

Welcome to York Region's Public Open House #3 Water and Wastewater Master Plan

Managing water for today and tomorrow



South Service Centre
Second Floor
50 High Tech Road, Richmond Hill
January 20, 2016
4 p.m. to 8 p.m.



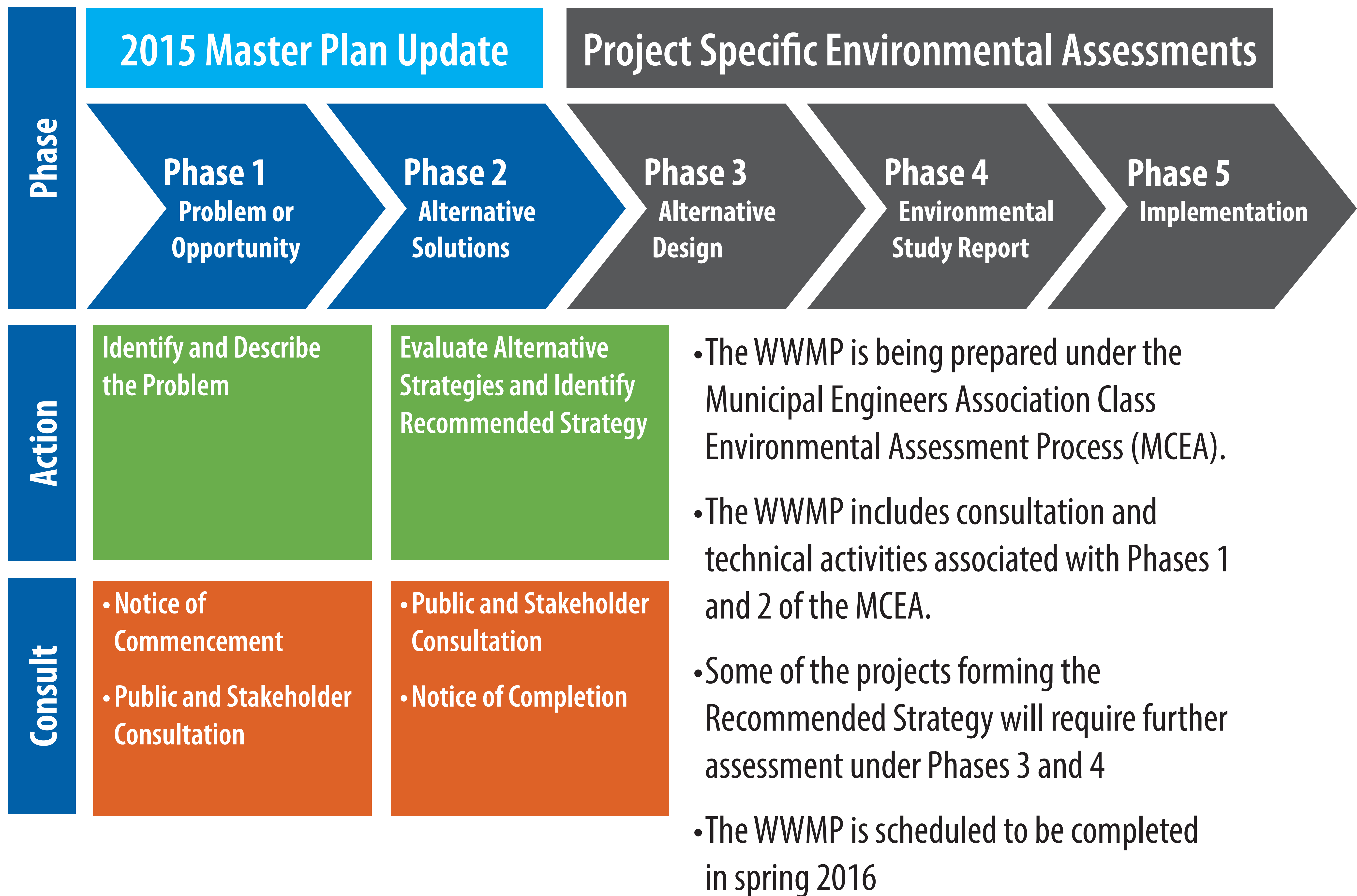
York Region Administrative Centre
Great Hall
17250 Yonge Street, Newmarket
January 26, 2016
4 p.m. to 8 p.m.



Master Plan Process

What is the Water and Wastewater Master Plan?

The Water and Wastewater Master Plan (WWMP) determines infrastructure requirements to serve the needs of those living and working in York Region over the next 25 years and beyond. It is shaped by provincial, Regional and local policies as well as stakeholder and public input. The WWMP will recommend new infrastructure, policies and programs to continue to provide clean, safe and affordable drinking water and sustainable wastewater services.



Working to Meet Your Needs

The WWMP is part of an integrated land use, infrastructure and financial planning process



The following explains how the WWMP serves York Region's communities:

A Vision 2051 - Vision 2051 is the **blueprint** for York Region's future and helps guide us, ensuring we set a course today for the future we desire by the year 2051.

B York Region Official Plan (ROP) - The ROP enables Vision 2051. It is the **policy framework** that describes how York Region plans to accommodate future growth and development while meeting the needs of existing residents and businesses. It sets out directions and policies that guide economic, environmental and community planning decisions over the next 25 years and beyond.

C Water and Wastewater Master Plan (WWMP)

- The WWMP puts the policies and growth forecasts of the ROP into an **action plan** for delivery of a water and wastewater servicing strategy to support new and existing communities over the next 25 years and beyond. It integrates social, environmental and financial sustainability principles.

D Transportation Master Plan (TMP) - The TMP puts policies and growth forecasts of the ROP into an **action plan** addressing transportation and mobility needs of those living and working in York Region over the next 25 years and beyond. It guides planning and investing in York Region's transportation network, including Regional roads, York Region Transit (YRT/Viva) and cycling and walking facilities.

E Local official plans and secondary plans

- These local municipal plans apply York Region's vision, policies and plans to the **local context**. They provide detailed land use planning direction in accordance with the ROP and direct cost-effective design, investigation and evaluation of transportation and water and wastewater infrastructure projects.

F Plans of subdivisions, condominium and site plans - These plans **implement** Regional and local plans and policies to build and provide infrastructure for our communities.

G In Your Home - The ROP, WWMP and TMP help provide essential services to **our residents and businesses**, including community centres, parks, schools, local transit, cycling, taps and toilets.

Why is it Important?

Addressing Growth

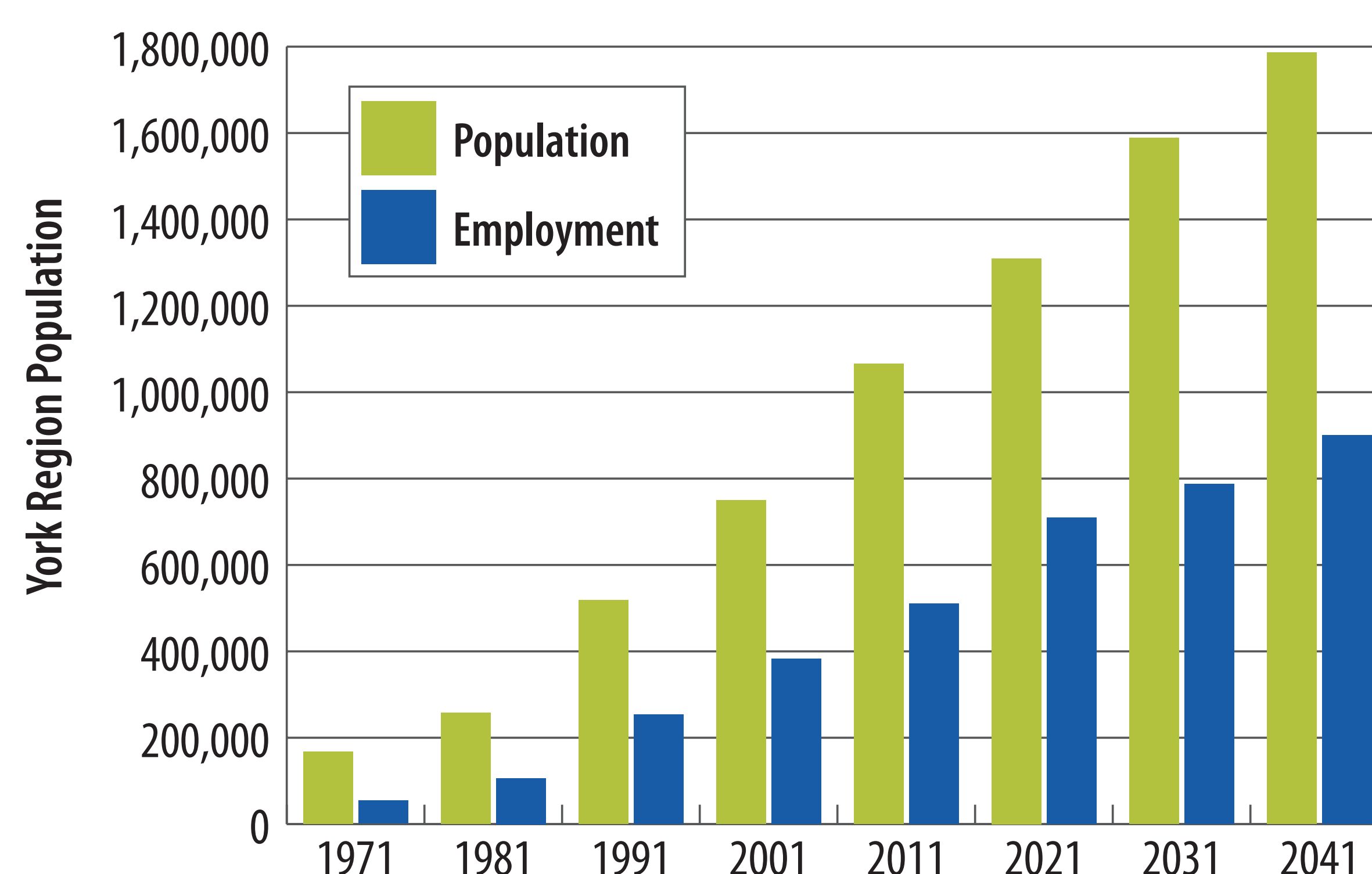
York Region's **population** is expected to grow from

1.1 million in 2014 to **1.8** million in 2041

York Region's **employment** is expected to grow from

565 thousand in 2014 to **900** thousand in 2041

York Region Population Growth - 1971 to 2041



Demand for services is increasing

- Growth increases overall demand, while per capita flow rate is decreasing
- Service area is expanding

Resources are limited

- Water resources are limited
- Financial resources to build and maintain infrastructure are finite

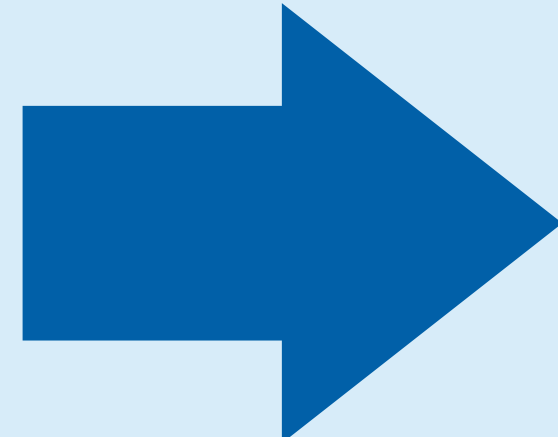
Environment is changing

- Climate change will increasingly impact water and wastewater systems
- Energy costs will increase in the future, demanding new efficiencies

What We Heard

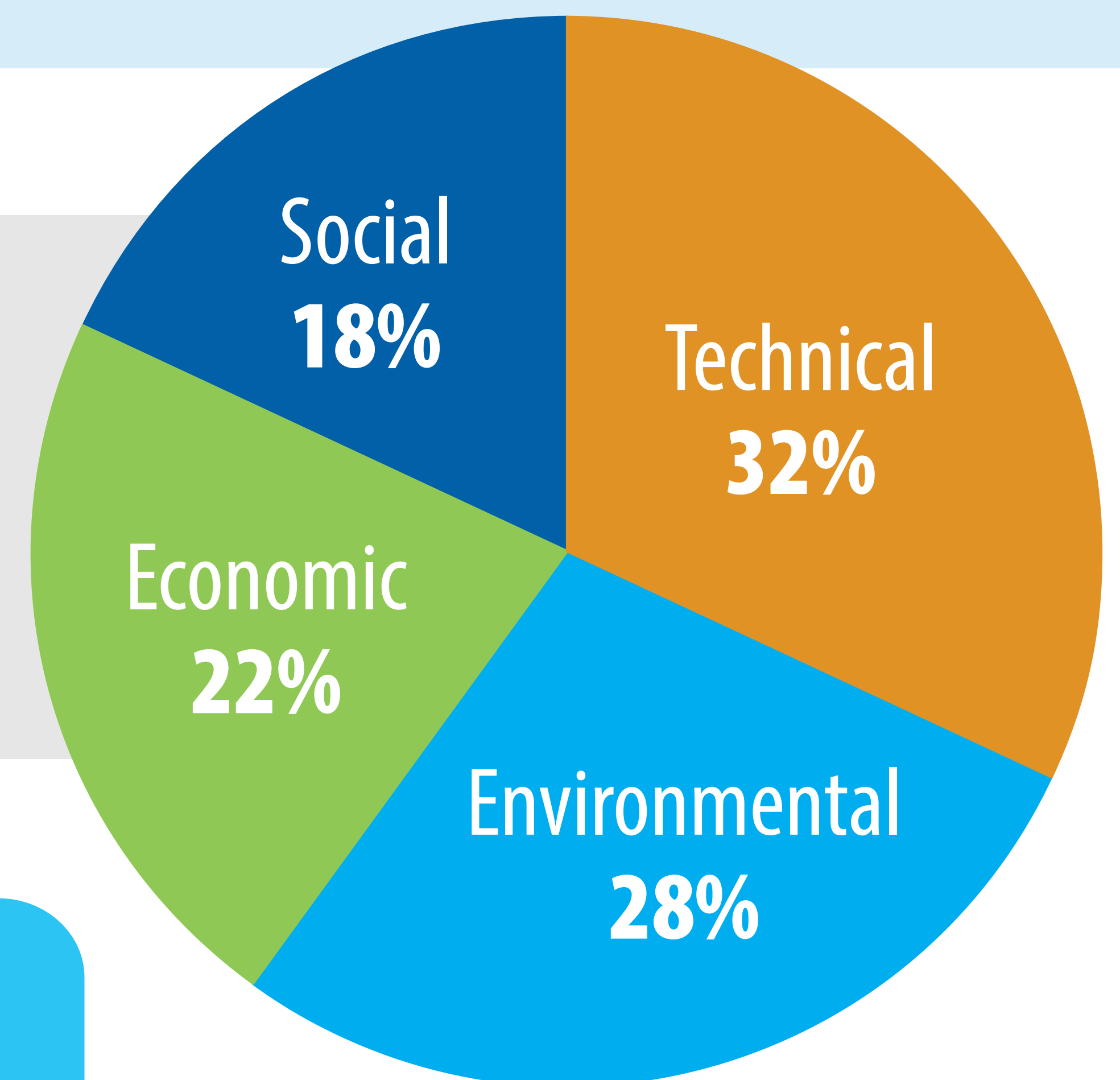
**Public Open House #1
completed November 2014**

**Public Open House #2
completed June 2015**



- More than **1,800** email notifications sent out
- **Advertised** on york.ca, local and Regional newspapers
- **311** Open House attendees
- **33** posts on Facebook and Twitter

Voting Results from Open House #2
What's important when the Region evaluates servicing strategies and servicing alternatives



Innovative approaches to water and wastewater treatment are critical to maintain water quality

Identify role of York Region in stormwater management

Identify opportunities for energy efficiency and recovery

The quality and quantity of our water resources must be protected

Consideration of environmental sustainability is critical when evaluating servicing strategies

Take action on climate change

Population and employment growth should not compromise existing services or significantly increase the price of water

How the Master Plan meets York Region's vision



The One Water Approach to the Master Plan

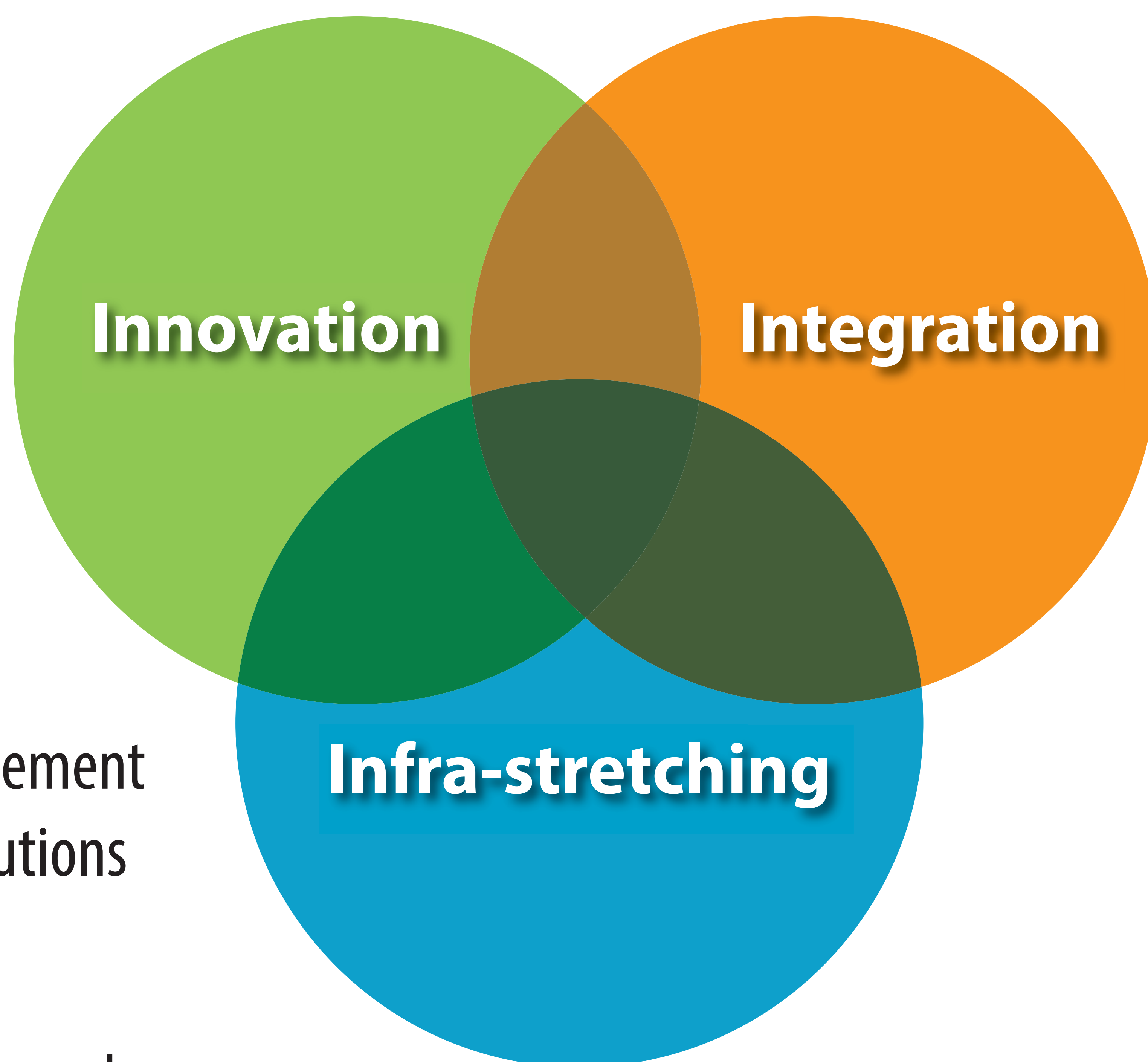


- From climate change to aging assets to regulatory compliance pressures, municipalities continue to face complex challenges in delivering water and wastewater services to our growing communities
- A One Water approach treats the urban water cycle as a single integrated system
- This approach allows us to deal with water more effectively, to protect it and get more value from it
- A One Water approach reflects all the needs of the water from human necessity to the ecosystem
- Interconnectedness of water supply, groundwater, stormwater and wastewater is optimized; all are recognized and considered as a potential resource
- A One Water approach allows for technological advancements and cost-effective sustainable water management

Three Tactics for the Master Plan

Innovation

- Invest in new technologies
- Use robust demand forecast model
- Apply state-of-the-art modeling techniques
- Explore water re-use using a One Water approach
- Improve energy efficiency and implement recovery and renewable energy solutions



Integration

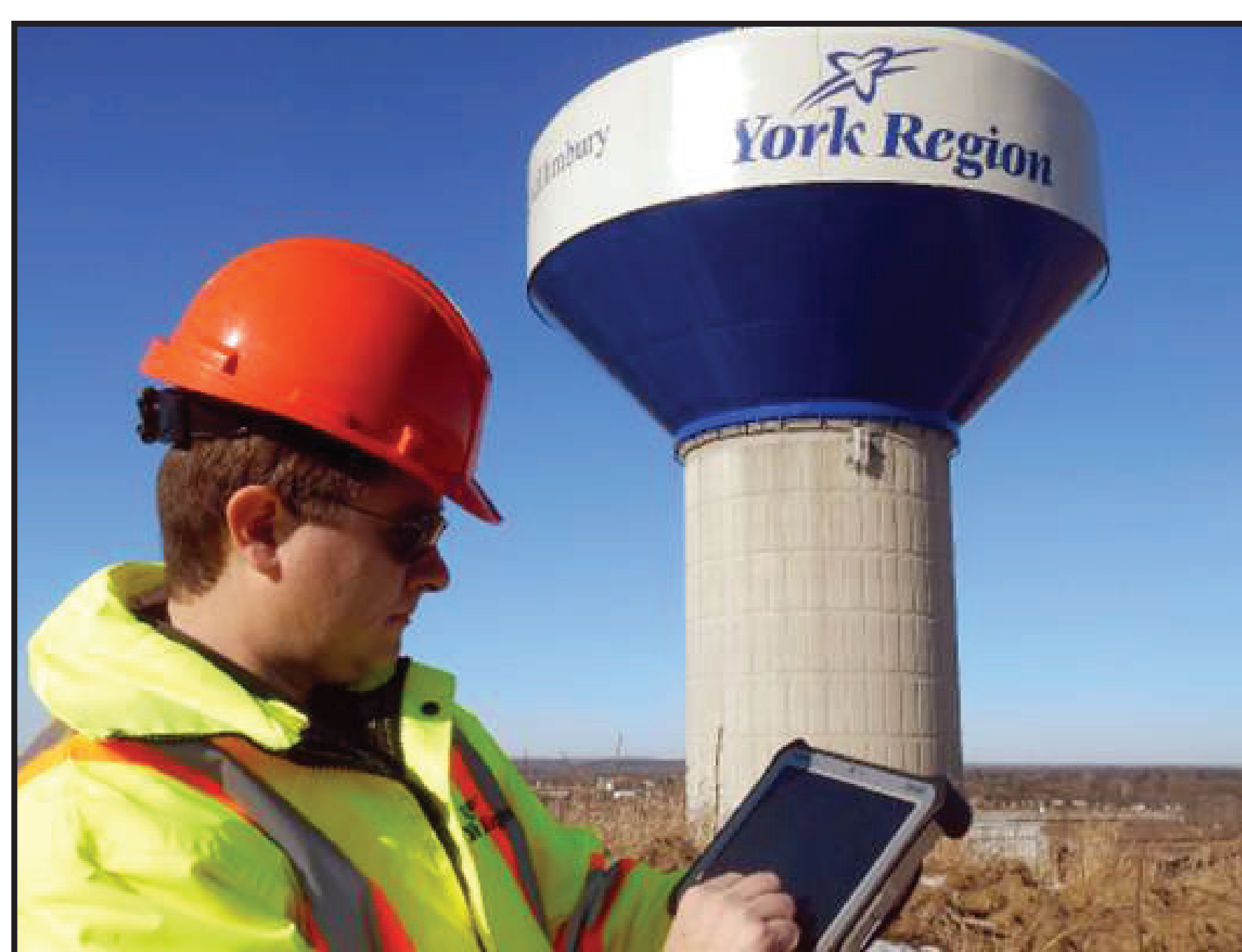
- Align with the Regional Official Plan and Transportation Master Plan updates
- Integrate with asset renewal program
- Create efficiencies through servicing partnerships with Local Municipalities and other Stakeholders

Infra-stretching

- Maximize use of built infrastructure while minimizing capital investment
- Reduce demand through implementation of Long Term Water Conservation and Inflow/Infiltration Reduction Strategy

Opportunities Using Master Plan Tactics

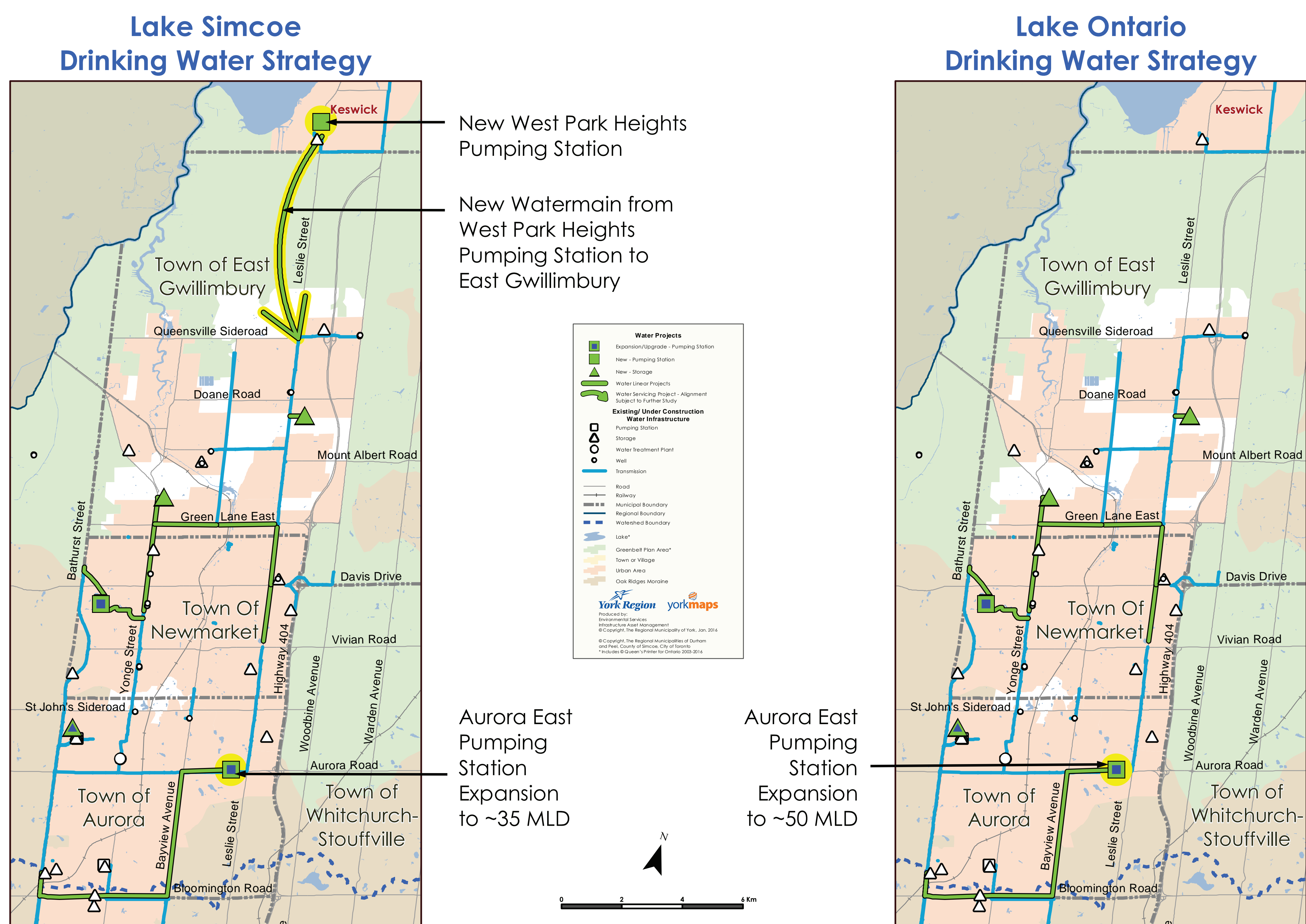
Challenges	Opportunities
York Region is forecast to grow to a population of 1.8 million and employment of 900,000 by 2041	<ul style="list-style-type: none"> Enhancing water conservation and inflow/infiltration reduction strategies to reduce demand Expanding existing water and wastewater infrastructure to support growth
Financial resources are limited	<ul style="list-style-type: none"> Maximizing use of existing infrastructure (infra-stretching) Staging of new infrastructure to reflect pace of growth Integration of existing programs and new initiatives to optimize efficiency
Built and natural Environment is rapidly changing	<ul style="list-style-type: none"> Maintaining water resource integrity by minimizing intra-basin transfer Enhancing climate change collaboration and adaptation Promoting energy efficient servicing alternatives and limiting carbon footprint Investing in new technology and innovation



Objective 1:

Develop a cost effective and resilient infrastructure plan to serve York Region communities to 2041 and beyond

Summary of Differences Between Recommended Drinking Water Strategies



Lake Simcoe Servicing Strategy

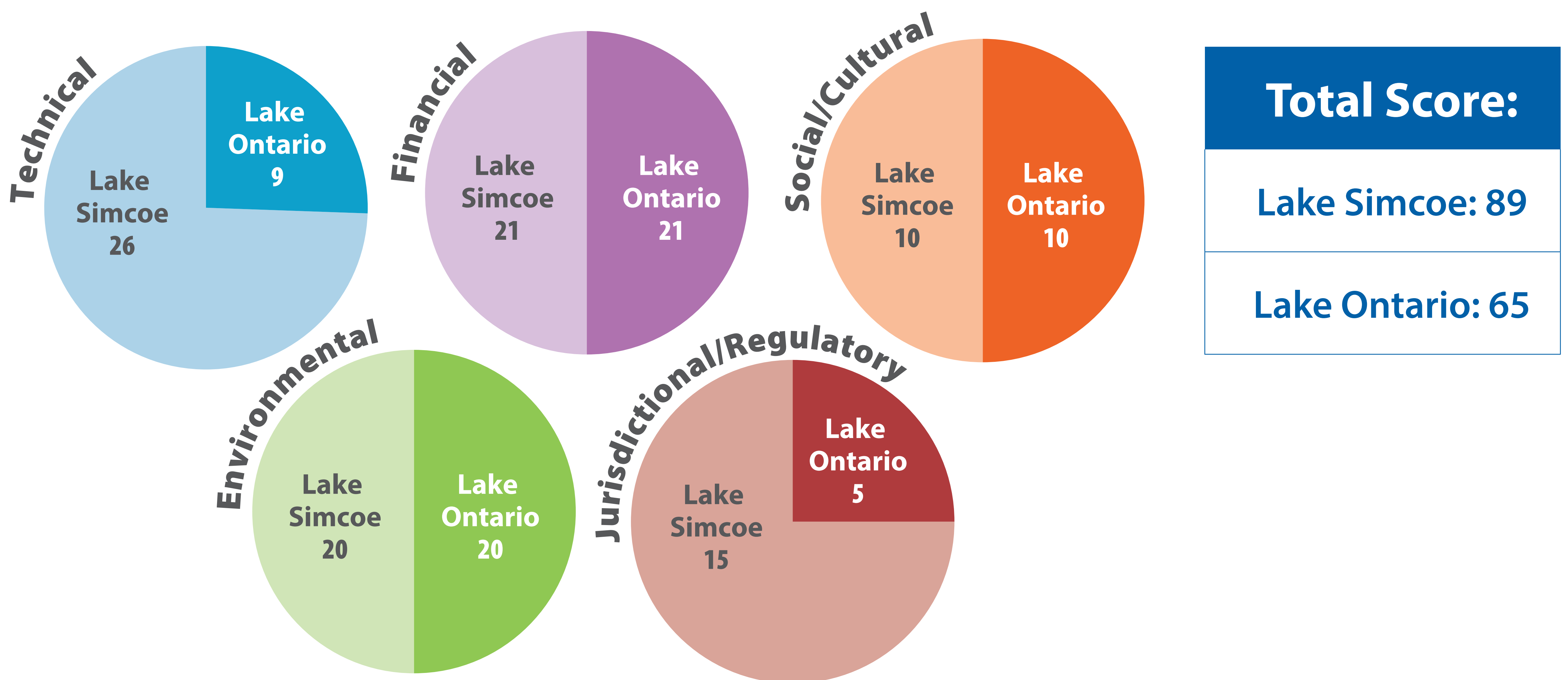
- Wastewater servicing is the same for both strategies
- Additional drinking water to East Gwillimbury, Newmarket and Aurora
- Requires a new watermain and pumping station to bring Lake Simcoe water to East Gwillimbury and the expansion of the Georgina Water Treatment Plant
- Aurora East Pumping Station to be expanded to ~ 35 MLD
- Water from Lake Simcoe travels through approximately 28 km of infrastructure to reach taps in East Gwillimbury

Lake Ontario Servicing Strategy

- Wastewater servicing is the same for both strategies
- Additional drinking water to East Gwillimbury, Newmarket and Aurora is supplied only by Lake Ontario
- Water from Lake Ontario travels through approximately 80 km of infrastructure to reach taps in East Gwillimbury

Evaluation Process Recommends Lake Simcoe Servicing Strategy

Total Weighted Evaluation Criteria Score



Evaluation Categories

Technical

Is the servicing strategy technically feasible?

Environmental

Is the servicing strategy environmental sustainable?

Financial

Is the cost of the servicing strategy fiscally sustainable?

Jurisdictional/Regulatory

How well does the servicing strategy align with current regulations and policies?

Social/Cultural

Does the servicing strategy impact local communities?

Evaluation Criteria Explained

Ability to meet design guidelines and operate in the required manner

Impacts on aquatic animals and terrestrial habitats as well as groundwater

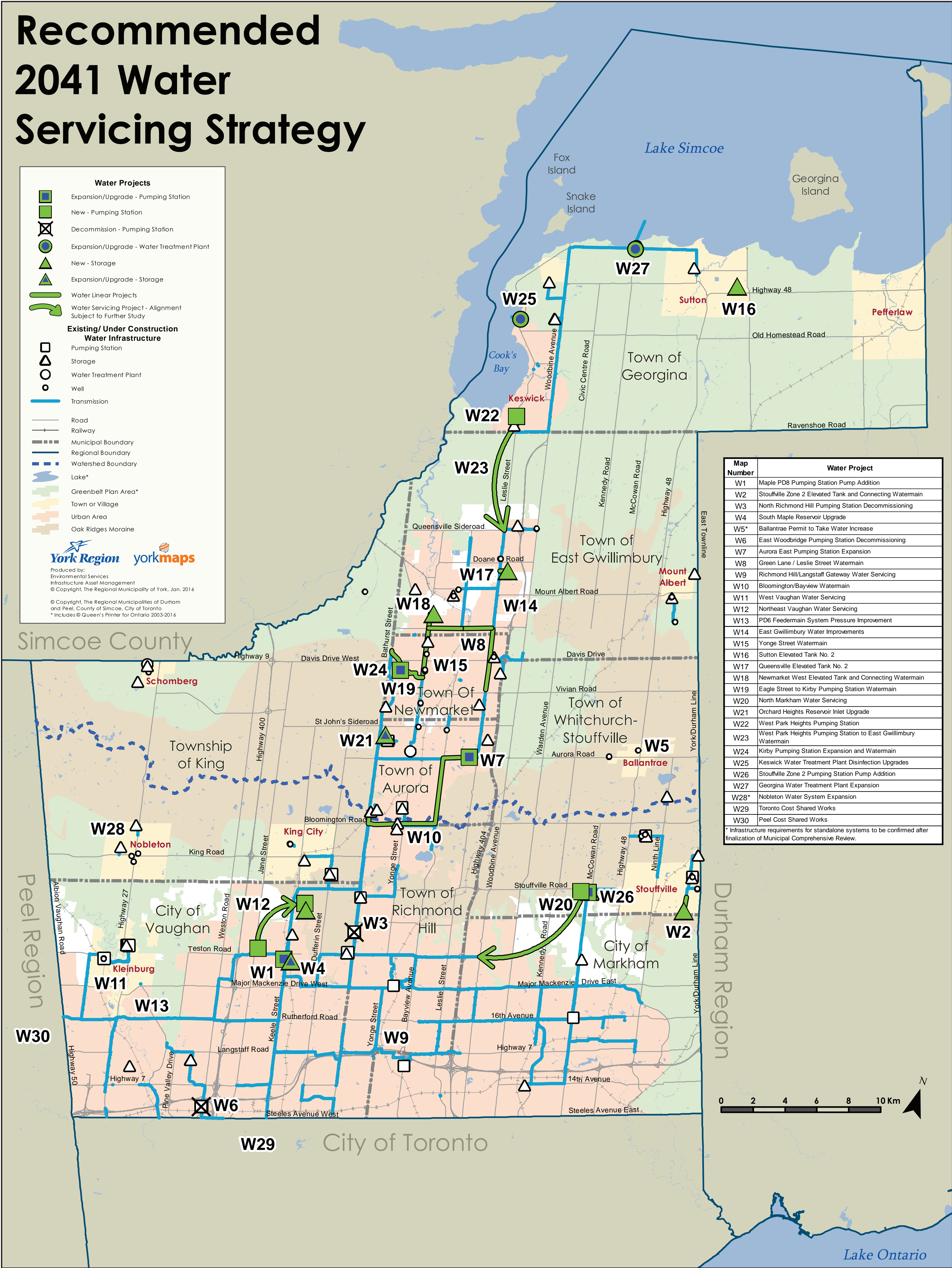
Required capital and lifecycle costs

Compliance and alignment with federal, provincial, Regional and municipal regulation and policies

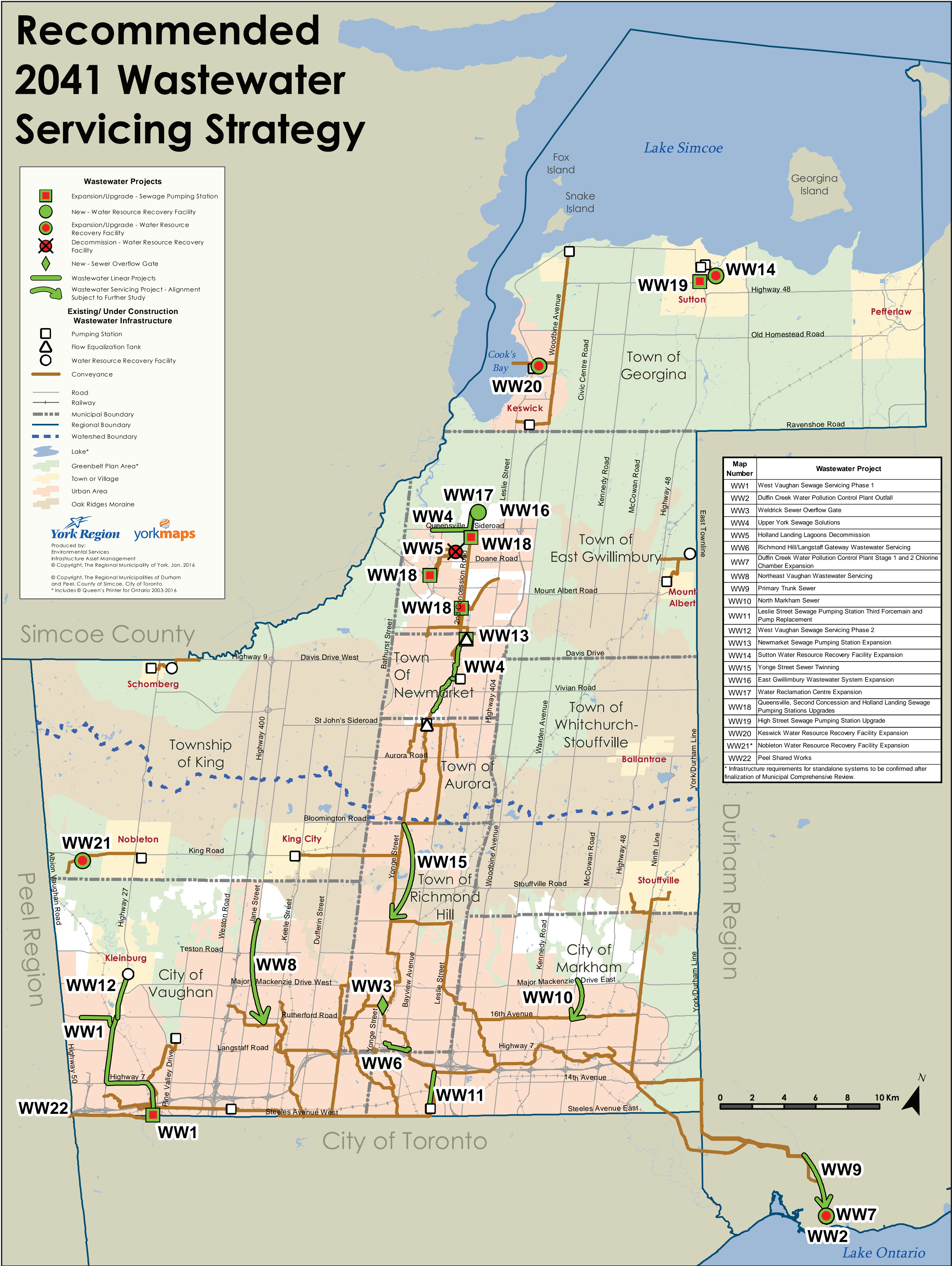
Impacts on archaeological and cultural heritage sites as well as impacts during and post- construction

*Weighted score is based on Public Consultation #2 input. Evaluation is based on study findings, staff analysis and community input to determine a preliminary preferred water and wastewater servicing solution.

Recommended Lake Simcoe Servicing Strategy



Recommended Wastewater Servicing Strategy



Objective 2:

Develop a long-term strategy to provide sustainable water services utilizing a One Water approach

The One Water Approach Objectives:

- Ensure Sustainable Water Services
- Operate and Manage an Integrated Service Delivery System
- Ensure Resilient and Financially Sustainable Water Services

Action Plan includes:

- Incorporation of the One Water approach into York Region culture
- Investment in new technology to promote water re-use and recovery
- Continued implementation of updated Inflow/Infiltration Reduction Strategy and Long Term Water Conservation Strategy
- Integrated long term planning including incorporation of asset management needs
- Regional and local water resource partnerships
- New and innovative energy management and efficiency programs
- Commitment to continued climate change collaboration and adaptation



Next Steps

Following this Public Open House the project team will:

- Compile information received from public and other stakeholders
- Review and respond to questions
- Finalize the 2015 Water and Wastewater Master Plan Update
- File the study on public record for a 30-day review period spring 2016

We want to hear from you.

We want your input on the recommended servicing strategy. Please fill out a comment sheet before you leave or send an email to watermasterplan@york.ca

For additional information go to York.ca/waterplan

