

---

# Service Level Review Public Works

---

September 30, 2004

---

## Public Works Service Level Presentation – Agenda

- **Introduction / Overview of Department**
  - **Program Service Level Reviews**
-

---

Public Works Department is  
Made Up of 4 Programs:

- **Water**
  - **Wastewater**
  - **Roads**
  - **Waste Management**
- 

---

Program Service Level  
Presentations will Include:

- **Overview of Current Services**
  - **Accomplishments / Efficiencies**
  - **Drivers / Issues**
  - **Preliminary Budget Implications**
  - **Potential Adjustments**
-

---

# Service Level Review

---

Water  
September 30, 2004

---

## Water Overview of Current Services and Levels

**The Water Program provides the following services: Water modeling, planning and development, design and construction, treatment and distribution, and source protection through three major delivery functions:**

- Capital Works
- Operation and maintenance of the water infrastructure system
- Source Protection

---

## Water

### Overview of Current Services and Levels

- The Water Program incorporates the management, operation and maintenance of:
    - 3,553 kilometres of watermain, it is expected that by 2014 the number of km of watermain in our system will amount to 4,264 km
    - 22 reservoirs-elevated tanks-standpipes
    - 2 water treatment facilities
    - 18 wells
    - 14 booster stations
  - In 2004, the estimated annual water volume treated at the plant is 187,950,000 m<sup>3</sup>. It is expected that by 2014 the annual water volume treated will be 244,856,000 m<sup>3</sup>
  - In 2005, the current maximum day utilized plant capacity will be 98%
  - Water Program resources also incorporate the meter operations and billing functions provided by the Finance department
- 

---

## Water

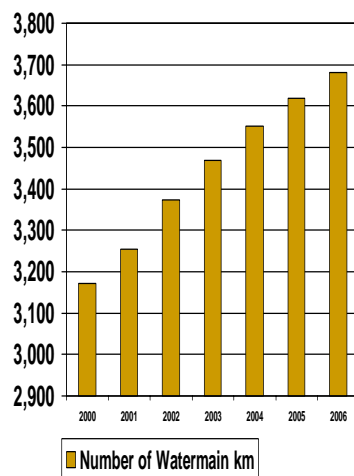
### Accomplishments/Efficiencies

- Completed development and implementation of the water hydraulic models for Peel
  - Implemented the toilet replacement program in three Peel Living facilities as part of Water Smart Peel
  - Purchased substantial ultrafiltration membrane for water treatment
  - Awarded design/build project for the Northeast Brampton feedermain and York Peel (2100mm & 1800mm)
  - Implementation of the pressure zone boundary by-pass
  - Looping of cul-de-sac and dead end watermains to maintain water quality
  - Developed GIS records for water distribution systems linked to the hydraulic models. The development of GIS records has also enabled field access to this electronic information
-

## Water Drivers/Issues

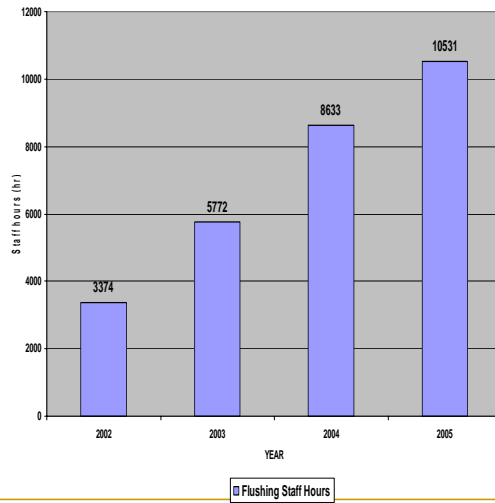
- ❑ Legislation – Safe Drinking Water Act
- ❑ Growth
- ❑ Increase in Hydro and Insurance Cost

## Number of Watermain Km's

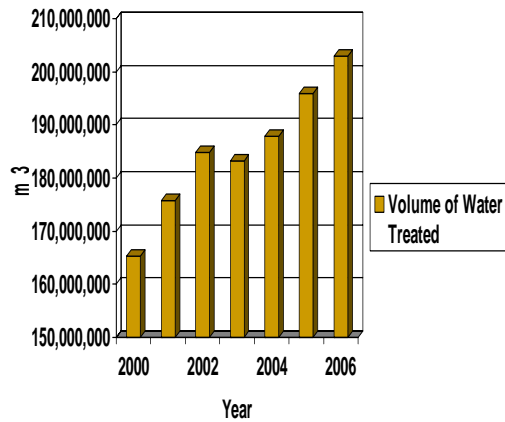


## Watermain Flushing (Staff hours)

Flushing-Staff Hours



## Volume of Water Treated



## Water

### Actions/Implications for Next 2 -3 Years

- Completion of the Lakeview Water Treatment Plant Expansion
- Further implications of the Safe Drinking Water Act regulations
- Continue with Water Efficiency Program- Water Smart Peel
- Continue increases in Hydro Rates
- Succession Planning for Operators

## Water

### Actions/Implications for Next 2 -3 Years

- Ensure that our distribution and treatment system comply with legislation
- Ensure that staff in the water program have the qualifications and expertise required to maintain and operate Peel's water system and infrastructure

## 2005 staffing-Water

- 3.5 additional FTE's
  - 0.5 Clerks
  - 0.5 Crewpersons
  - 1.5 Crewpersons
  - 1 Technical Analyst

- Questions?

---

# Service Level Review

---

Wastewater  
September 30, 2004

---

## Wastewater Overview of Current Services and Levels

The Wastewater Program provides the following services: Planning and development, design and construction, collection, treatment and environmental control through three major delivery functions:

- Capital Works
  - Operation and maintenance of the wastewater infrastructure system
  - Environmental Control
-

---

## Wastewater

### Overview of Current Services and Levels

- The Wastewater Program incorporates the management, operation and maintenance of:
    - 2794 kilometres of sanitary sewer
    - 2 wastewater treatment facilities
    - 35 sewage pumping stations
    - 2 stormwater pumping stations
    - 2 landfill leachate pumping stations
  
  - The estimated 2004 flow of wastewater treated is 187,537,000 m<sup>3</sup> and by 2013 the annual flow of wastewater treated is expected to be 236,896,000 m<sup>3</sup> with a utilized plant capacity of 91%
- 

---

## Wastewater

### Accomplishments/Efficiencies

- Completed Environmental Assessment for the extension of the West Trunk Sewer (Credit Valley)
  
  - \$255 million out of \$ 380 million for the Lakeview and Clarkson WWTP Expansion projects has been committed to date.
  
  - Continued Integrated Fixed-Film Activated Sludge
  
  - Completed development and implementation of wastewater hydraulic models for Peel
  
  - Developed GIS records for water distribution and wastewater collection systems linked to the hydraulic models. The development of GIS records has also enabled field access to this electronic information.
-

---

## Wastewater Accomplishments/Efficiencies

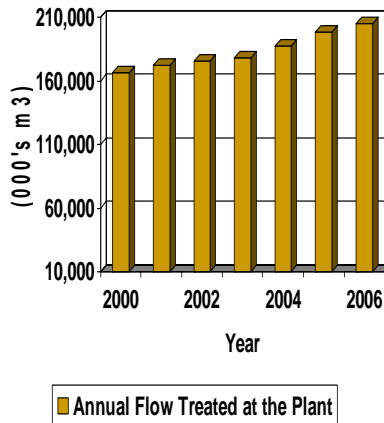
- Established a Public/Private partnership for the design and construction of the Inglewood Sewage Treatment Plant to provide sanitary sewer servicing to residents and proposed development
- 

---

## Wastewater Issues/Drivers

- Legislation
  - Growth
  - Increase in Hydro and Insurance Costs
-

## Annual Flow Treated at the Plant (000's m<sup>3</sup>)



## Wastewater Actions/Implications for Next 2 -3 Years

- Completion of the Clarkson and Lakeview Wastewater Treatment Facilities expansions
- Completion of major trunk sewer expansions
- Regulatory requirements
- Ensure that our collection and treatment system comply with legislation

---

## Staffing-Wastewater

- 3.5 FTEs
    - 0.5 Clerk
    - 0.5 Crewpersons
    - 1.5 Crewpersons
    - 1.0 Laboratory Technical Analyst
- 

---

## Potential Service Adjustments Wastewater

- New Program: Emergency Response for Blocked Laterals
-

---

## Wastewater

- Questions?
- 

---

## Service Level Review

---

ROADS  
September 30, 2004

## Roads

### Overview of Current Services and Levels

The Roads program provides the following services: Planning and development, design and construction, signals and systems, road maintenance through two major delivery functions:

- Capital Works
- Operation and maintenance of the Regional road system

## Roads

### Overview of Current Services and Levels

A portion of this program is delivered by various outside contractors and/or through municipal partnerships.

In 2004 the Roads Program incorporates the management, operation and maintenance of:

- 1,511 single lane kilometers of roads
- 101 bridges and 43 box culverts
- 370 signalized intersections
- 42 flashing beacons

---

## Roads

### Accomplishments/Efficiencies

- Application and use of Anti-icing/de-icing technologies in our winter maintenance activities
  - LED Traffic Signal lamp replacement
  - Negotiated extensions of winter maintenance contracts to minimize the increase in costs
  - Equipment modifications to facilitate summer/winter operation
- 

---

## Roads

### Accomplishments/Efficiencies

- Bottom Ash use in road resurfacing project for the asphalt mix
  - Salt Management award for an advanced environmental storage facility
  - Extension of the Red-Light Camera program with the objective to make our intersections safer
-

---

## Roads

### Accomplishments/Efficiencies

- Completion of Hwy 401/Mississauga Road project, joint with Ministry of Transportation (MTO), and recognition by OPWA as “Project of the Year” Transportation Category over \$10 million
- 

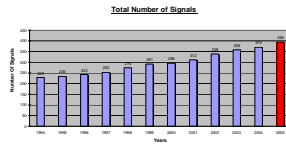
---

## Roads

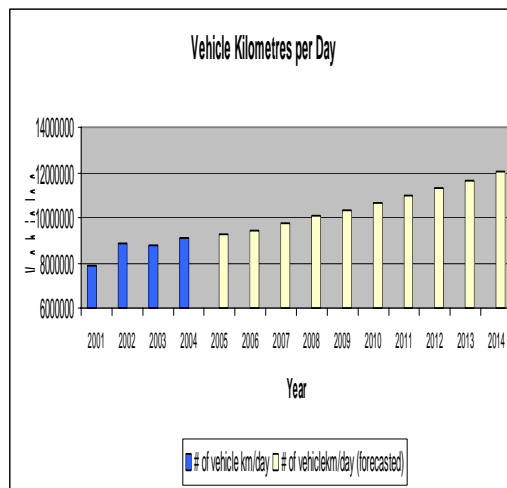
### Drivers/Issues

- Legislation- Salt Requirements & New Technology
  - Growth
  - Contracted Services
  - Increase in Material, Fuel and Insurance Cost
  - Partnerships with area municipalities for road optimization opportunities
  - Environmentally awareness - Salt Reduction
  - Over capacity roadways
  - Traffic Signal Maintenance
  - Winter Maintenance
-

## Traffic Growth -Roads



## Vehicle KM - Roads



---

## Roads

### Actions/Implications for Next 2 -3 Years

- Implementation of Salt Management Plan
  - Full Implementation of Anti- & De- icing technologies
  - Partnerships with other municipalities to optimize road maintenance activities
  - Traffic signal network optimization program
  - Implementation of audible and countdown pedestrian signals
- 

---

## Staffing -Roads

- 2.5 Staff (Operations)
    - 0.5 Clerk for Manager of Roads
    - 2 Crewperson – Ensure that one extra staff is available to go on each rotating winter shift schedules
-

---

## Potential Service Adjustments Roads

- Reduction in road maintenance activities
  - New complement reduction
- 

- 
- QUESTIONS?
-

---

# Service Level Review

---

**Waste Management**  
**September 30, 2004**

---

## Waste Management Overview of Current Services and Levels

**Waste Management provides waste collection and processing services, operates waste management facilities and provides planning for future waste management initiatives and new waste management facilities**

- **The following services are provided through the Waste Collection and Processing section, and delivered through private sector Contracts:**
  - Urban and Rural Curbside Collection of garbage, recyclables, yard waste, white goods and kitchen organics
  - Multi-residential collection of garbage
  - Recyclable material processing and transfer
  - Yard waste transfer and composting
  - Waste transfer, handling and processing
  - Waste incineration



## Waste Management Overview of Current Services and Levels

- The following services are delivered through the Waste Operations section:

- Operation of Caledon Sanitary Landfill
- Remediation of 21 Closed Landfills
- Operation of the Caledon Depot and Transfer Station
- Operation of Caledon Peel Organics Composting Facility
- Planning and Operation of Environmental Programs



- The Waste Program Planning sections provide:

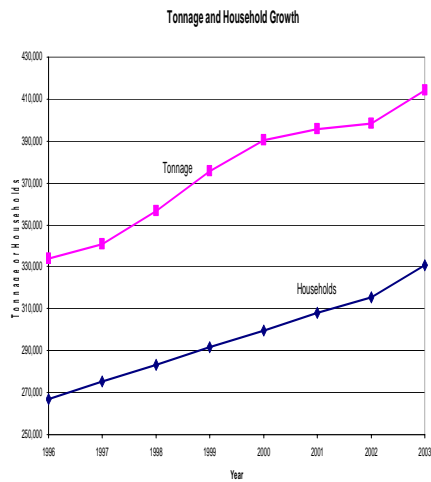
- Program planning services – enhancing existing programs and developing new programs
- Operational planning services – planning for new facilities and new waste management functions



## Waste Management 2003-2004 Accomplishments

- Achieved a 45 percent diversion rate in 2003;
- Regional Council awarded the design and construction of the Peel Integrated Waste Management Facility (including a single stream Material Recovery Facility, organics composting facility and transfer station) to Waste Management of Canada;
- The new Battleford Community Recycling Centre opened in November 2003;
- Regional Council awarded a contract for composting technology to Herhof GmbH and approved expansion of food waste collection to all single family households in Peel;
- Region of Peel entered into Memorandum of Understanding with the Regions of York and Durham and the City of Toronto with respect to a cooperative approach to long term waste planning;
- Regional Council awarded a contract to Sandhill Waste Collection and Recycling for rural collection services from 2005 to 2012.

## Waste Management Household and Tonnage Growth



## Waste Management Issues

- Shortage of landfill capacity in Ontario, and export of waste to other provinces
- Proposed Provincial goal of 50% waste diversion by 2008.
- Future collection system contracts
- Extension of collection and processing contracts
- Community Recycling Centres Level of Service



## Waste Management Actions for Next 2 -3 Years

- Implement Region-wide kitchen collection by 2006 to increase diversion of waste
- Build Peel IWMF to provide 130,000 tpy of recycling process capacity, 60,000 tpy of organics composting capacity and 60,000 tpy waste transfer capacity
- Build 3 additional Community Recycling Centres and convert the Caledon Depot into a Community Recycling Centre to increase diversion of waste
- Secure Ontario based waste disposal capacity
- Finalize review of the proposed Algonquin Power Facility Expansion
- Develop value added markets for fly ash from Algonquin Power Facility



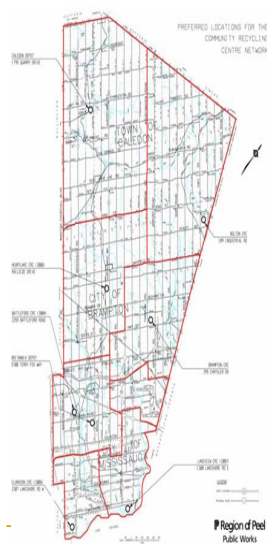
## Waste Management 2005 Staffing Requirements

Staff	Description
1	Collection & Processing Technical Support Assistant
10	Peel Integrated Waste Management Facility
17.5	Clarkson CRC
3	Waste Operations Support – due to opening of new facilities

## Waste Management 2006 Additional Staffing Requirements

Staff	Description
13	Peel Integrated Waste Management Facility
18.5	Heartlake CRC
3	Waste Operations Support – Due to opening of new facilities

## Waste Management CRCs Service Level Review



- ❑ **Three New Community Recycling Centres (CRCs) are planned – Clarkson, Heartlake and Lakeview**
- ❑ **The Caledon Depot is to be closed due to the need of the space for the final contours, and a Caledon CRC is planned in its place**

## Waste Management CRCs Service Level Review

### CRCs - Staffing Impacts

	7 Day Operation	5 Day Operation
Sub-Foreperson	2	1
HHW Operators (FT)	4	2
Weighscale Operators (FT)	3	2
Weighscale Operator (PT)	0.5	
CRC Haulage Operators	2	2
Labourer (FT)	6	3
	17.5	10

## Waste Management CRCs Operating Impact

- Community Recycling Centres Proposed Implementation Schedule:
  - Clarkson CRC – Fall 2005
  - Heartlake CRC – Spring 2006
  - Lakeview CRC – Spring 2007
- Each CRC will have an annualized impact of \$1,700,000 if operated 7 days per week
- Impact is reduced to \$1,300,000 with 5 day per week operation

---

## Waste Management Current Program

### CRCs Service Level Review

#### Possible Saving Options

- Raising minimum fees at CRCs to \$5 would result in an estimated additional revenue of \$100,000
  - Delaying opening of Clarkson CRC to January 2006 would save \$150,000 in 2005
- 

---

## Waste Management Current Program

### Service Level Review

#### Possible Savings Options

- Banning grass from curbside collection could save up to \$1,000,000
    - An education campaign is required for grass ban programs to be effective
-

---

# Service Level Review Public Works Services

---

September 30, 2004

---

## Public Works Services Includes:

- **Office of the Commissioner.**
- **Business & Information Services (Business Unit, Information Services, Resource Centre, Education & Outreach Centre, Managed Competition).**
- **PW Internal Support (Fleet, Facilities, Inventory, Asset Infrastructure Management, Inventory, Sign Production).**
- **Engineering and Construction (Engineering & Infrastructure Planning, Capital Works, Engineering Technical Services).**

**All costs and revenues are distributed to either the Current or Capital programs for Roads, Water, Wastewater, Waste Management**

---

## Public Works Services Accomplishments

- Hosted a Road Occupancy Permit Open House for Contractors and Utilities companies in partnership with MTO, City of Mississauga, City of Brampton & Enbridge gas
- Purchased hybrid vehicles as part of air quality/anti-smog initiatives for Peel
- Hosted a Road Occupancy Permit Open House for Contractors and Utilities companies in partnership with MTO, City of Mississauga, City of Brampton & Enbridge Gas
- Purchased hybrid vehicles as part of air quality/anti-smog initiatives for Peel
- Created a new Division to provide improved support services to the department
- Enhanced Education and Outreach for PW programs



## 2005 Preliminary Current Budget – Drivers/Issues

- **Capital Program Administration/Support.**
- **Fleet Services (incl. Ambulance Maint., Growth, Reserve Contributions).**
- **Enhanced Financial Controls.**

## Preliminary Budget Drivers - Staffing Increases

### **16 FTE's**

- 10 Capital & Financial Controls
  - 3 Fleet Services & Operations Area
  - 3 Other (Property, New Division, Commissioner)
  
  - 6 Staff are Contract/Temp
  - 5 Staff are Regular f/t
- 

# Questions

---