



Forum on Provincial Ministries and Wastewater Issues The Role for Wastewater

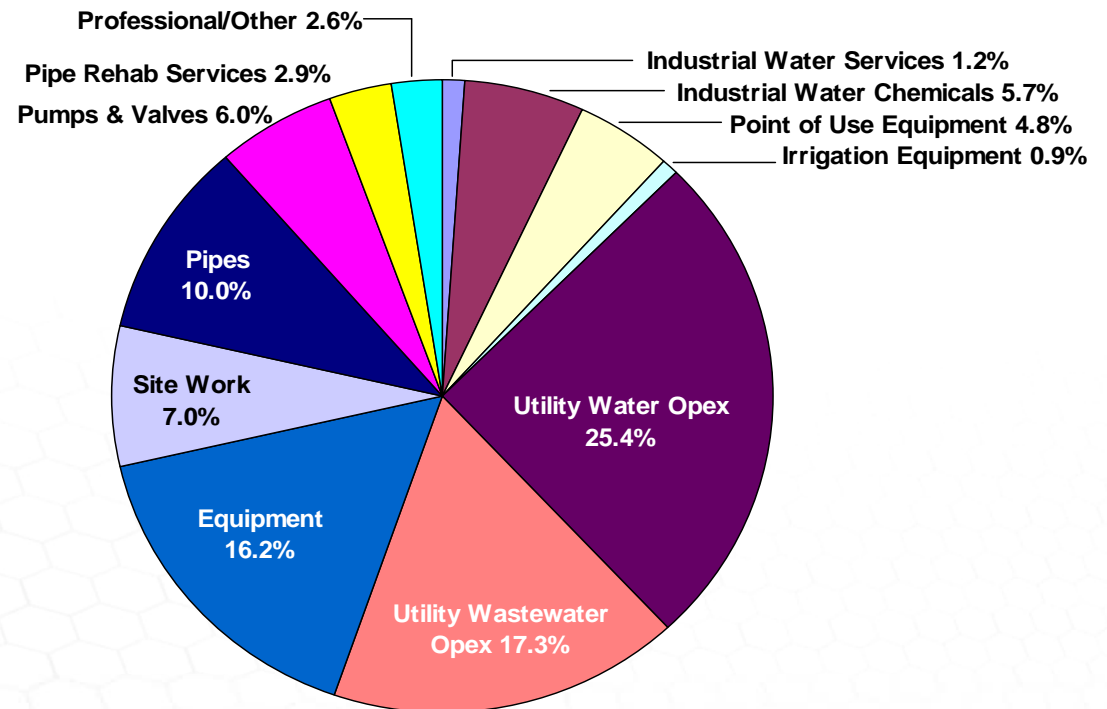
January 20, 2011

Agenda

- Cover 3 topics:
 - Discuss the market opportunity
 - Ontario-based resources
 - What can wastewater do?

Canadian Water Market

- Est. Global Water Market in 2010: US\$424 Billion¹.
- At its current and forecast growth of 5.1% per year between 2007 and 2020, the world faces a shortage of up to 40% by 2030²
- Est. Canadian Water Market in 2010: \$4.657 Billion¹

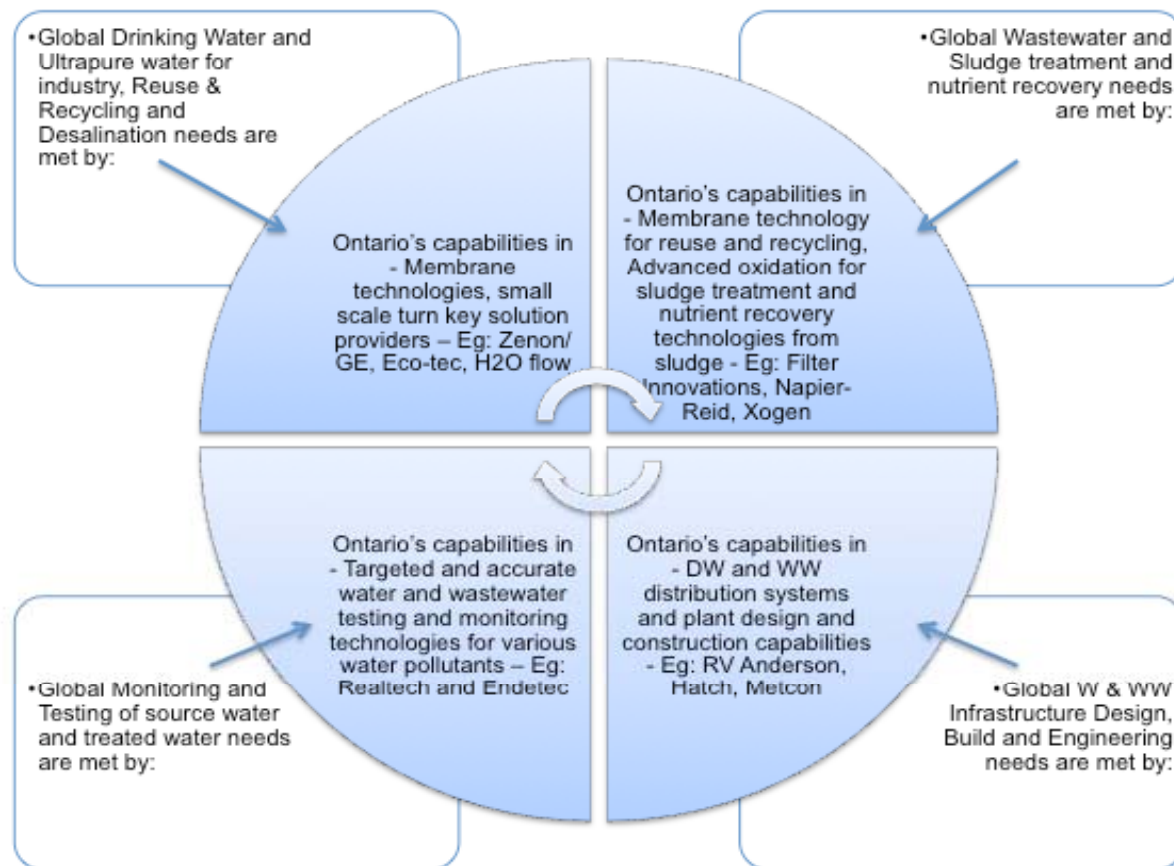


* Excluding bottled water (\$US 58.9 Billion)

[1] Source: *Global Water Market 2011*, Global Water Intelligence, UK, 2010.

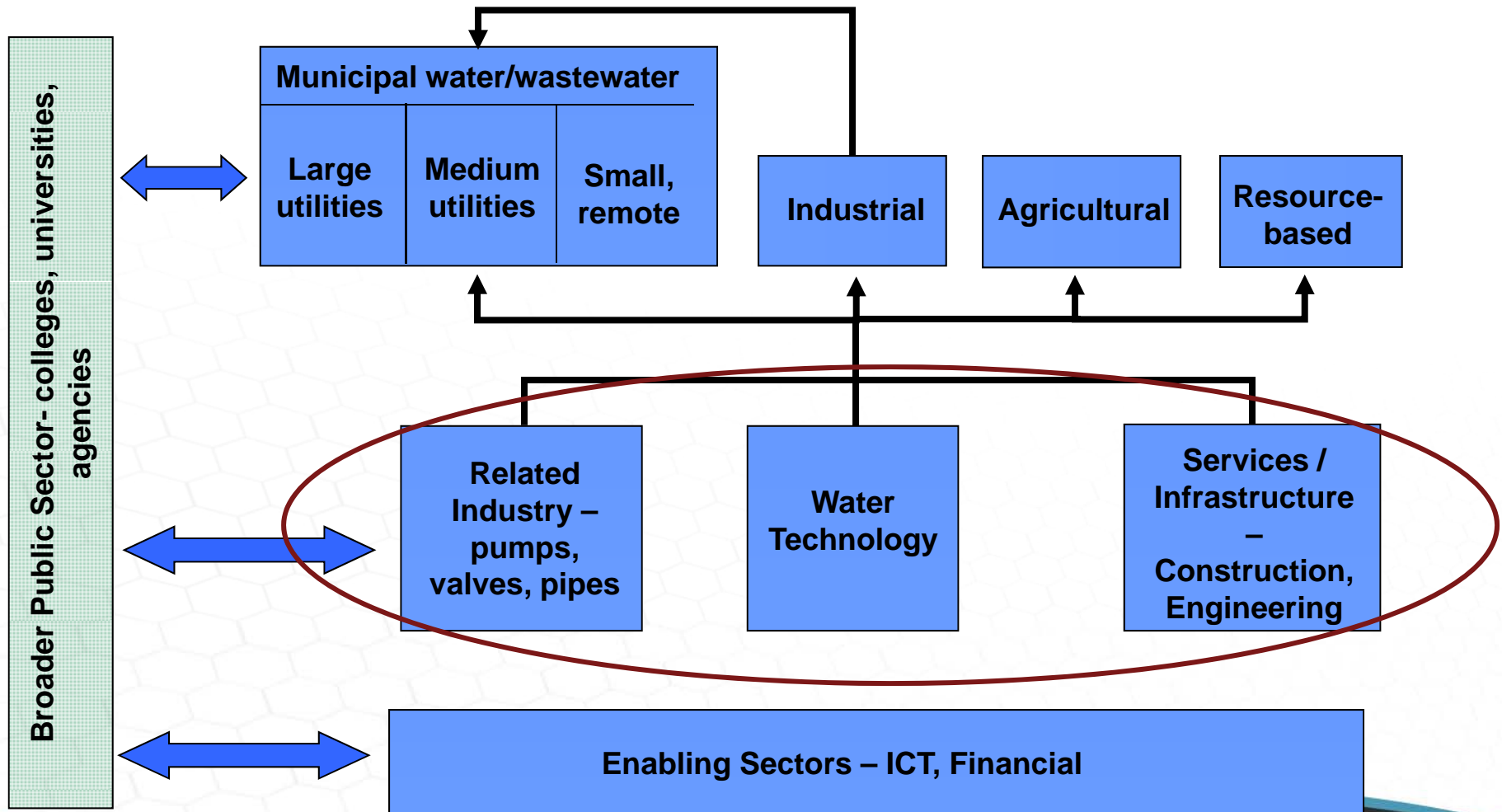
[2] Source: *Charting Our Water Future, 2009*; 2030 Water Resources Group (IFC/McKinsey).

Market Segmentation: Ontario Niches in Water



Source: MaRS, various data sources

What is our focus in the water sector?



What are we known for?

- Canadian companies have already developed highly innovative technologies and established themselves as world leaders in:
 - Disinfection Technologies (ultra-violet radiation, chlorination, ozonation)
 - Physical and Chemical Treatment (membrane technology for filtration, sedimentation, oxidation and precipitation)
 - Biosolids Management
 - Biological Treatment and Bio Solids Management Systems for liquid and sludge treatment
 - Specialized pumps, gates and valves
 - Energy Recovery Systems (technologies that recover waste products for reuse)[1]

What Resources do We Have in the Province?

- Ontario has a strong private sector base of more than **1,100 companies** involved in some type of water-related technology or service delivery for domestic or international markets.
 - This includes companies that provide chemicals, technologies, small services, infrastructure products and engineering consulting services in this sector.
 - Nearly **80 per cent of the companies identified are Ontario based**, which represents close to **16,000 jobs** in the private sector.
 - In addition, there are **766 water and wastewater facilities** in the province, including **317 water and wastewater facilities operated by OCWA** (a crown corporation).
 - Many small, entrepreneurial companies – but highly dispersed.

Some of the water tech companies in Ontario...

Company	City	Technology	Employees (est.)
GE Water & Process (Zenon)	Oakville	Wastewater treatment systems	500
Nalco Canada Co	Burlington	Chemical water treatment	310
Trojan Technologies (Danaher)	London	UV water treatment	340
Cambridge Brass	Cambridge	brass fittings for the waterworks industry	120
EnviroTower	Toronto	Clean cooling tower treatment	N/A
Hayward Gordon	Halton Hills	Process equipment, engineered systems.	75
Biorem Technologies Inc.	Guelph	Biofiltration systems	37
Eco-Tec Inc.	Pickering	Recycling of industrial water	75
Siemens Water Technologies	Mississauga	Wastewater treatment	45
Napier-Reid Ltd.	Markham	Wastewater treatment	25
UV Pure Technologies	Toronto	UV Water purification systems	25
Vive Nano Inc.	Toronto	Nanoparticle based materials	14
Imbrium Systems	Toronto	Stormwater treatment products	18
Burnside International	Orangeville	Wastewater treatment systems	11
EnviroSim	Dundas	Design of wastewater treatment plants	10
Filter Innovation	North York	Wastewater treatment systems	12
Schlumberger	Waterloo	Engineered water solutions	N/A

We have Research Centers...

- **For example:**

- Ontario Centres of Excellence for Earth and Environmental Technologies
- Ontario Ministry of the Environment Dorset Environmental Science Centre
- The National Network for Environmental and Water Research
- Ontario Ministry of Natural Resources Research labs in Peterborough
- Canada Centre for Inland Waters (Burlington)
- OCETA: Ontario Centre for Environmental Technology Advancement
- Walkerton Clean Water Centre

Networks...

- **For example:**

- 12-13 Industry associations representing different aspects of water & wastewater in Ontario – including Water Environmental Association of Ontario
- CWWA: Canadian Water and Wastewater Association
- Alliance for Water Efficiency
- Great Lakes-based commissions (IJC and GLFC)
- Canadian Water Network (CWN)
- Canadian Water Quality Association

...leading scientists and research programs

- **For example:**

- **University of Waterloo** – numerous chairs and centres
- **University of Toronto** – numerous chairs and centres
- **University of Guelph** – numerous chairs and centres
- **McMaster University** – numerous chairs and centres
- **Queen's University** – numerous chairs and centres
- **Trent University** – numerous chairs and centres
- **Brock University** – Oenology and Viticulture Institute (irrigation methods)
- **Fleming College** – Centre for Alternative Wastewater Treatment
- **United Nations University** - Institute for Water, Environment and Health (UNU-INWEH) (Hamilton)
- **Laurentian University** – Living Lakes Centre/Cooperative Freshwater Ecology Unit
- **Lakehead University** – Chair in Sustainable Water Management
- **University of Western Ontario**

Water Opportunities & Water Conservation Act

- Seeks to establish Ontario as a Water leader; economic development perspective:
 - WaterTAP to play a facilitating role for industry, advise government
- Address challenges to development & adoption of innovative technologies & business approaches through demonstration (examples):
 - Research Excellence Water Round (go to www.mri.gov.on.ca)
 - Innovation Demonstration Fund – targeted water round
 - Ontario Small Waterworks Assistance Program-3 (OSWAP-3)

What can the wastewater industry do?

- Ideas & engagement

- Tell us what you need from us to grow beyond our borders (and within). For example:
 - Is there a role for ICT in the industry?
 - How do you sell to foreign markets?
 - How important are domestic reference sites?
 - How big do you need to be (now; in 10 years?)
 - What technology do you need; wish you had or could develop?
Relationship to government?

Thank you.

Ken Albright
Director, Special Projects
416-212-4530
ken.albright@ontario.ca