



Operations, Maintenance and Monitoring Branch

Status Update and 2009 Priorities

Presentation to Transportation and Works Committee

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Monitoring**

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Key Water & 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 DWQMS, Acts and Regulations



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

Operations, Maintenance & Monitoring's role in Environmental Services – Key Responsibilities



- ❑ Efficient and cost effective day to day delivery of water and wastewater services
- ❑ Ensure compliance with Regulations and DWQMS
- ❑ Operate, maintain and inspect our assets
- ❑ Maintain SCADA and calibrate instrumentation
- ❑ Communicate with our local municipalities, stakeholders and Capital Delivery



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

Operations, Maintenance & Monitoring is responsible for Water and Wastewater Facilities



- ❑ 64 Certificates of Approval
- ❑ 12 Permits to Take Water
- ❑ SCADA system monitors over 2000 alarms, with over 300 compliance related
- ❑ 2000 process related instruments and flow meters
- ❑ 24/7 system monitoring and after hour response to alarms and emergencies
- ❑ Clear guidelines, standards and practices for staff through Drinking Water Quality Management System and ISO



Branch Organized to Deliver Water and Wastewater Services



**Operations
Maintenance
And Monitoring**
8 Management
5 Support staff

Operations

45 Operators

Maintenance

6 Mechanics
5 Electricians
1 Planner

SCADA / PCS

4 PCS Technologists
1 Instrument Tech
6 Control Panel Ops

Asset Inspections

4 Asset Inspectors
2 Project Coordinators

**Staff deliver reliable and efficient W/WW services for
York Region's residents and businesses**

Operations - Operate, Maintain and Monitor all Water and Wastewater Assets



- ❑ Reduce risk of failure to service delivery
- ❑ Build strong relationships with Ministry of the Environment
- ❑ Ensure day-to-day compliance with Acts and Regulations, ISO, DWQMS
- ❑ Operate over 100 W/WW facilities including treatment plants, pumping stations and well systems



Operations staff ensure compliance and reduce risk

Maintenance - Completes all Major Mechanical and Electrical Maintenance

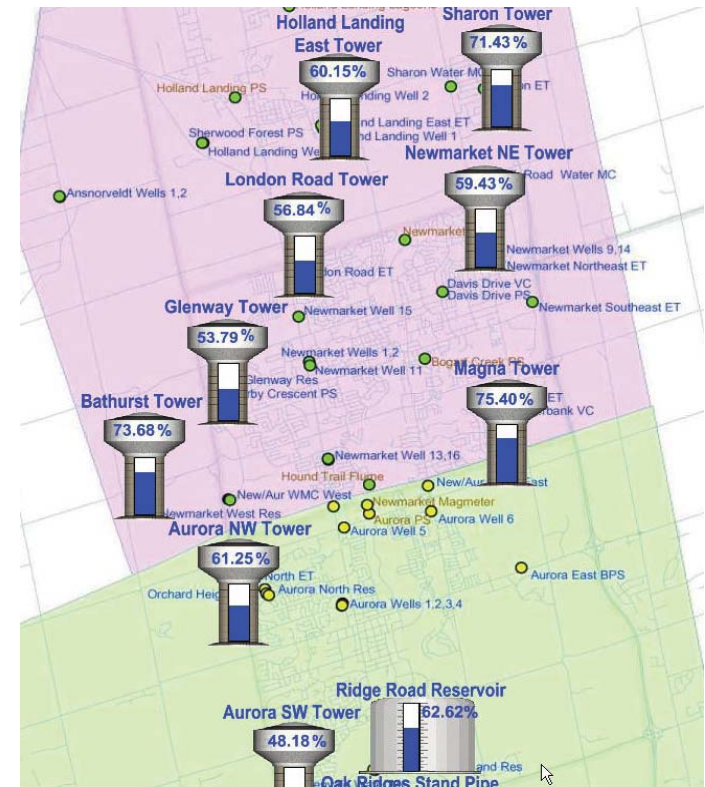
- ❑ Partner with Electrical Safety Association
- ❑ Operational Support (Troubleshooting, Upgrades and Repairs, On-Call Support)
- ❑ High level of scheduled maintenance – 19,634 work orders closed in 2008



Strong maintenance practices increase service reliability and deliver return on investment

SCADA - Maintain Robust Network that Collects Accurate Data Required for Compliance

- ❑ Instrumentation and calibration ensures compliance
- ❑ Provides 24/7 monitoring through Control Panel Operations
- ❑ Leveraging technology has allowed less attended facilities



Technology and automation optimizes resources

Asset Inspections - Deliver Condition Assessments which Reduce Risk of Failure



- ❑ Stream bank program protects assets and the environment
- ❑ Ensures connections to our \$1 billion linear assets meet York Region standards
- ❑ Over 500 maintenance hole inspections completed in 2008

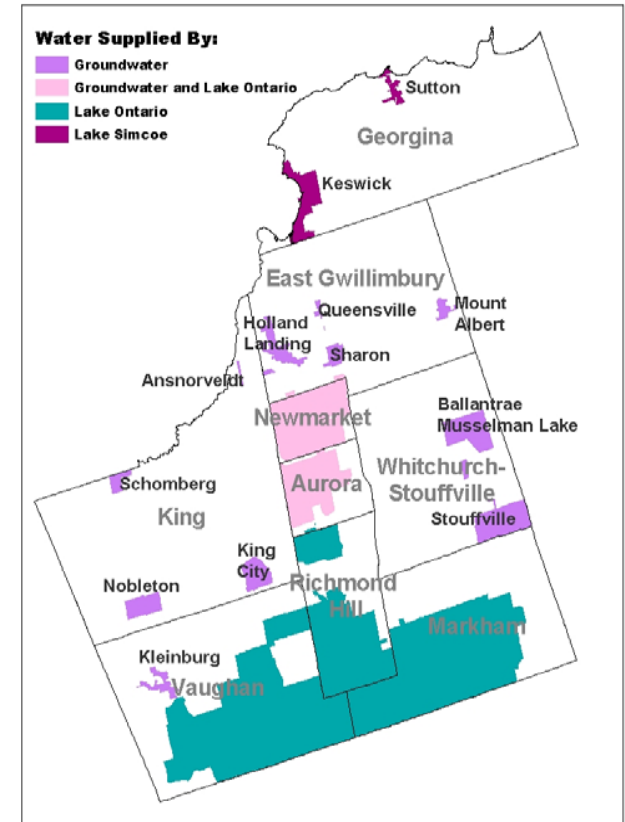


Asset Inspections focus maintenance on priority areas

Water and Wastewater Overview



- ❑ Complex water system includes 2 treatment plants, 37 wells, 40 storage facilities and 280 kms of watermain
- ❑ Wastewater system includes the YDSS, 6 WW treatment plants and 200 kms of sewer
- ❑ Manage service agreements with Toronto, Peel and Durham
- ❑ Enhancing treatment and technology to meet regulatory needs - membranes planned for Lake Simcoe WW plants

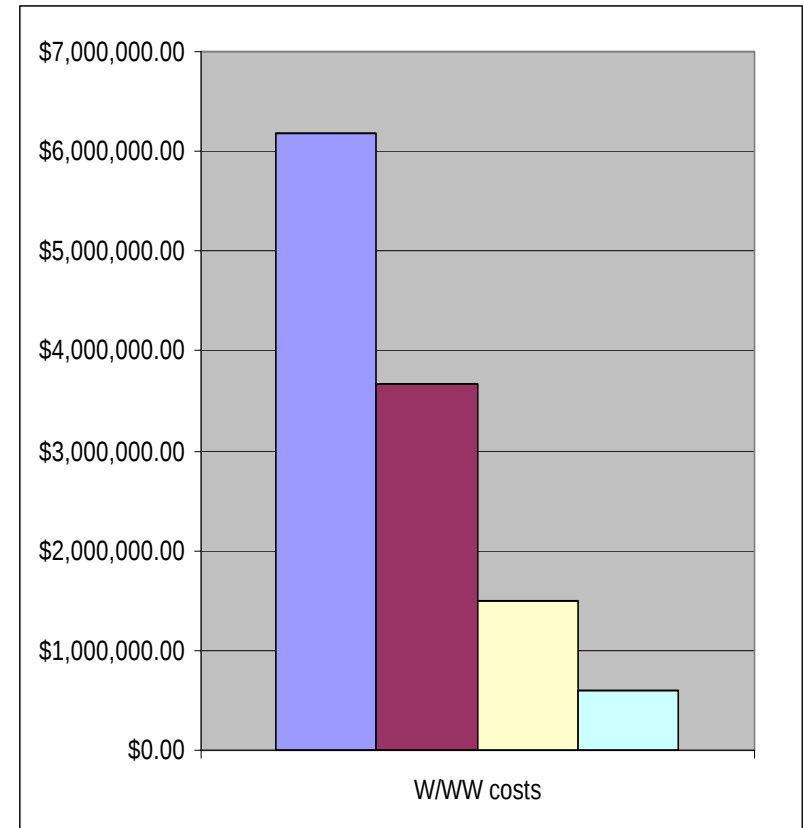


Preserving and protecting services for a growing region

Business Costs in Operations, Maintenance & Monitoring



- ❑ Materials and Supplies – new equipment and replacement parts
- ❑ Treatment Chemicals – cost of chemical production increasing
- ❑ Lab Fees – sample costs increasing due to regulatory requirements



W/WW accounts for 60% of corporate energy use

Continuing to Drive Operational Efficiency and Reliability in 2009



- ❑ LEED implementation (Stouffville Zone 2 Pumping Station)
– energy consumption offset by 25% by photovoltaic system
- ❑ Working closely with Property Services on energy use initiatives - to date realized savings of \$455,000
- ❑ Upgrading to energy efficient equipment reduces energy costs
- ❑ DWQMS / ISO programs drive continuous improvement
- ❑ Partnership with City of Toronto – Transmission Operations Optimization will result in energy savings for York Region
- ❑ Treatment and process optimization – Partnership with University of Toronto and Drinking Water Research Chair

Keeping downward pressure on costs through key efficiency initiatives

Continuing to Drive Operational Efficiency and Reliability in 2009



- ❑ Inflow and Infiltration study will reduce operating costs
- ❑ “Best in class” operator training and Mentoring program
- ❑ Cross training of water and wastewater operators optimizes staffing levels and creates workforce flexibility
- ❑ Efficient Operational Hub system reduces travel time of operators



OMM using resources effectively to deliver W/WW services

Continuing to Drive Operational Efficiency and Reliability in 2009



- ❑ Water for Tomorrow promotes public education
- ❑ Maintenance program – move from reactive to program driven maintenance
- ❑ Suppliers Agreements will secure preferred pricing and save money
- ❑ Remote SCADA access for operators – less attended facilities and reduced overtime
- ❑ Communications with our local Municipalities, City of Toronto, Durham and Peel Region



DWQMS enhances accountability and communications with Regional Council

Superior Performance and Quality Assurance



- ❑ 99.3 % compliance score on MOE inspections
- ❑ 99.9 % of samples meet Provincial water quality standards
- ❑ 100% of operators met regulatory training requirements
- ❑ Operators increase licence levels higher than Provincial average
- ❑ 100% alarms and emergencies responded to and corrected in a timely manner
- ❑ Excellent Health and Safety record



ISO and DWQMS programs increase compliance and reduce risk

Addressing our future Challenges



- ❑ New and changing Regulations for Water and Wastewater
- ❑ New and changing Regulations for Health and Safety
- ❑ Maintaining 100% Compliance
- ❑ Keeping up with capital program and growth
- ❑ Long term asset maintenance / management
- ❑ Continued investment in Water and Wastewater systems
- ❑ Retaining and attracting staff in very competitive market

OMM positioned to successfully tackle these challenges

