



Upper York Sewage Solutions Environmental Assessment

Public Workshop

June 2, 2010



Tonight's Agenda



- Welcome and Introductions
- Project Overview
- Alternatives To the Undertaking
- Assessing the Alternatives To the Undertaking

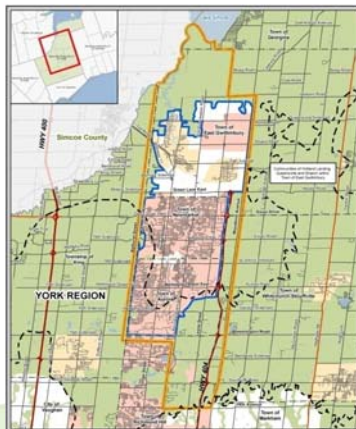


Upper York Sewage Solutions Environmental Assessment

Project Overview

June 2, 2010

Project Background It's an IEA...



- What is an IEA?
- Terms of Reference approved

Legend	
	EA Study Area
	UYSS Service Area
	Towns and Villages
	Urban
	Oak Ridges Moraine Boundary
	Countryside
	Municipal Boundary

Service Area & Preliminary Study Area

Purpose/Opportunity Statement



- To develop a sustainable sewage servicing solution that can accommodate the growth forecasted to occur in the Upper York Sewage Solutions service area

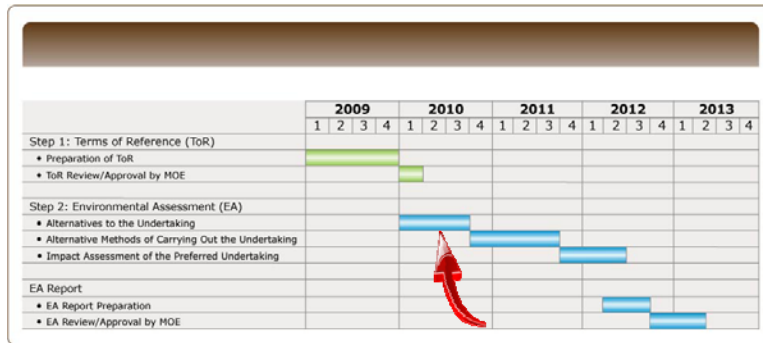


Our Service Area Communities



		2006	2031
Newmarket	Population	77,556	97,345
	Employment	42,085	49,444
	Total	119,641	146,789
Aurora	Population	49,610	70,350
	Employment	20,204	34,144
	Total	69,814	104,494
East Gwillimbury (portions of)	Population	13,884	77,856
	Employment	4,151	31,688
	Total	18,035	109,544
UYSS Service Area	Population	141,054	245,551
	Employment	66,440	115,276
	Total	207,490	360,827





- Making smarter decisions about our lifestyle, community design, infrastructure and financial decisions
- Thinking differently, being more innovative, proactive and collaborative
- Leaving our communities and our water resources in a healthy state for our children and grandchildren



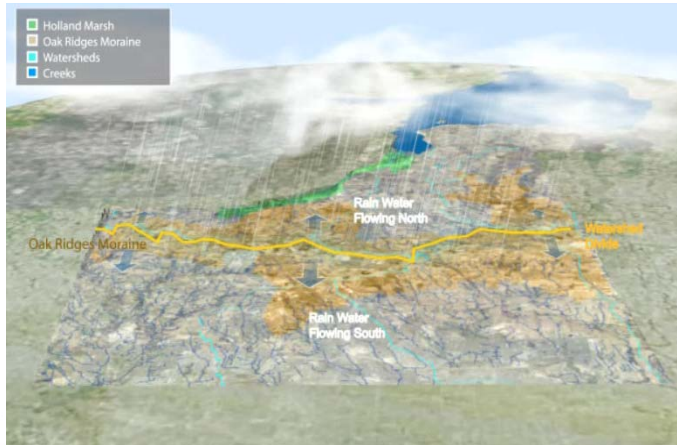
“Sustainability means living within the Earth’s limits... doing things better – not doing without.”

David Suzuki,

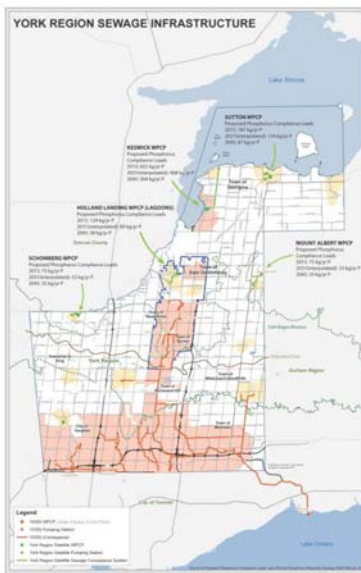
Foreword to Sustainability within a Generation, 2004



Our Existing Environment



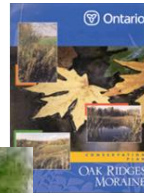
York Region and York Durham Sewage System



Challenges and Opportunities

Legislation with the goal to...

- ❑ Reinvigorate the Oak Ridges Moraine
- ❑ Respect our Great Lakes
- ❑ Revitalize the Lake Simcoe Watershed



Out of the Box Thinking...

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Get Involved!

The Public Face of UYSS...

- ❑ Public Information Forums and Workshops
- ❑ Tuesday Talks at Project Office
- ❑ www.uyssolutions.ca
- ❑ Review Agency Advisory Committee
- ❑ Community Liaison Forum
- ❑ Consultation with First Nations and Métis organizations



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Our Direction



- ❑ Concept of Sustainability blended into our EA approach
- ❑ Participant involvement and engagement at its best
- ❑ Value Engineering and Constructability Review



Your Thoughts...



- ❑ For this project, what big picture ideas and concerns do you think the Region should consider?
- ❑ What key words would describe your vision for a sustainable sewage solution for upper York?



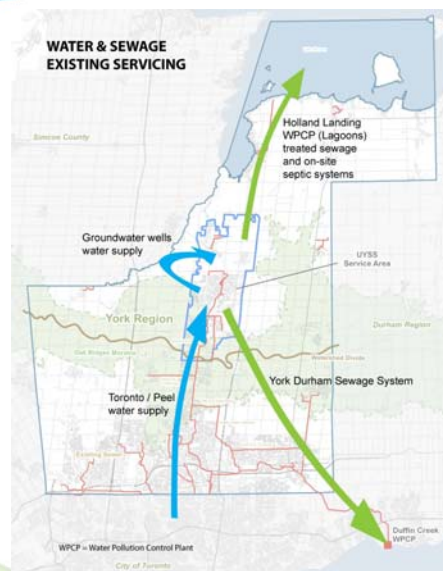
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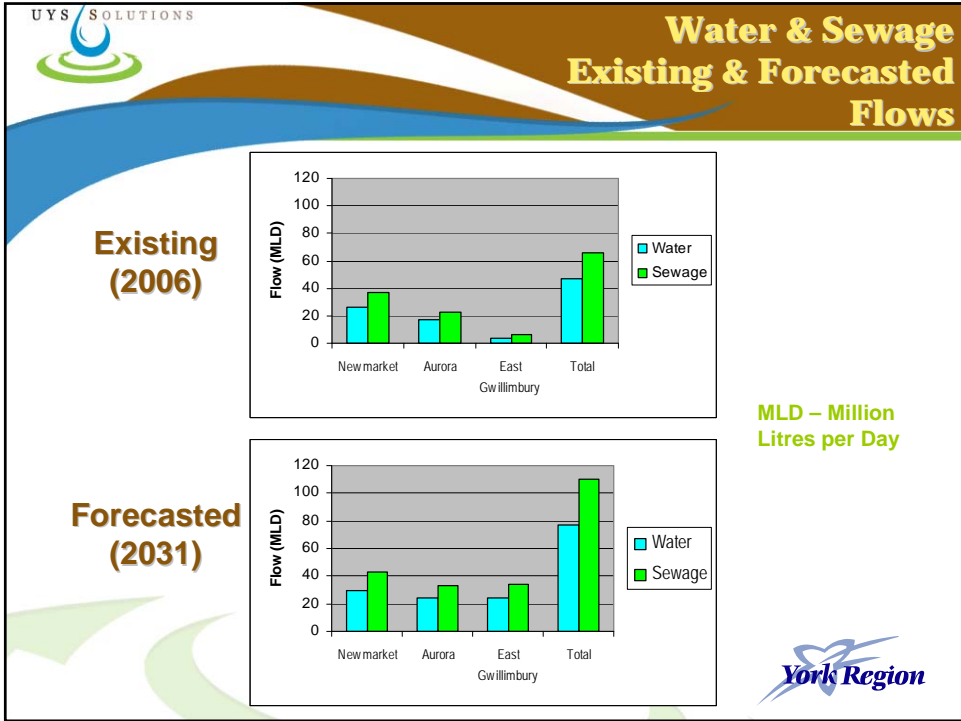
Alternatives To the Undertaking

June 2, 2010



Water & Sewage Servicing





UYS SOLUTIONS

The Alternatives To

To accommodate growth to 2031...

- ❑ Do Nothing
- ❑ Discharge to Lake Ontario
- ❑ Discharge to Lake Simcoe
- ❑ Innovative Wastewater Treatment Technologies

Do Nothing

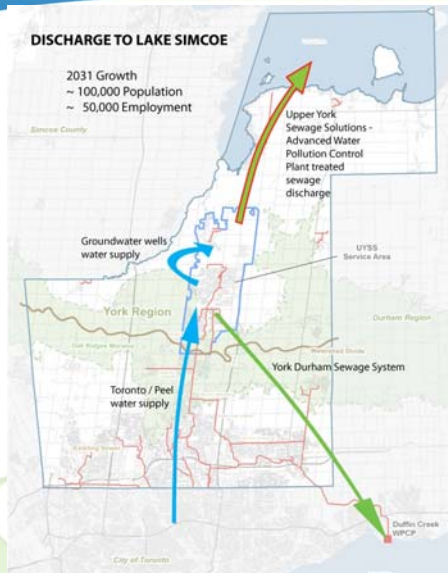
- ❑ No additional sewage collection and treatment capacity would be built to accommodate the prescribed growth
- ❑ Serves as a benchmark to assess the other alternatives

Discharge to Lake Ontario



Connection to YDSS via some combination of tunnel, pumping station(s) and forcemain(s)

Discharge to Lake Simcoe



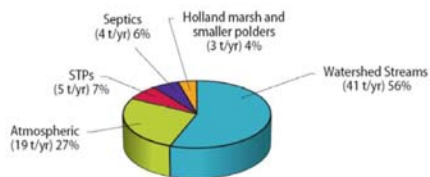
Requires an advanced wastewater treatment plant guided by the Lake Simcoe Protection Plan (including the Phosphorus Reduction Strategy and possibility of Water Quality Trading)



Lake Simcoe Legislative Policies

- ❑ Lake Simcoe Protection Plan
- released Jun 2009
- ❑ Draft Phosphorus Reduction Strategy
- released for comment Feb 17, 2010
- ❑ Draft Water Quality Trading (WQT) Feasibility Study
- released for comment Feb 17, 2010

Lake Simcoe Phosphorus Sources



(Source: Lake Simcoe Region Conservation Authority and Ministry of the Environment Data sets on phosphorus loading for 2002 to 2007)



Phosphorus Reduction Strategy (draft)

- ❑ **2015** Baseline compliance caps (sewage treatment plants)
 - Technology based
- ❑ **2045** Ultimate compliance caps
 - Total phosphorus loading target from sewage treatment plants
3.2 tonnes/year (~7% of total loading)



Total phosphorus loading target to Lake Simcoe (all sources) is 44 tonnes/year – deficit of 14 tonnes/year.

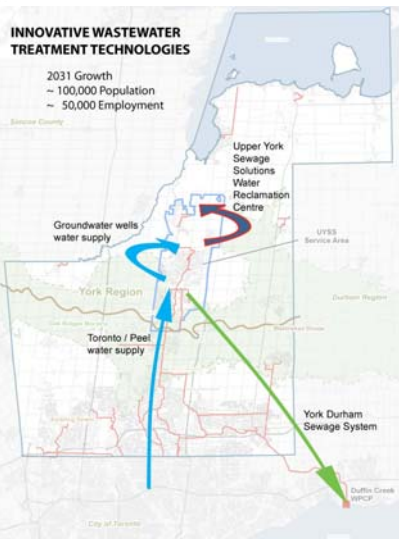
Treatment Processes Required

- ❑ Enhanced Biological Nutrient Removal
- ❑ Tertiary Membranes
- ❑ Reverse Osmosis



Need phosphorus credits from Water Quality Trading for full discharge

- ❑ Market-based approach with phosphorus as a commodity for overall net reduction of phosphorus loading
- ❑ Identified sources of phosphorus credits
 - Agricultural Best Management Practices and treatment of polder water
 - Retrofit urban stormwater sources
 - Removal of septic tanks (future)



Innovative Wastewater Treatment Technologies

Innovative wastewater treatment technologies will be considered in the UYSS EA. At a minimum this will include, but not be limited to, consideration of the development and use of a wastewater purification system and water recycling facilities to be located in The Regional Municipality of York

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Innovative Reuse Applications

- ❑ Urban water reuse
 - e.g. irrigation of municipal properties
- ❑ Agricultural irrigation of crops
 - e.g. irrigation of sod farms
- ❑ Recreational water reuse
 - e.g. irrigation of golf courses
- ❑ Industrial water reuse
 - e.g. power plants
- ❑ Groundwater & surface water recharge
 - e.g. wetland enhancement
- ❑ New developments
 - e.g. toilet flushing

Water for Tomorrow

“Leading the World in Water Innovation and Conservation”

Ontario

York Region

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UYS SOLUTIONS

Your Thoughts...

- ❑ What are your views on the four alternatives being considered?
- ❑ What do you like about each and what concerns might you have?

York Region

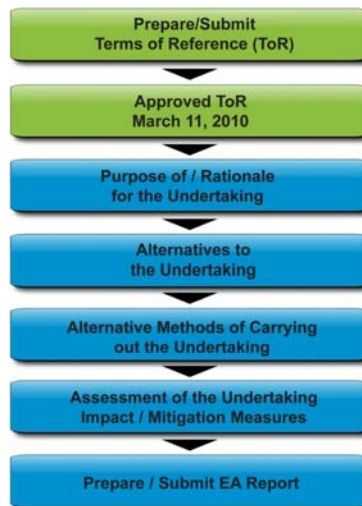
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Upper York Sewage Solutions Environmental Assessment

Assessing the Alternatives To the Undertaking

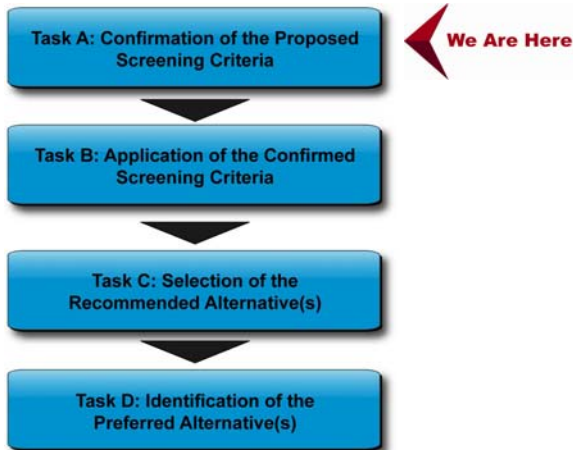
June 2, 2010

Environmental Assessment Planning Process



We Are Here

Choosing an Alternative



15 Proposed Screening Criteria

- Each criteria is framed as a question and addresses the following topics:
 - Problem / Opportunity Statement
 - Provincial Growth, Environmental Policies & Legislation
 - Regional Official Plan, Master Plans, Strategies & Programs
 - Proven Technology / Feasibility
 - Ability to Implement/ Financial Viability
- The criteria will be used to assess the four Alternatives To the Undertaking

Can the Alternative satisfy the problem/opportunity statement?

The purpose of the proposed undertaking is to develop a sustainable sewage servicing solution that can accommodate the growth forecasted to occur in the Upper York Sewage Solutions service area.



- ❑ Environmental Assessment Act
- ❑ Provincial Policy Statement
- ❑ Growth Plan for the Greater Golden Horseshoe
- ❑ Lake Simcoe Protection Plan
- ❑ Source Water Protection requirements developed for the South Georgian Bay Lake Simcoe Source Protection Region
- ❑ Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement (as incorporated into the Ontario Water Resources Act)

- ❑ **Official Plan** (Adopted by York Regional Council 2009)
- ❑ **2009 Water & Wastewater Master Plan Update**
- ❑ **Sustainability Strategy**
- ❑ **Water Efficiency & Conservation Programs**
(*Water for Tomorrow*)



**Segmental
Lining
Tunnel**



**Reverse
Osmosis
modules**



**Tunnel
Boring
Machine**



Ability to Implement / Financially Viable

- York Region can implement on their own or through an existing jurisdictional agreement
- Financial viability of the alternative based on its conceptual cost estimate

Choosing an Alternative

	Do Nothing	Discharge to Lake Ontario	Discharge to Lake Simcoe	Innovative Wastewater Treatment Technologies
Criteria #1 Can the alternative satisfy the problem/opportunity statement to be addressed?	Yes/No, with supporting rationale	Yes/No, with supporting rationale	Yes/No, with supporting rationale	Yes/No, with supporting rationale
Criteria #2 Does the alternative represent proven technology	Yes/No, with supporting rationale	Yes/No, with supporting rationale	Yes/No, with supporting rationale	Yes/No, with supporting rationale
...
Summary of Results	Carried forward to Alternative Methods stage or not	Carried forward to Alternative Methods stage or not	Carried forward to Alternative Methods stage or not	Carried forward to Alternative Methods stage or not

Choosing an Alternative

	Do Nothing
Criteria #1 Can the alternative satisfy the problem/opportunity statement to be addressed?	No Problem/opportunity statement not addressed.
Criteria #2 Does the alternative represent proven technology	Yes No technology required.
...	...
Summary of Results	Carried forward to Alternative Methods stage or not

Problem/Opportunity Statement

To develop a sustainable sewage servicing solution that can accommodate the growth forecasted to occur in the Upper York Sewage Solutions service area.



Choosing an Alternative

	Do Nothing
Criteria #1 Can the alternative satisfy the problem/opportunity statement to be addressed?	No Does not meet the mandate for growth.
Criteria #2 Does the alternative represent proven technology	Yes No technology required.
...	...
Summary of Results	Carried forward to Alternative Methods stage or not

- What comments do you have on each of the criteria?
- Are they clear?
- What changes (if any) would you recommend?
- Are there any other criteria that you would like York Region to consider?

