



# Water and Wastewater Master Plan Update

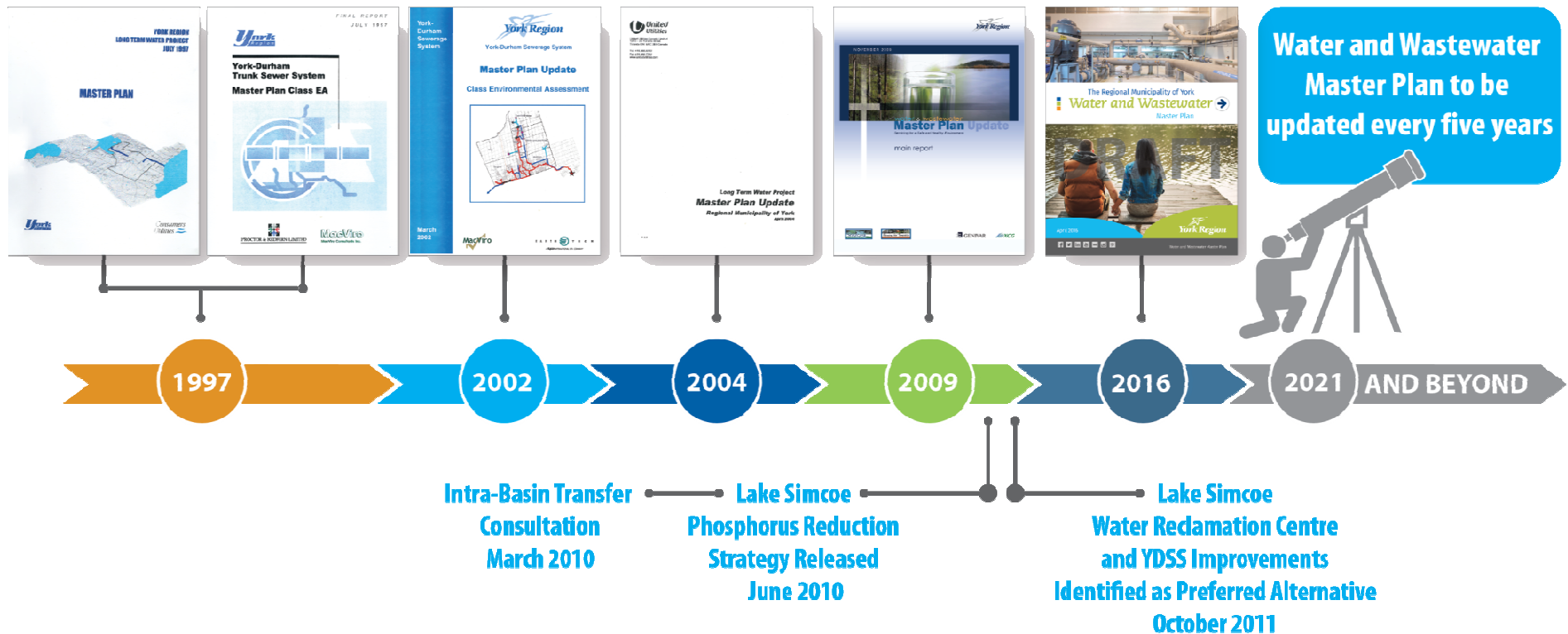
Presentation to  
**Town of Newmarket  
Committee of the Whole**

**Stephen Fung**  
Director, Infrastructure Asset Management

May 9<sup>th</sup>, 2016

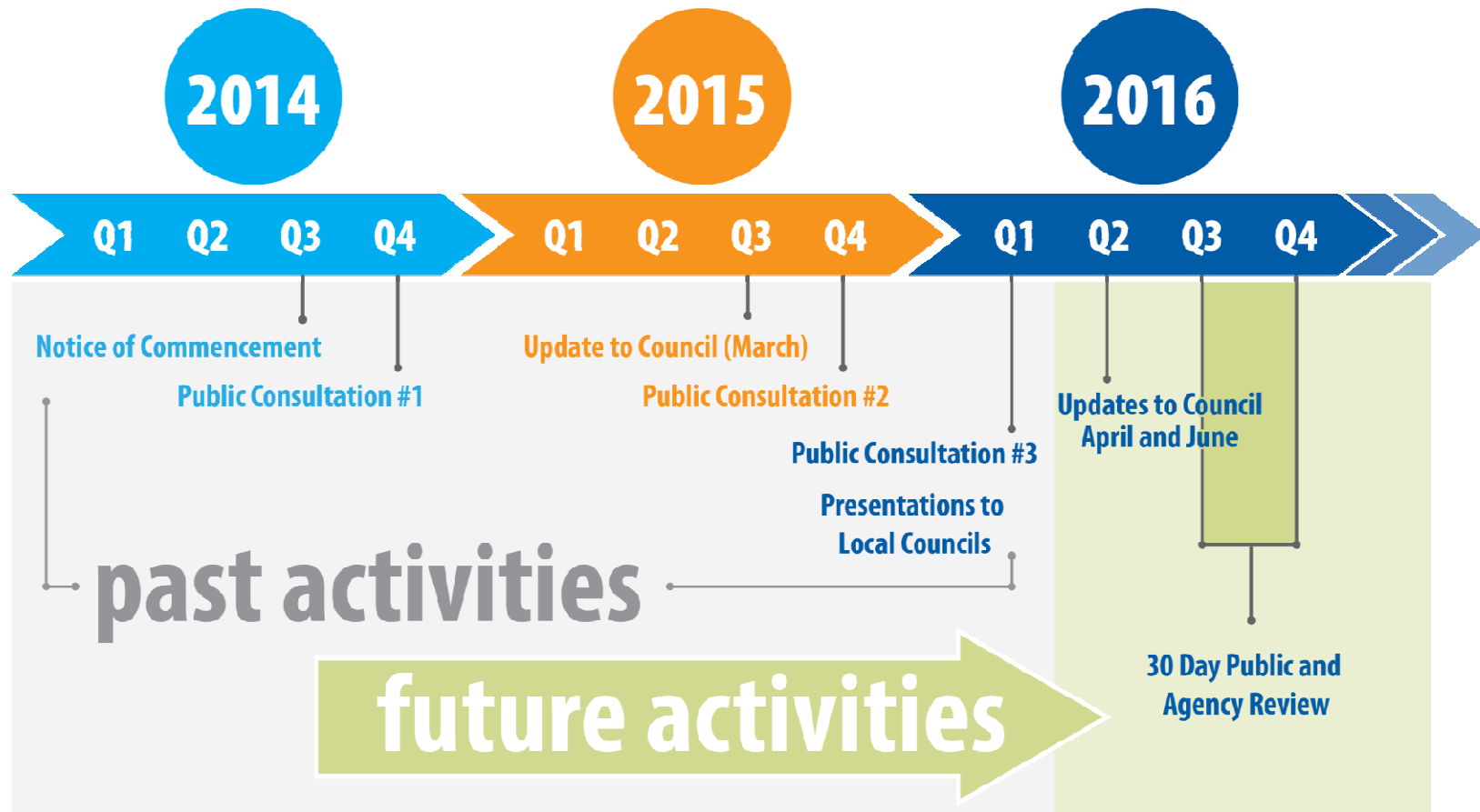


# Water and Wastewater Master Plan: Living Process



**Master Plan is a Living Document That Builds Upon Earlier Work**

# Master Plan Schedule



**Update to Regional Council to be Provided June 2016**

# Public and Stakeholder Engagement

## Public Outreach

<b>32,893</b>		Facebook Reach
<b>4,400</b>		Email Notification
<b>365</b>		Open House Attendees
<b>104</b>		Newspaper Ads
<b>73</b>		Twitter Retweets
<b>33</b>		Facebook and Twitter Posts
<b>1</b>		Website: <a href="http://www.york.ca/waterplan">www.york.ca/waterplan</a>

## Public Feedback

<b>112</b>		Comments from Public, First Nations, Metis
<b>38</b>		Open House Comment Sheets

## Stakeholder Meetings

<b>20</b>	Local Municipality Staff
<b>3</b>	LSRCA
<b>3</b>	TRCA
<b>3</b>	MOECC
<b>2</b>	First Nations and Metis
<b>2</b>	BILD

## Public Open Houses

### Open House #1

Vaughan - November 11, 2014  
Newmarket - November 12, 2014  
Markham - November 18, 2014

### Open House #2

Markham - June 9, 2015  
Richmond Hill - June 11, 2015  
Aurora - June 16, 2015  
Georgina - June 25, 2015

### Open House #3

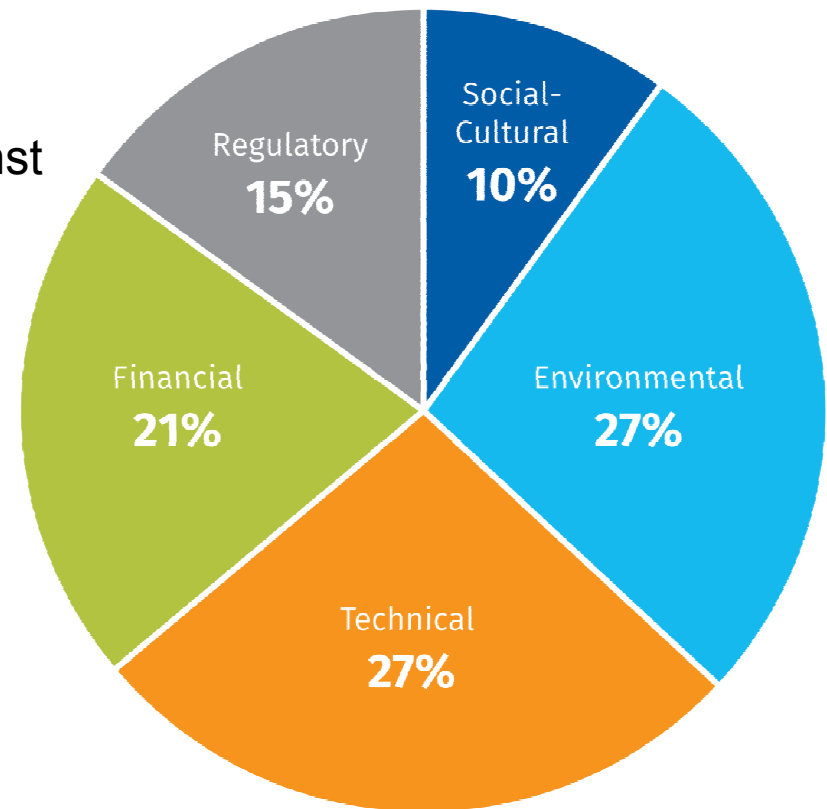
Richmond Hill - January 20, 2016  
Newmarket - January 26, 2016

**Public and Stakeholder Engagement Provided  
Key Input to Master Plan Process**

# Master Plan Evaluation Process

## Servicing Strategy Evaluation

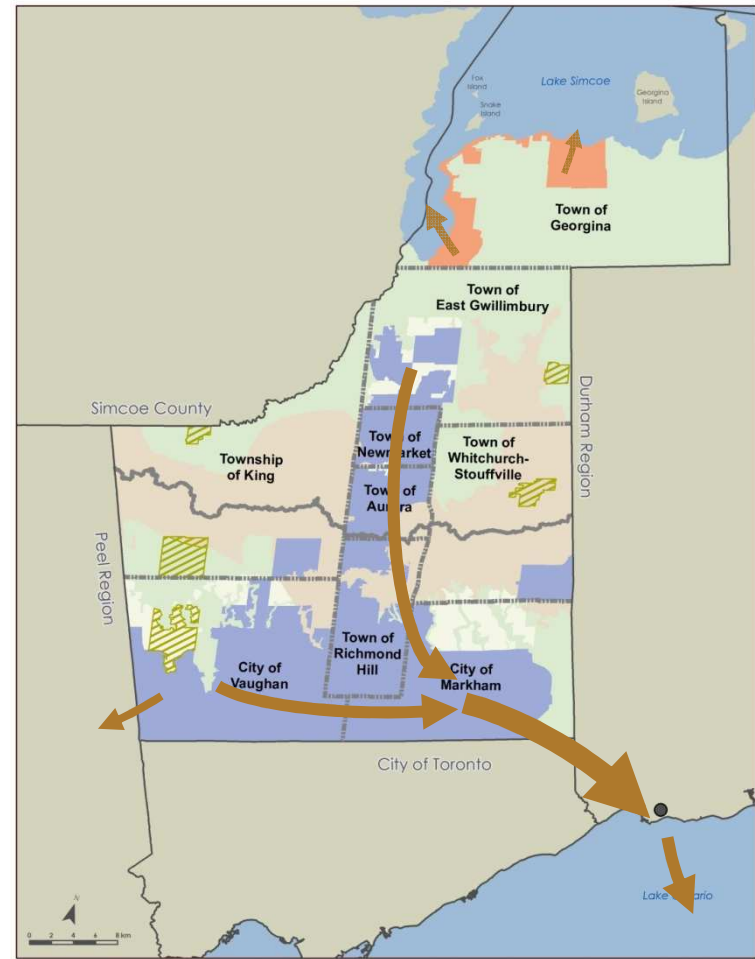
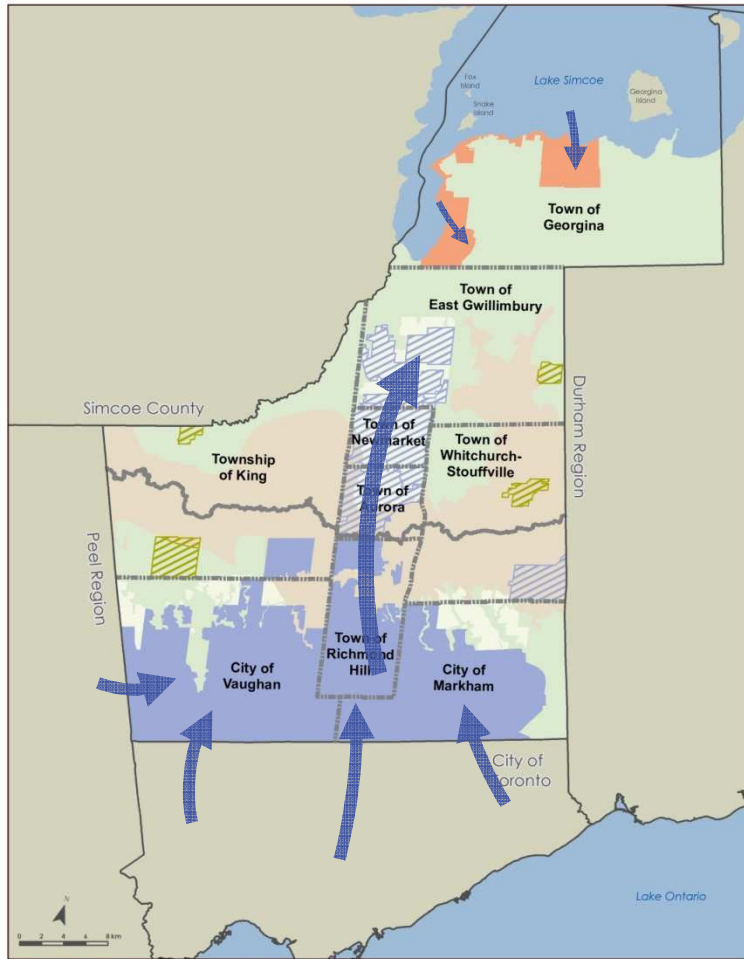
- Two Servicing Strategies evaluated against criteria set in Class EA process
- Weightings derived from public input through surveys and Region staff experience
- Public indicated Environmental and Technical impacts were most important
- Results of evaluation used to determine **Recommended Servicing Strategy**



**Public Input Used to Develop Evaluation Criteria Weighting**

# 2009 Master Plan

## Water & Wastewater Servicing Strategy



**2009 Master Plan Recommended Servicing East Gwillimbury  
From Lake Ontario and Through Expansion of YDSS**

## What Has Changed Since 2009 Master Plan?

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**Completion of Upper York  
Sewage Solutions Individual  
Environmental Assessment**



**Water consumption per  
capita has dropped by**

**20%**  
since 2009



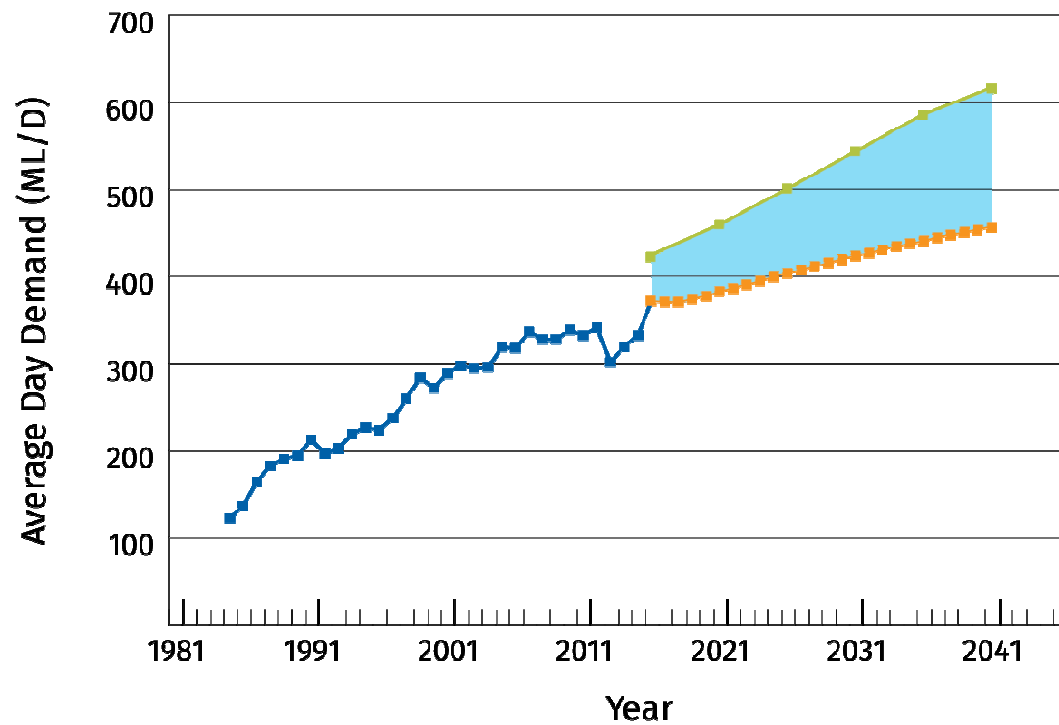
**Intra-basin Transfer  
from Lake Ontario  
limited to 105 MLD**

**Upper York Environmental Assessment Changed  
2009 Master Plan Servicing Strategy**



# What Has Changed Since 2009 Master Plan?

**York Region Average Day Demand Projection**



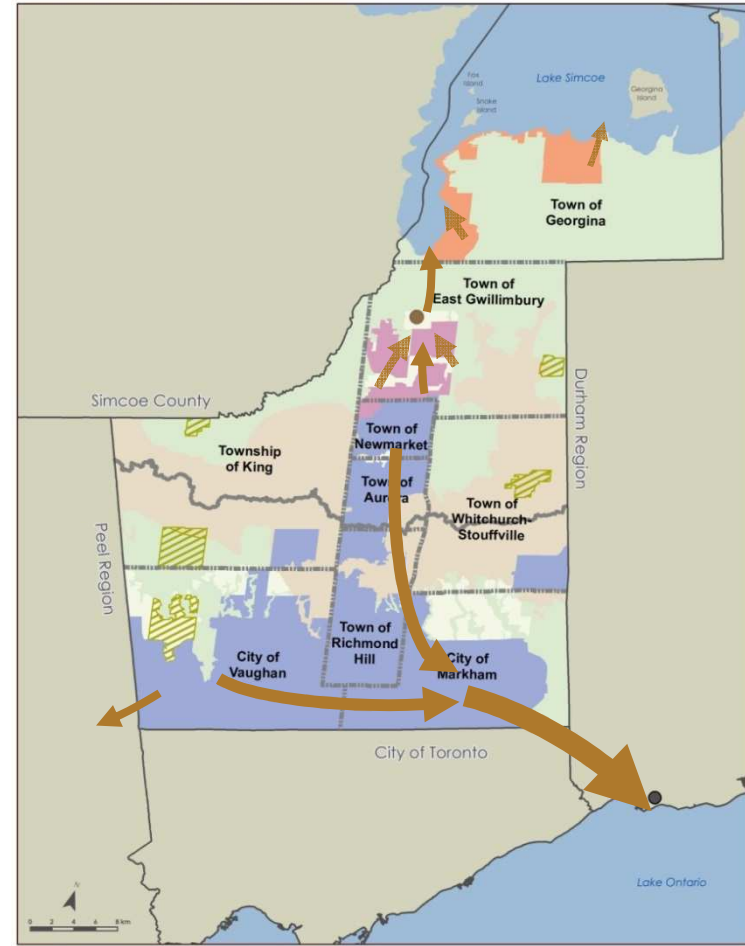
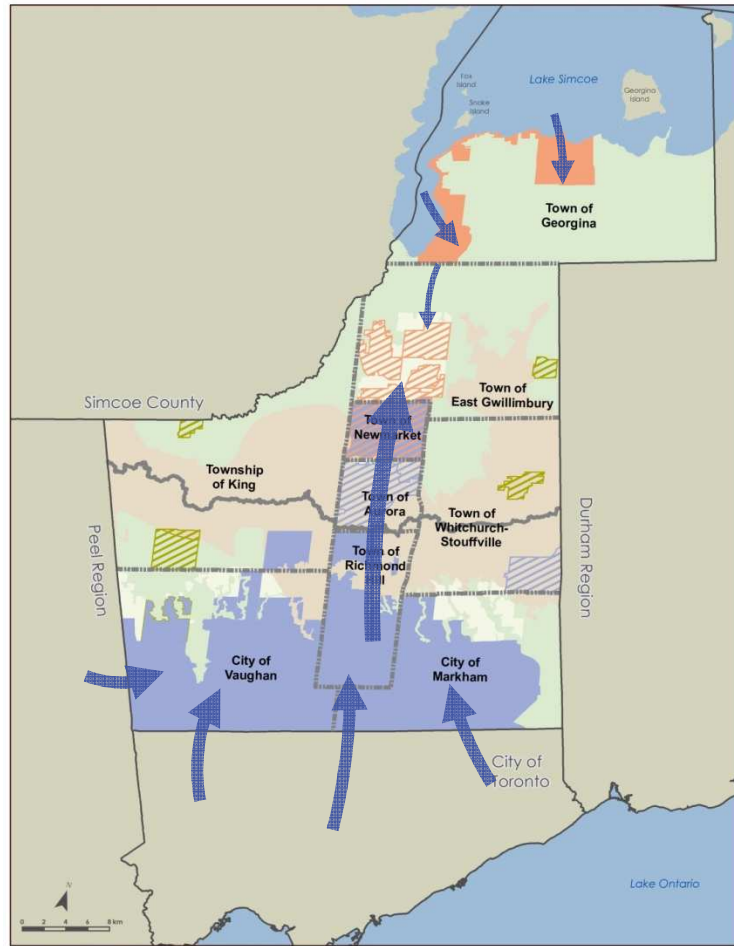
— Historical Average Day Demand      — 2009 Master Plan Average Day Demand  
— 2016 Master Plan Average Day Demand      Water Savings Due to Conservation

**Water Conservation Has Successfully Reduced Demand**



# 2016 Master Plan

## Water & Wastewater Servicing Strategy



**2016 Master Plan Recommendation in Alignment with  
Upper York Sewage Solutions Environmental Assessment**

# Benefits of Supplementing with Lake Simcoe Water

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**Less Intra-basin  
Transfer**



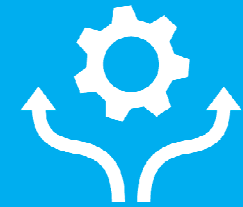
**Shorter  
Water Age**



**Less Energy  
Consumption =  
Fewer Greenhouse  
Gas Emissions**



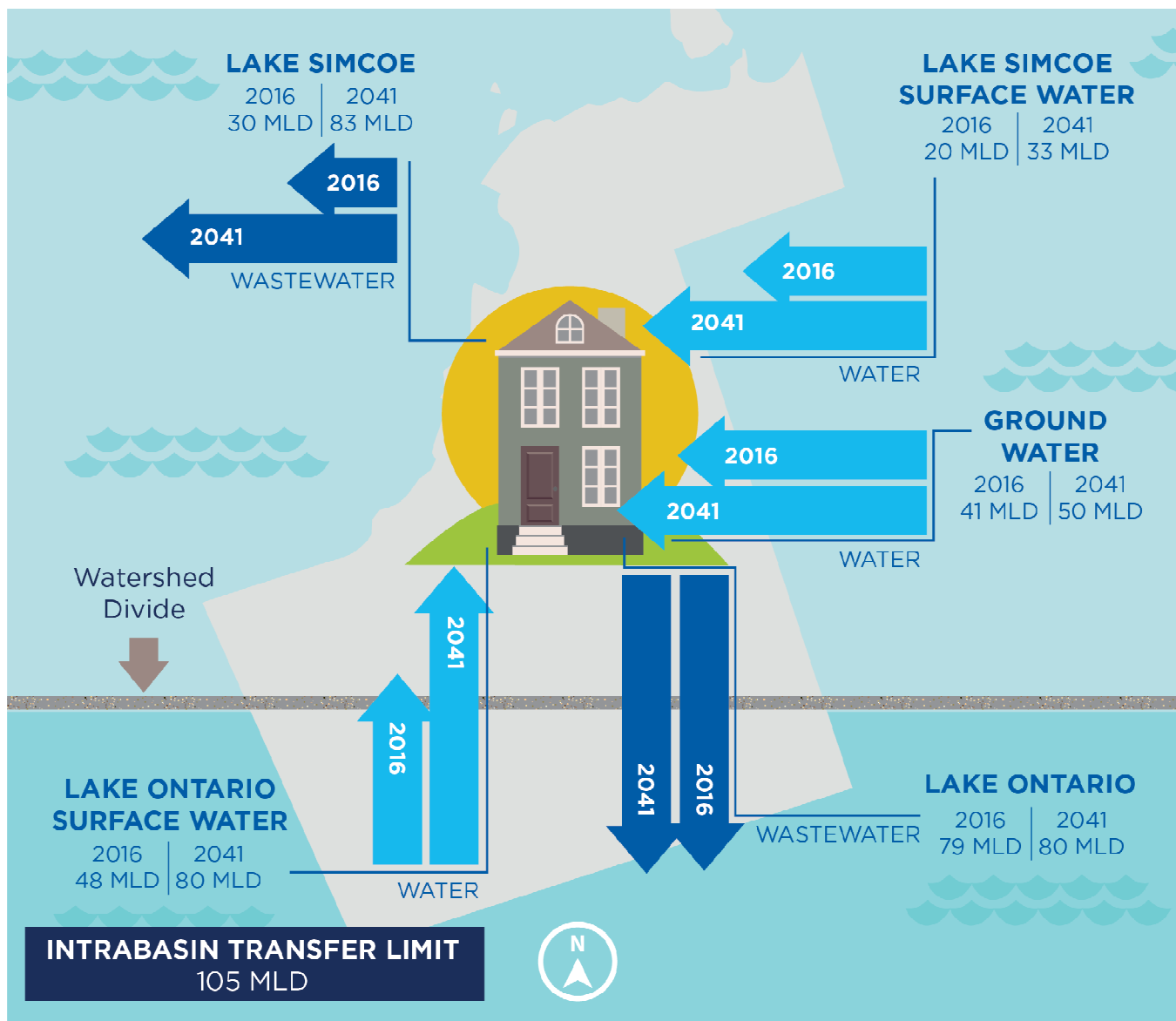
**Diversity of  
Supply**



**Operational  
Flexibility**

**Lake Simcoe Strategy Better Aligns with Provincial Legislation  
and Provides Technical and Environmental Benefits**

# Water Balance



MLD = MILLIONS LITRES PER DAY

# Water Re-Use

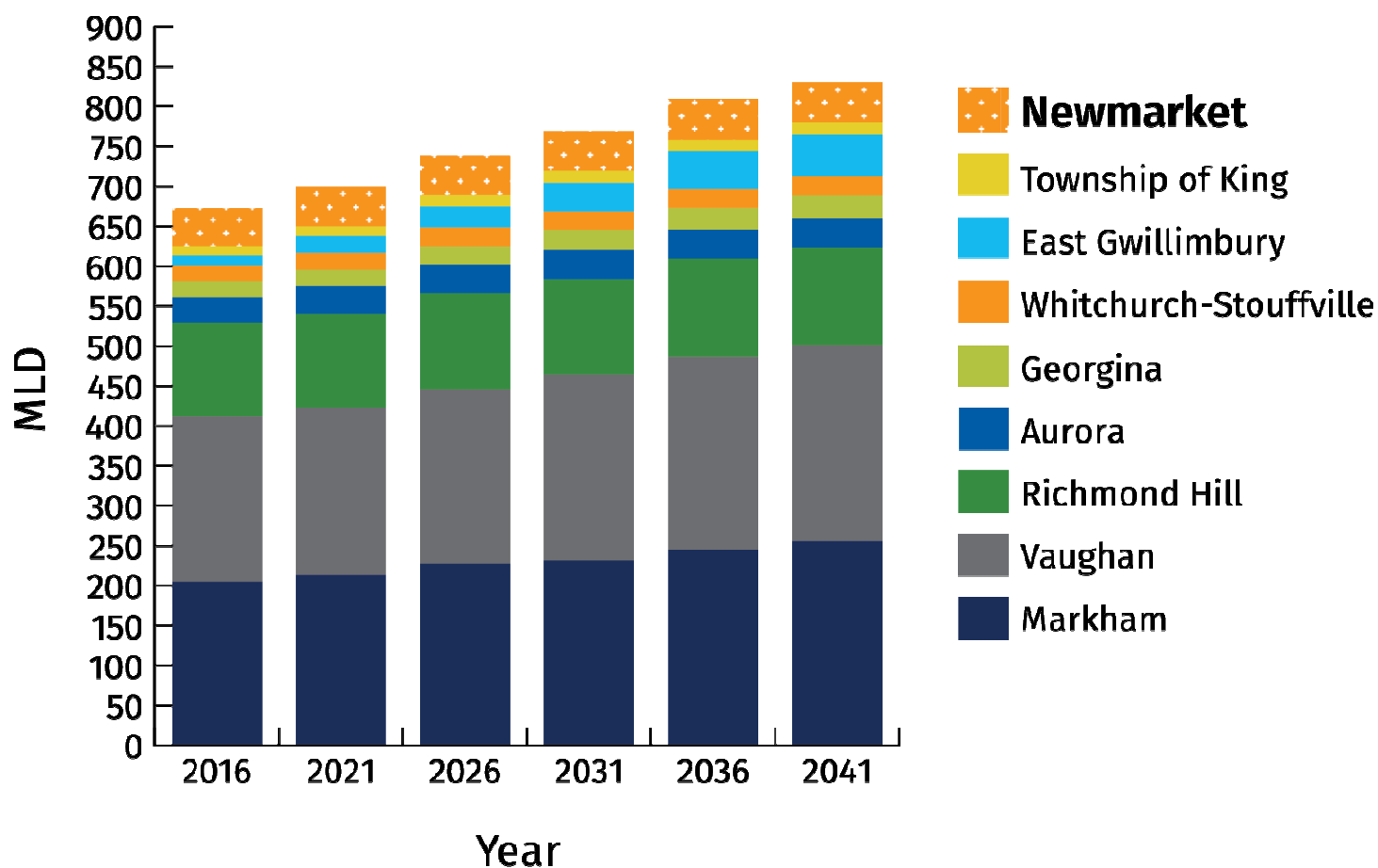
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## Water Re-use is Part of Master Plan Servicing Strategy

- Working collaboratively with Province to explore water re-use pilot using reclaimed water from a Regional wastewater facility
- Reclaimed water is central component of Water Reclamation Centre
- Future work with Province on water reuse guidelines and regulatory framework, starting with demonstration project

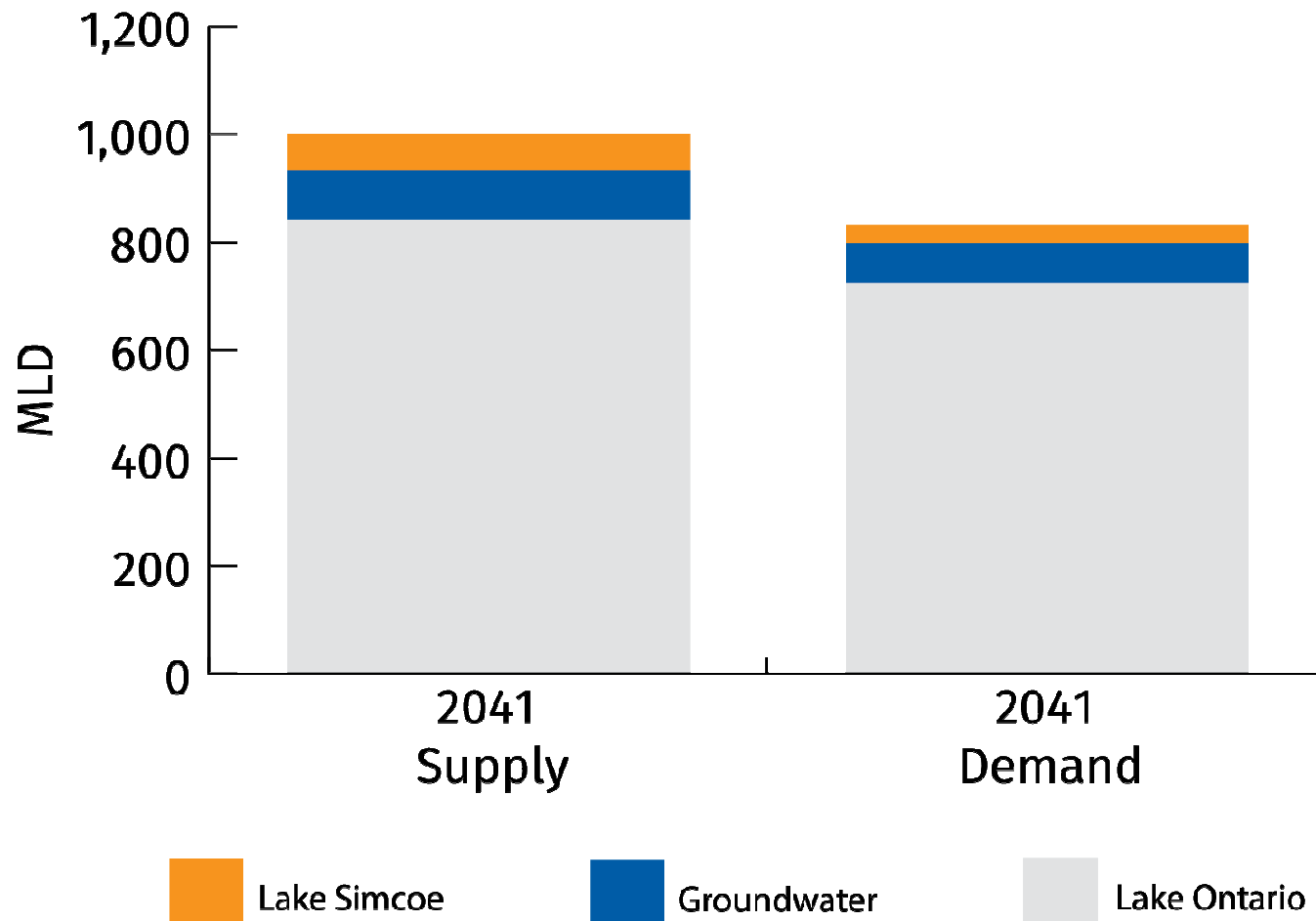
**Water Reclamation Centre Integral to Master Plan Strategy**

## Regional Water Demand



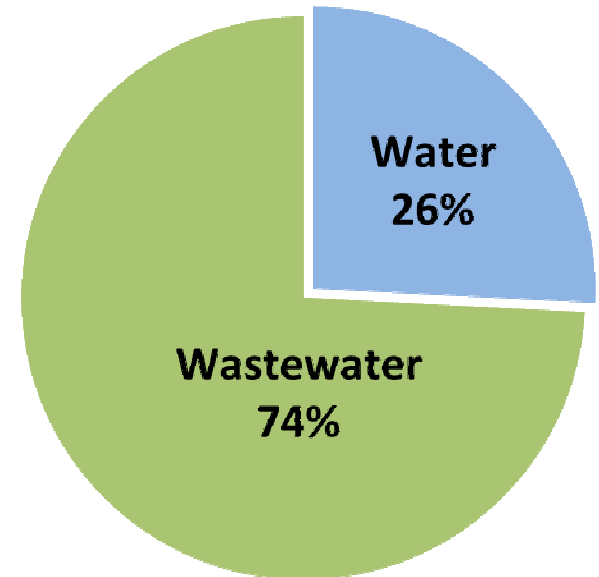
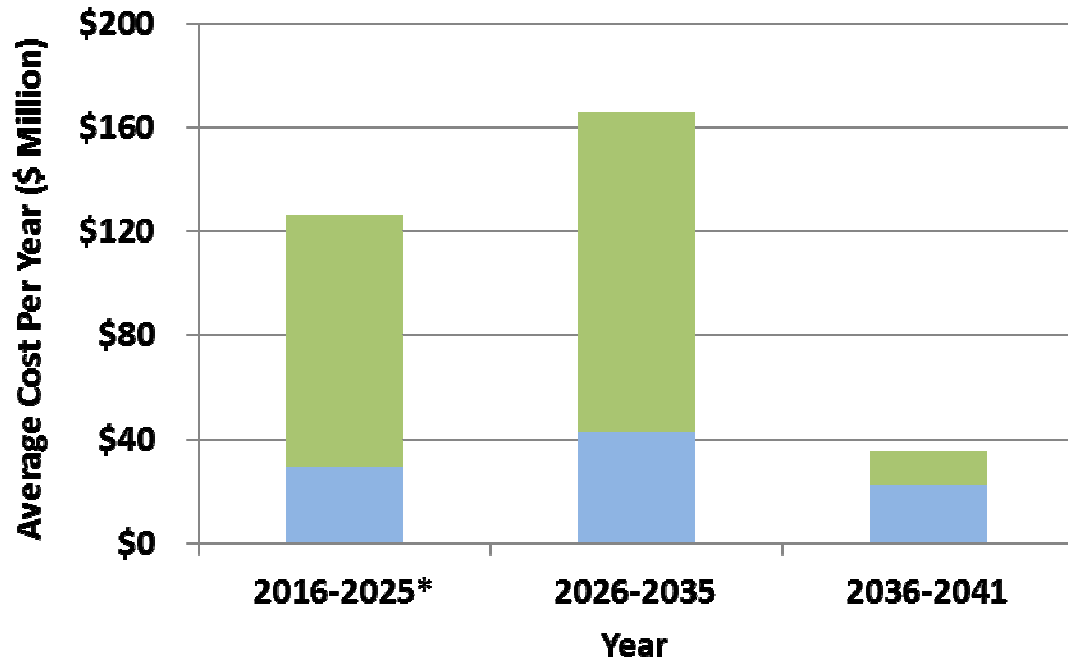
**Newmarket Drinking Water Demand is 6% of Region's Total**

# York Region Water Supply Sources



**Supply Greater Than 2041 Demand**

# Master Plan Project Costs



\* First ten year cost is in line with 2016 10-year capital plan

**Cost of Master Plan Projects is Approximately \$3.1B;  
\$1.3B is Included in 2016 Ten Year Capital Plan**