

Operations, Maintenance and Monitoring Branch Status Update

Presentation to Environmental Services Committee

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May 12, 2010

Key Water and Wastewater objectives

- ❑ Provide clean and safe drinking water
- ❑ Support population and employment growth
- ❑ Proactively manage assets
- ❑ Return good quality effluent to the environment
- ❑ Minimize risk through compliance with Legislation and Drinking Water Quality Management Standard



Water and Wastewater service delivery supports the key elements of Vision 2026

Our role within Environmental Services – Key Responsibilities

- ❑ Efficient and cost effective day to day delivery of water and wastewater services
- ❑ Ensure compliance with Legislation and Drinking Water Quality Management System
- ❑ Operate, maintain and inspect our assets
- ❑ Maintain SCADA and calibrate instrumentation
- ❑ Communicate with our local municipalities, stakeholders and support Capital Delivery
- ❑ Provide a safe working environment



Operations, Maintenance & Monitoring is responsible for operating, maintaining and protecting assets valued over \$1.5 billion



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Managing risk through audits and inspections

- ❑ Drinking Water Quality Management Standard (DWQMS)
- ❑ ISO 9001 and 14001 (internal and external audits)
- ❑ Ministry of the Environment
- ❑ Electrical Safety Association
- ❑ Compliance audits (internal and external)
- ❑ Health & Safety audits and inspections
- ❑ Ministry of Labour



Ensuring safe drinking water and protecting the environment requires top marks



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Participation in rigorous audit program

Audit Type	Standard/Regulation	Frequency	Facilities Audited in 2009
Compliance Audits	ISO 14001	Periodically	15 compliance audits scheduled for 2010
Internal Audits	ISO 14001 ISO 9001 DWQMS	Each facility audited every 3 years	24
MOE Inspections	Ontario Water Resources Act	Frequency not regulated, typically inspected annually	4 Wastewater
	Safe Drinking Water Act	Frequency is regulated. Inspected at least annually, in some cases twice a year. Approximately one third of inspections are unannounced.	22 Water
External Audits	ISO 14001 ISO 9001 DWQMS	Bi-annually Annually Annually	8 13 5

75 facilities had compliance audits completed between 2006 and 2009.



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MOE Inspections - Water and Wastewater

System:	Year:	# MOE Inspections Completed:	# Non-Compliance Findings:	# Best Practice Recommendations:
Water	2009	22	2	4
Wastewater	2009	4	0	0

- ❑ 100% of operators met regulatory training requirements
- ❑ 93 new certification and operator licence upgrades
- ❑ 99.8% score on MOE inspection reports
- ❑ 99.9% of drinking water samples met the standard
- ❑ 9 adverse water quality incidents reported to the MOE

York Region water and wastewater operations received top marks from MOE inspections



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Immediate response to adverse water quality incidents in 2009

- ❑ Low Pressure – Ansnorveldt – due to power failure
- ❑ Slight Sodium exceedance – Ansnorveldt, Holland Landing – required to report to Medical Officer of Health every 60 months
- ❑ Low chlorine residual – Holland Landing, Newmarket, Aurora – flushing immediately restored chlorine residual
- ❑ Total coliforms – Georgina, Newmarket, Bayview Pumping Station – all re-samples acceptable
- ❑ All adverse water quality incidents reported immediately to the Ministry of the Environment and Medical Officer of Health
- ❑ All corrective actions completed to satisfaction of the Ministry of the Environment and Medical Officer of Health

ISO and DWQMS procedures ensure compliance with regulatory reporting requirements



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Reports to Ministry of the Environment - Wastewater

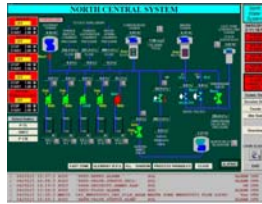
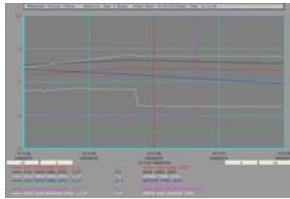
Location	Description	MOE Report date
Sutton WPCP	Sodium Hydroxide leak caused by frozen chemical line. Approximately 500L spilled to just outside plant and contained. Repairs completed immediately to prevent reoccurrence. All appropriate regulatory authorities contacted.	29-Jan-09
Newmarket PS	Rapid spring thaw and heavy rains across Region caused high inflow and infiltration flows resulting in a sewage by-pass of 26,409 cubic metres into East Holland River. All appropriate regulatory authorities and stakeholders contacted and corrective action completed.	12-Feb-09
Aurora PS	Rapid spring thaw and heavy rains across Region caused high inflow and infiltration resulting in sewage by-pass into East Holland River. All appropriate regulatory authorities and stakeholders contacted and corrective action completed.	12-Feb-09
Holland Landing PS	Sewer main break on Old Yonge St North of Bradford Street. All appropriate regulatory authorities and agencies notified. Repairs completed in 12 hours.	02-Jun-09
Kleinburg WPCP	Heavy rainfall caused high inflow and infiltration flows to Kleinburg WPCP. A blockage in plant influent chamber resulted in 523 cubic meters of sewage by-pass into environment and Humber River. All appropriate regulatory authorities contacted. Blockage removed and corrective action plan includes temporary by-pass pumps on site and investigation into source of blockage.	29-Sep-09
YDSS / Peel	Air valve on York Peel Sewer Forcemain did not close completely. 500 litres overflowed chamber to surrounding area and storm sewer. Air valve replaced and tested. All appropriate regulatory authorities contacted.	29-Dec-09



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SCADA – Continuous Data Collection to Monitor System Performance

- ❑ Instrumentation and calibration ensures compliance
- ❑ Provides 24/7 monitoring through Control Panel Operations
- ❑ Leveraging technology allows less attended facilities
- ❑ Remote SCADA access for staff



Technology and automation optimizes staff resources and reduces risk



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Driving operational excellence

- ❑ Energy audits and hydro cost savings of \$300K in 2009
- ❑ Upgrading to energy efficient equipment reduces energy costs
- ❑ University of Toronto Drinking Water Research Group – process optimization will reduce chemical costs
- ❑ Partnership with George Brown College to develop advanced maintenance training for Operators
- ❑ Operator cross training and mentoring
- ❑ Measuring performance using key indicators
- ❑ 46% increase in scheduled maintenance work orders



Keeping downward pressure on costs through key efficiency initiatives



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Inflow and Infiltration programs

- ❑ Closed Circuit TV Program
- ❑ Stream Bank Inspection Program
- ❑ Maintenance Hole Condition Assessment Program
- ❑ YDSS Inspection Walk
- ❑ Chamber Inspections / Valve Exercise Program
- ❑ Air Valve Maintenance Program



Operations has on-the-ground programs to reduce inflow and infiltration



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Future staff resources to manage growth in capital infrastructure

- ❑ Capital expansion program will have operational impact on budget
- ❑ New or upgraded facilities and assets in all operational areas
- ❑ Additional resources to operate, maintain and monitor new and more complex infrastructure
- ❑ Resource planning will reduce risk and maintain compliance
- ❑ Operations salaries only 7.5% of operating budget



Effective resource management will ensure return on capital investment and maintain levels of service



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Managing Summer demand in 2010

- ❑ Predicting hot, dry summer in 2010
- ❑ New infrastructure in place
- ❑ Enhanced coordination with municipalities
- ❑ Water for Tomorrow program and public awareness
- ❑ Leverage municipal by-laws



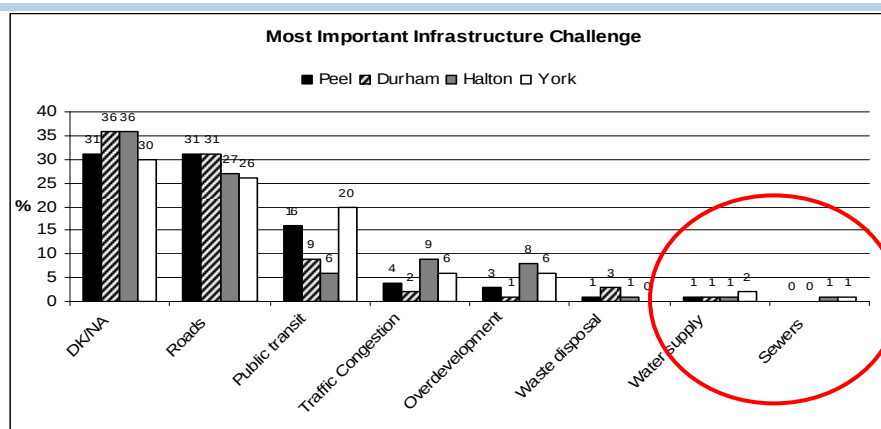
Additional infrastructure will minimize risk of water restrictions



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2009 Environics Survey



Our customers are satisfied with water and wastewater services provided by York Region



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Addressing our future challenges

- ❑ New and changing regulations for water and wastewater
- ❑ New and changing regulations for health and safety
- ❑ Maintaining compliance
- ❑ Future resources to manage growth capital infrastructure
- ❑ Long term asset maintenance / management
- ❑ Continued investment in water and wastewater systems
- ❑ Working with Regional Public Works Commissioners of Ontario to get essential services agreement
- ❑ Retaining and attracting staff in very competitive market

Operations well positioned to successfully tackle these challenges



Thank You!

