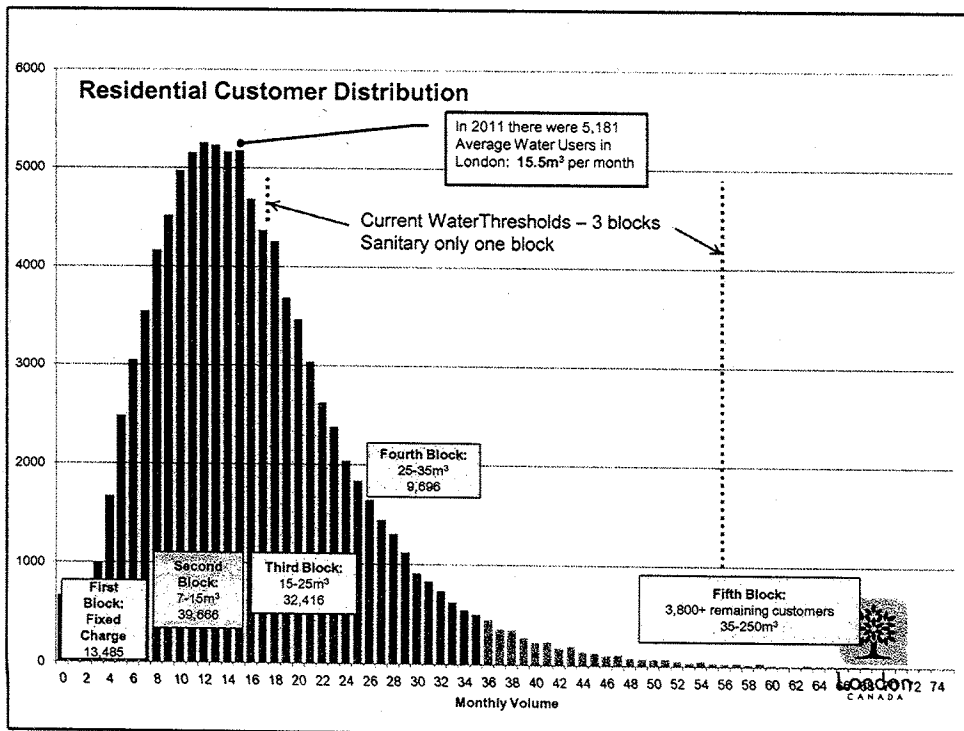
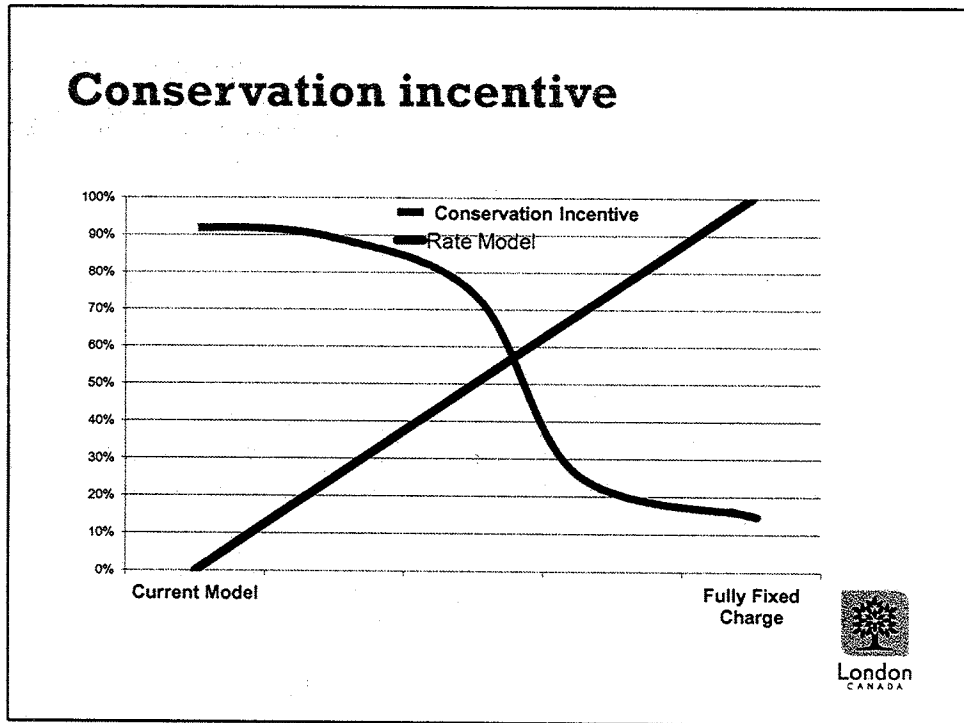


\$85,000 per hectare

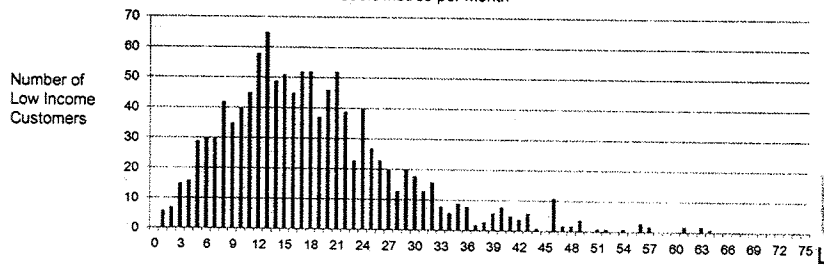
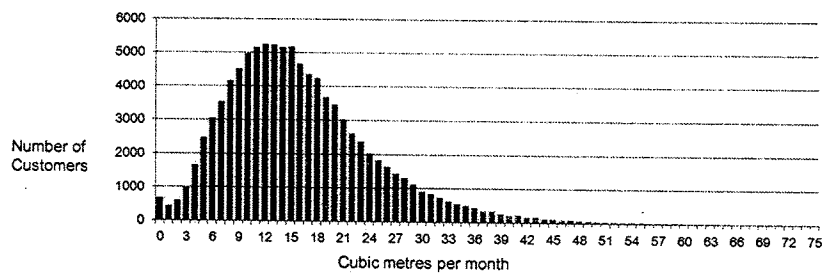
— STORM SEWERS
— SANITARY SEWERS
- - - WATERMAINS

\$28,000 per hectare

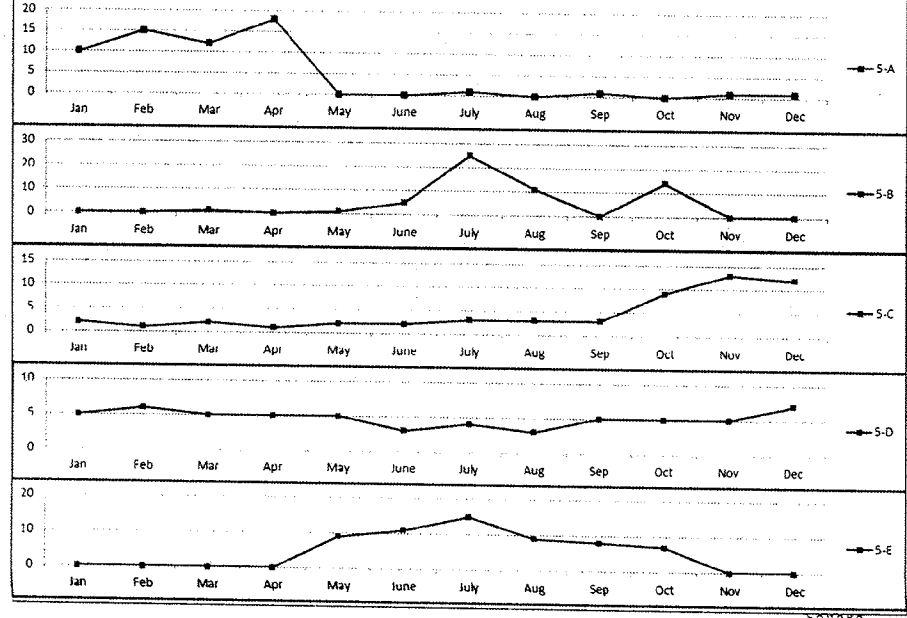
Pipe Value= diameter x length x unit cost (based on average depth)

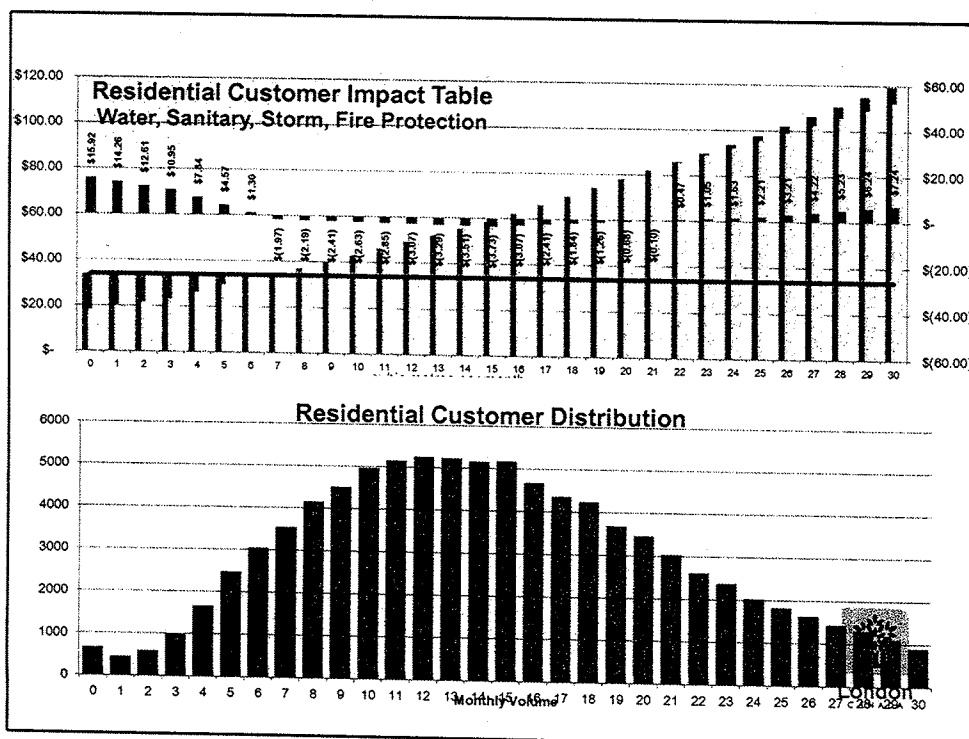
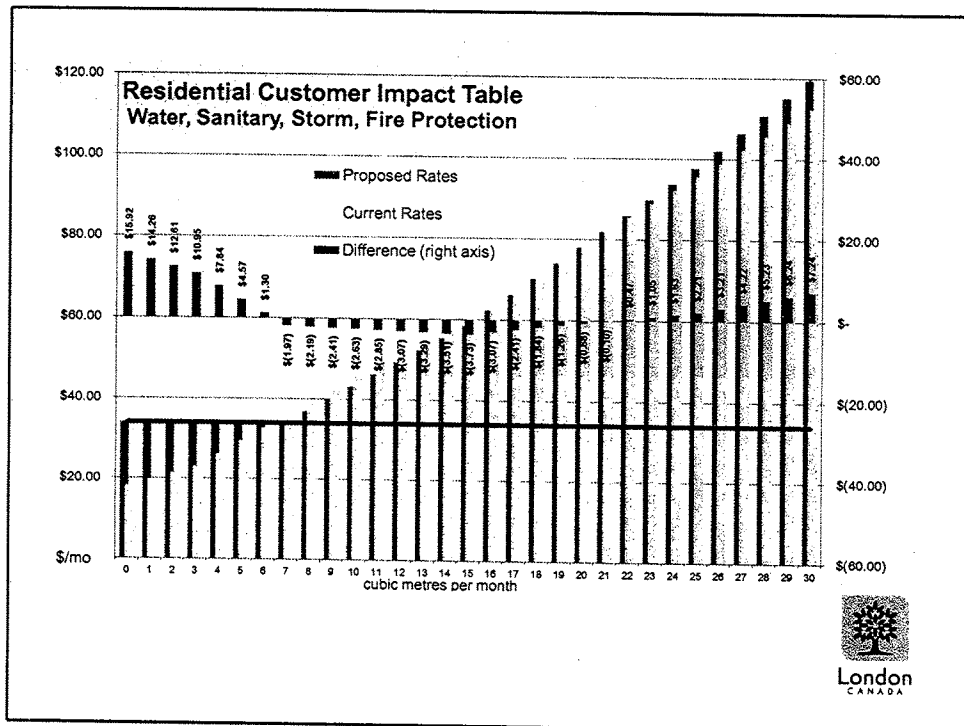


Residential Customers – Consumption Patterns

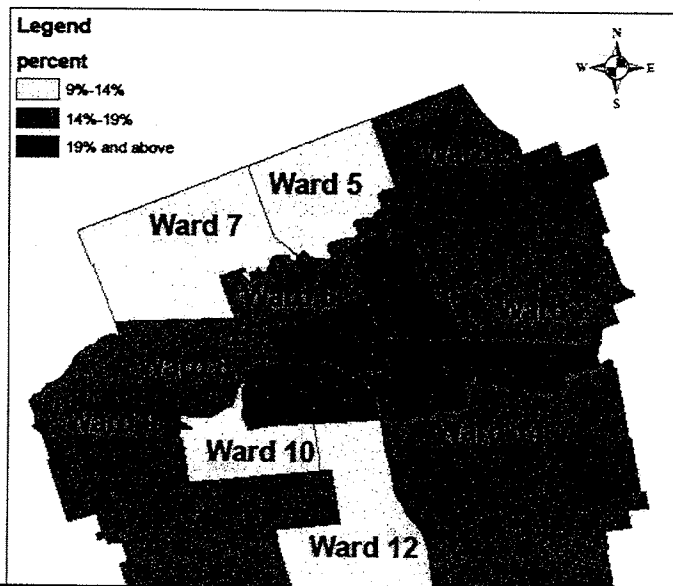


Averaged Monthly Consumption @ 4-5 m³

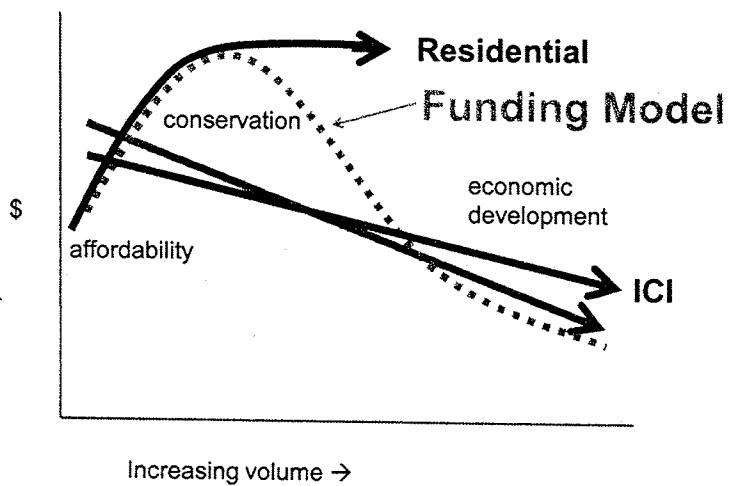




Average of 7m3 of water or less a month for residential users in each Ward.



True Cost to Service



30/10/2012

**Customers between 300 and 420
m3 per year**

Classification	Number between 300 to 420 m3 per year	Total number of customers	Number without multiple accounts
Commercial	383	4526	383 (8%)
Industrial	9	192	7 (4%)
Institutional	13	514	9 (2%)
High Rise	12	717	12 (2%)
Total ICI	417	5949	411 (7%)
Residential	8638	103,722	8638 (8%)