

Environmental Services Overview

Environmental Services Committee

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Presentation Summary



- Overview of Committee
- Environmental Services Overview



- Issues Relevant to Committee
- Continuing Major Projects and Initiatives



- Meeting Future Challenges
- Working Partnerships

Environmental Services Committee

- ❑ Provides policy guidance and direction to ensure efficient and effective management of water, wastewater and waste services
- ❑ Provides strategic regional long-term view of integrated service delivery objectives
- ❑ Makes recommendations to Regional Council on priority and policy matters

Committee guidance and direction supports sustainable growth across York Region

Environmental Services Committee

- ❑ Water treatment and wholesale distribution services
- ❑ Wastewater treatment and wholesale collection services
- ❑ Solid waste processing, haulage and disposal
- ❑ Waste reduction, reuse, recycling, recovery and diversion
- ❑ Annual regulatory compliance reports
- ❑ Environmental assessments and delivery of servicing infrastructure

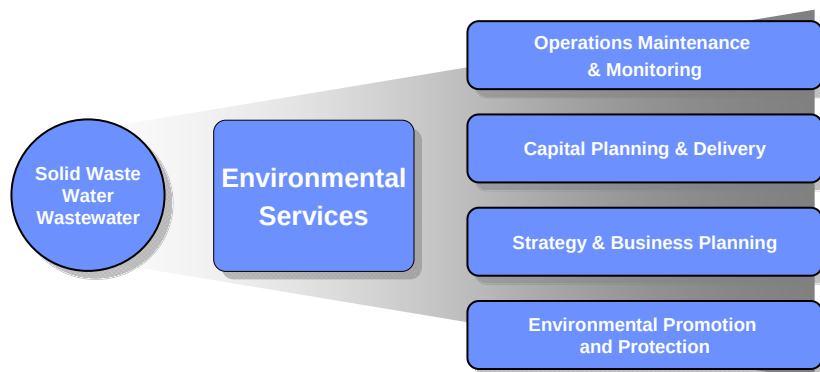
Critical issues require Committee oversight to ensure successful service delivery

Environmental Services

Departmental Overview

Environmental Services

Integrated Service Delivery



One team aligned towards a single purpose: results in efficient and effective service delivery

Environmental Services

Mission and Vision



Mission:

- ❑ Our innovative people provide environmental services that protect public health and the environment and meet the needs of our thriving communities

Vision:

- ❑ We will provide sustainable environmental services through integrated efforts in an organization culture of opportunity, trust, leadership and partnership

Environmental Services

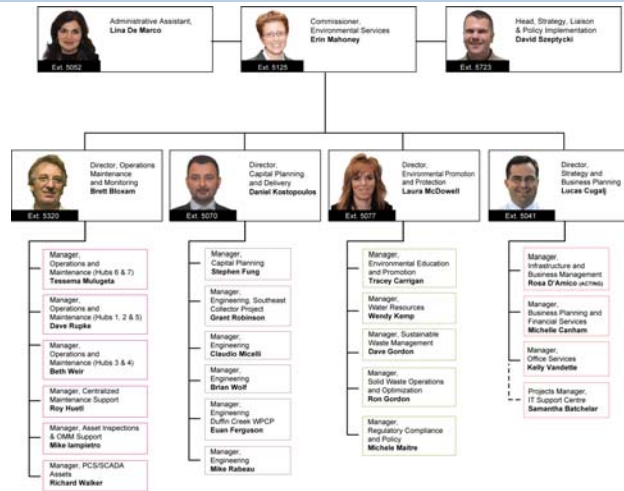
Core Service Delivery Responsibilities

- ❑ Providing drinking water, wastewater and waste management services to over one million residents
- ❑ Managing 350,000 tonnes of solid waste per year
- ❑ Complying with complex Provincial Acts and regulations
- ❑ Driving ambitious \$3.9B 10-year capital program
- ❑ Implementing a focused asset management approach
- ❑ Growing our influential educational and advocacy programs



Environmental Services continues to implement York Region's infrastructure needs while ensuring environmental protection and sustainability into the future

Environmental Services Management Team



Environmental Services Recent Accomplishments



- ❑ **Federation of Canadian Municipalities 2010 Sustainable Community Award – Waste Category**
 - ❑ McCleary Court Community Environmental Centre
- ❑ **Federation of Canadian Municipalities - Sustainable Neighbourhood Retrofit Action Program (SNAP)**
 - ❑ Pilot project to better control storm water runoff into Lake Wilcox in the Town of Richmond Hill
- ❑ **Lake Simcoe Region Conservation Authority 2010 Watershed Heroes Awards**
 - ❑ Water Conservation Award
 - ❑ Education Award
- ❑ **Ontario Public Works Association - Public Works Leader of the Year**
 - ❑ Brett Bloxam - Director of Operations, Maintenance and Monitoring
- ❑ **Ontario Chief Drinking Water Inspector's Annual Report, 2008-2009**
 - ❑ Water Quality Compliance (99.97%)
 - ❑ Facility Compliance (100%)
- ❑ **Toronto Region Conservation Award - Excellence in Environmental Compliance**
 - ❑ Stephen Marino - Construction Administrator

York Region continues to be recognized as a leader in Ontario

Issues Relevant to Committee

Issues Relevant to Committee



- ❑ Increasing critical wastewater capacity
- ❑ Security and protecting drinking water
- ❑ Diversifying waste management solutions
- ❑ Managing operating expenditures and rates
- ❑ Achieving a sustainable state of infrastructure through asset management

Critical issues will require Committee oversight

2011 to 2014 Increasing Critical Wastewater Capacity

- ❑ Duffin Creek Water Pollution Control Plant Expansion
 - ❑ Stage 3 Liquids Process commissioned
 - ❑ Stage 3 Solids Process construction ongoing
 - ❑ Stage 1 & 2 Upgrades underway
- ❑ Southeast Collector Trunk Sewer construction tendered
- ❑ Upper York Sewage Solutions IEA ongoing, completion 2018
- ❑ Sutton WPCP Expansion EA approved
- ❑ Keswick WPCP Expansion in construction, completion 2012
- ❑ Kleinburg WPCP Expansion in construction, completion 2011
- ❑ West Vaughan Sewage Solutions EA ongoing, completion 2013
- ❑ Primary Trunk Twinning to commence 2012



Key wastewater capital investments service York Region's future growth needs

2011 to 2014 Securing and Protecting Drinking Water



- ❑ Long-term water agreements with Peel and Toronto
- ❑ York Water System connection to Kleinburg, King City and Stouffville
- ❑ Security of supply in satellite systems including new Mount Albert Well 3, Nobleton Well, Ballantrae Well, new Schomberg WTP and Georgina WTP Expansion
- ❑ Five Elevated Tank Projects underway
- ❑ Source Water Protection
 - ❑ Lake Simcoe South Georgian Bay Source Protection (LSSGB) Committee
 - ❑ Credit Valley, Toronto and Region, and Central Lake Ontario (CTC) Committee
- ❑ Meeting Conditions of Approval
 - ❑ Environmental Protection Act and Ontario Water Resources Act
 - ❑ Intra-Basin Transfer

Drinking water services expanded considerably over last four years to increase service to satellite communities and diversify water sources

Diversifying Waste Management Solutions

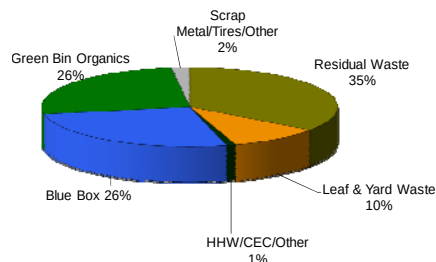
- ❑ Approval of Durham-York Energy from Waste Facility
- ❑ Successful Waste Electrical and Electronic Equipment drop-off events
- ❑ Community Environmental Centre Network
 - ❑ McCleary Court (LEED Certified)
 - ❑ Elgin Mills (LEED Registered)
 - ❑ Georgina Modifications and Upgrades
- ❑ Extended Producer Responsibility advocacy
- ❑ ISO 14001 Certification – inclusion of solid waste facilities
- ❑ Developing an Integrated Waste Management Master Plan



Waste diversion plays a critical role in achieving Regional sustainability goals

Solid Waste Management Costs for Leading Edge Diversion

2010 Solid Waste Management Budget Tonnage Distribution



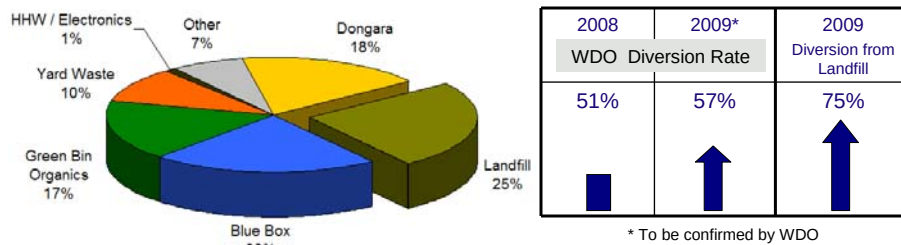
Waste Management Stream 2010 (Budgeted)	Cost per tonne
Leaf and Yard Waste	\$ 65
Blue Box (Net)	\$ 77
Residual Waste (Landfill)	\$ 86
Residual Waste (Dongara)	\$ 122
Community Environmental Centre Diversion / Other	\$ 126
Green Bin Organics	\$ 157
Household Hazardous Waste and Electronics	\$ 312
System Average Cost	~\$ 113

Management of source separated organics currently represent a significant portion of solid waste management costs and budget

2011 to 2014

Addressing Our Future Challenges: Increasing Diversion from Landfill

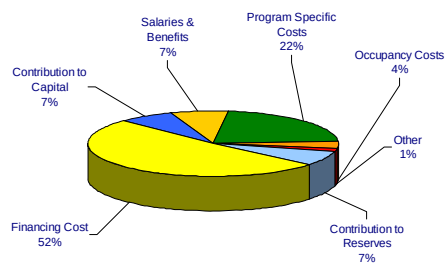
2009 Diversion From Landfill



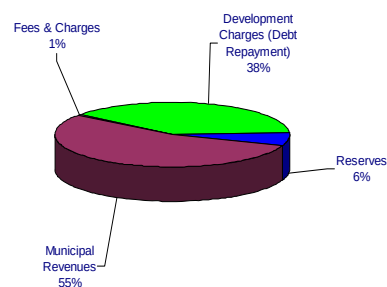
York Region's waste system has potential to achieve over 90% diversion from landfill by 2020

2010 Water & Wastewater Operating Expenditures

2010 GROSS EXPENDITURES \$299.7 Million



2010 GROSS REVENUES \$299.7 Million



66% of operating expenditures relate to infrastructure capital and financing costs

2011 to 2014 Water & Wastewater Rate Pressures

- ❑ Water and Wastewater rate increase for 2010 & 2011 is 10%
- ❑ Main drivers of rate pressure include purchased water rates from Toronto and Peel (85% of Regional water supply), operational costs of Duffin Creek WPCP and additional hydro, chemical and treatment costs
- ❑ Increased rates required over near term to achieve full cost recovery and build capital replacement reserves that are currently in a negative position
- ❑ Declining per capita flows and increasing capital and operating costs also put additional pressure on rates



Report on future water and wastewater rates and recommendations will be brought to Council in Q2 2011

2010 Rate Increases

Scenario	Annual Rate Increase	Operating Surplus By	Eliminate Reserve Deficit By
Water 10% Option	- 10% in 2009-11 - 5% in 2012-13 - 2% thereafter	2011	N/A
Wastewater 10% Option	- 10% in 2009-13 - 5% thereafter	2018	2023

Approved by Council in December 2008

Water Rate Impacts to Annual Household Costs

Land / Mobile Phone	\$1,200 per annum
Gas	\$2,000 per annum
Hydro	\$1,800 per annum
Insurance	\$1,500 per annum
Cable	\$ 750 per annum
Water & Wastewater	\$ 750 per annum

Water rates are considerably less than typical household utility costs

Achieving Sustainable State of Infrastructure Performance



- ❑ 2009 State of Infrastructure evaluated reliability, soundness, capacity and financial state of owned assets
- ❑ York Region's water, wastewater and waste management infrastructure assets are in a good state
- ❑ More than half the value of Environmental Services' \$2B in assets have reached midway point of expected useful life
- ❑ Continued investment in rehabilitation, replacement and resources will ensure desired levels of service are maintained

Proactive infrastructure improvement program addresses need for improved maintenance of critical infrastructure systems

Continuing Major Projects and Initiatives

Durham York Energy from Waste Facility

- ❑ Covanta Energy identified as preferred vendor
- ❑ Proposed site located in Clarington
- ❑ EA approved November 2010
- ❑ Covanta Agreement executed November 2010
- ❑ Facility to be operational in 2014
- ❑ Sustainable in-Ontario solution for long-term sustainable waste management
- ❑ Compliant with new A7 Air Emission Guidelines
- ❑ 140,000 tonne facility capacity
 - ❑ York share is 30,000 tonnes
- ❑ \$276.5 million project



York Region Council supports "4th R" - Energy Recovery
to increase diversion of waste from landfill

2011 to 2014

Inflow & Infiltration Reduction Program

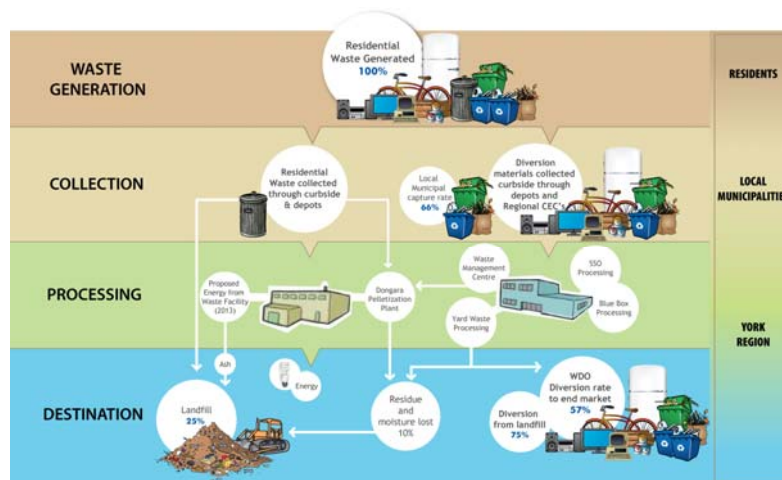


- ❑ Staff co-lead Inflow & Infiltration Steering Committee with local municipalities to develop long-term program strategy and implement actions
- ❑ Selected municipal pilot projects to reduce inflow and infiltration
- ❑ Municipal cost sharing formula currently being developed
- ❑ Outcomes will impact Sustainable Asset Management practices
- ❑ Report to be submitted to the Ministry of the Environment by March 31, 2011

Report to be brought to Council in February 2011

2011 to 2014

Service Delivery in a Shared Waste Management System



2011 to 2014 Addressing Our Future Challenges: Integrated Waste Management Master Plan

- ❑ Builds on success of Joint Waste Diversion Strategy developed by York Region and local municipalities
- ❑ Comprehensively addresses 4 R's and supports York Region's Sustainability Strategy and Official Plan
- ❑ Foundation for future advocacy with Province
- ❑ Basis to ensure proactive investment in solid waste infrastructure and services
- ❑ Aligns with requirements in provincial Policy Statement on Waste Management Planning



Process facilitates citizen involvement and transparency to guide future of waste management and diversion in York Region

2011 to 2014 Operating with Excellence



- ❑ 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
- ❑ Managing risk with proactive audits and facility inspections

Environmental Services is responsible for operating, maintaining and protecting assets valued over \$2 billion

Advocating for Change to Ensure Environmental Sustainability

- Lake Simcoe Protection Plan
- Full Extended Producer Responsibility
- Strategic Review of Blue Box System
- Enhancements for Source Water Protection
- Endorsing *Energy Recovery* as 4th R in Waste Management Hierarchy
- Recognition of York Region's critical need to construct the York Durham Sewer System
- New composting guidelines
- Asset management – State of the Infrastructure
- Clarity and consistency in provincial initiatives



York Region proactively engages Province to ensure interests are reflected in new Provincial policies and programs

Meeting Future Challenges

Future Challenges: 2011 and Beyond

- ❑ Delivering large capital programs to service regional growth
- ❑ Infrastructure implementation in a large urbanizing Region
- ❑ Meeting Provincial regulatory demands
- ❑ Securing long-term waste management capacity
- ❑ Driving sustainable solutions



Strong integrated team approach has put us in an excellent position to face our future challenges

Securing Long-Term Waste Management Capacity



- ❑ 85% of waste management services delivered through third-party contracts
- ❑ Enhancing Regional ownership and control provides greater diversification and reduces risk of heavily outsourced business
- ❑ Ownership provides opportunities for local solutions
- ❑ Opportunity to increase Regional presence at public use facilities
- ❑ Stopped waste exports to Michigan in 2008

Diversification and balance of outsourcing with Regional ownership provides a strong foundation for sustainable waste management

2011 to 2014

Conservation and Planning for the Future

Soft Path Approach Inspired Framework

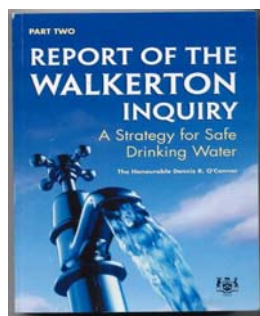
- ❑ New way to think about how we use water
- ❑ Reduce water use through innovation, conservation, policy and behavioural change
- ❑ Plan from 40 years in the future, back to the present
- ❑ Required to be submitted to MOE in March 2011
- ❑ Final strategy will be presented to Committee next month



Recent innovative consultation programs with public and local municipalities provide key inputs towards a finalized strategy

2011 to 2014

Drinking Water Source Protection

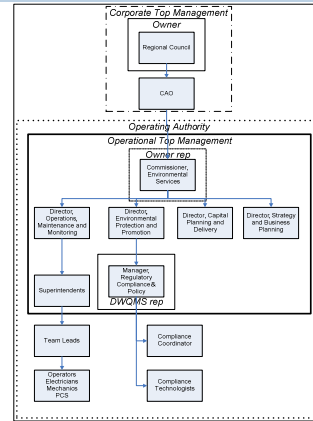


- ❑ *Clean Water Act*, 2006 promotes protection of drinking water through mandatory and voluntary actions
- ❑ Promote protection of drinking water through mandatory and voluntary actions
- ❑ Watershed based
- ❑ Locally driven assessment reports
- ❑ Public process
- ❑ New requirements to control land uses within vulnerable areas
- ❑ New Regional Risk Management Official to monitor and support implementation

Need to develop a comprehensive business process with sufficient Resourcing to govern new and existing land uses

Drinking Water Quality Management System: Ensuring Water Quality and Compliance

- Regional Council has overall responsibility and authority to ensure Regional water systems meet legislated and regulatory requirements
- Under *Clean Water Act*, York Region (the corporation) is defined as the owner and Regional Council acts on its behalf
- Able to allocate resources to ensure safe drinking water based on recommendations from the Commissioner



Depth of program resources ensures vigilance and helps to maintain integrity of York Region's water system

Moving Forward

- Well positioned to meet near term regulatory compliance and growth challenges
- Continuing to diversify Waste Management operations for resiliency during volatile market conditions
- Continuing to invest in resources to maintain and ensure full compliance with all regulatory requirements
- Delivering a demanding capital infrastructure program that continues to anticipate and meet York Region's growth needs



Continuing to implement York Region's infrastructure needs while ensuring environmental protection and sustainability into the future

Working Partnerships

Enhancing Key Partnerships for Success

- ❑ Regulatory Agencies and Conservation Authorities
 - ❑ MOE Liaison Meetings
 - ❑ Source Protection Committees
 - ❑ Annual Environment First Symposium
- ❑ Local Municipalities
 - ❑ Municipal Liaison Meetings
 - ❑ Inflow and Infiltration Task Force
 - ❑ Waste Coordinators Liaison Group
 - ❑ Water Operations Liaison Group
- ❑ Inter-Municipal Partnerships
 - ❑ Municipal Infrastructure Committees (Durham, Peel, Toronto)
 - ❑ Transmission Operations Optimizer (Toronto)
 - ❑ Regional Public Works Commissioners of Ontario (RPWCO)

Improved knowledge sharing and integration between external organizations will ensure success of service delivery goals

2011 to 2014 Building Strategic Relationships

- ❑ *Water for Tomorrow* program
- ❑ Asset Management Programs with Local Municipalities
- ❑ Municipal Inflow and Infiltration Reduction Program
- ❑ Community Environmental Centres
- ❑ Annual *Environment First* Symposiums
- ❑ Peel and Toronto Cost Share Programs
- ❑ York Durham Sewer System / Energy From Waste



Partnerships create opportunities for shared resources and capital infrastructure capacity sharing to better ensure our long term success

2011 to 2014 Report Outlook

Every Year	2011	2012	2013	2014
❑ Water & Wastewater Annual Capital and Operating Budget ❑ Solid Waste Annual Capital and Operating Budget ❑ Capital Infrastructure Update ❑ Inflow & Infiltration Status Update ❑ Operations Status Update ❑ Long-term Water Conservation Strategy Implementation Update ❑ Energy Management Program Update ❑ Water Taking Compliance Report (Schedule 22)	❑ York Durham Sewer System Agreement ❑ Sewer Use Bylaw ❑ Upper York Sewage Solutions ❑ Long-Term Water Conservation and Inflow & Infiltration Reduction Strategy ❑ Capital Infrastructure and Water Purchasing Program ❑ Southeast Collector Trunk Sewer ❑ Inflow & Infiltration Reduction Strategy ❑ Upper York Preferred Alternatives ❑ Water & Wastewater Capacity Allocation (with Planning) ❑ Elgin Mill CEC	❑ State of Infrastructure Update ❑ Duffin Creek Stage 3 Expansion ❑ Integrated Waste Management Master Plan ❑ York Durham Sewer System Primary Trunk ❑ Georgina CEC/Transfer Station	❑ Upper York Sewage Solutions IEA ❑ Source Separated Organics Processing Facility	❑ State of Infrastructure Update ❑ Durham-York Energy from Waste Facility - Commissioning ❑ Southeast Collector Trunk Sewer - Commissioning

Questions