



# 2013 WATER WASTEWATER STORM RATE BUDGET

December 7, 2012



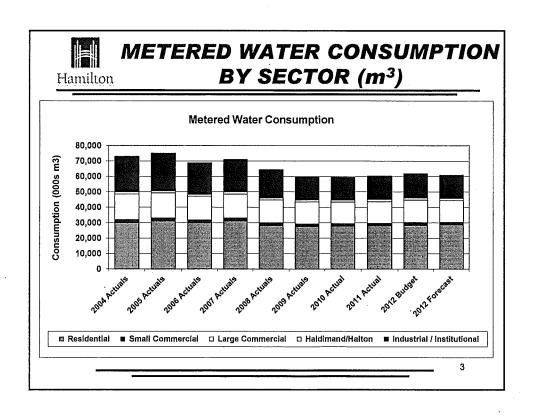
# **OVERVIEW**

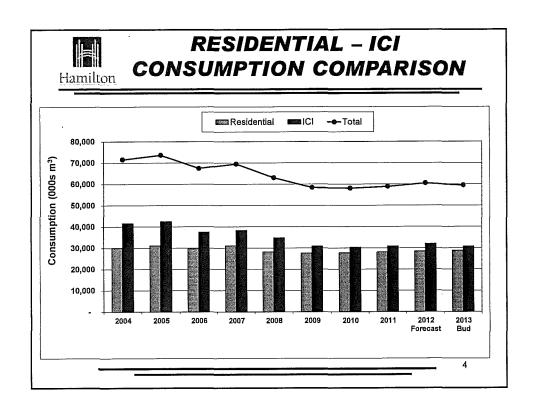
- Consumption & Rate Trends
- Planning Issues
- Program Delivery
- Operating Forecast
- Capital Forecast

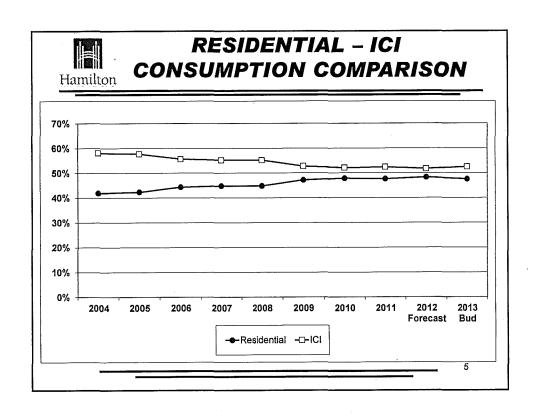


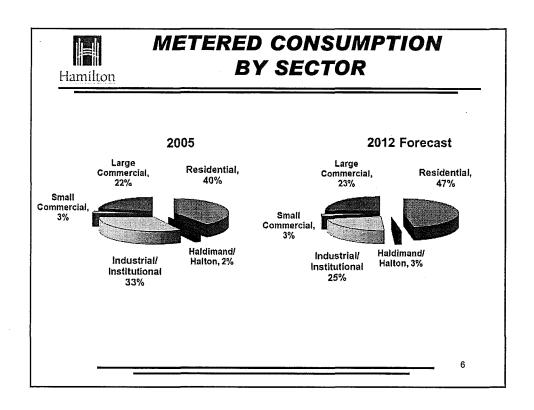
# 4 YR ACTUAL VS. BUDGET REVENUE VARIANCE

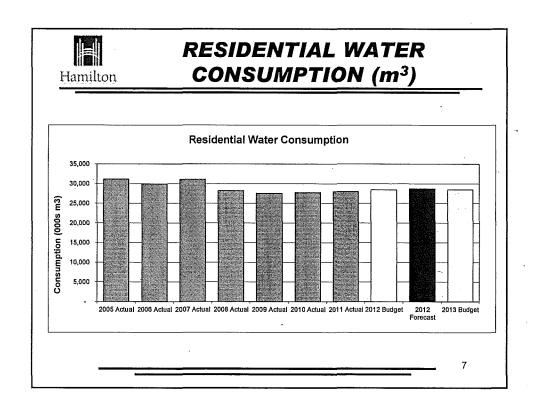
REVENUES (000's)	20	2009		2010		2011		2012 Forecast	
	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	
Residential	69,880	63,303	74,419	66,367	68,663	69,616	72,418	73,682	
ICI	81,105	68,593	80,984	70,323	80,355	74,660	81,569	76,807	
Haldimand/Halton	2,183	2,106	2,341	2,325	2,447	2,483	2,565	2,600	
Non-metered	282	566	293	573	570	582	594	570	
RATE REVENUES	153,450	134.569	158.036	139.587	152,036	147,340	157.145	153,659	
Surplus/(Deficit)		(18.881)		(18.450)		(4,696)		(3,486	

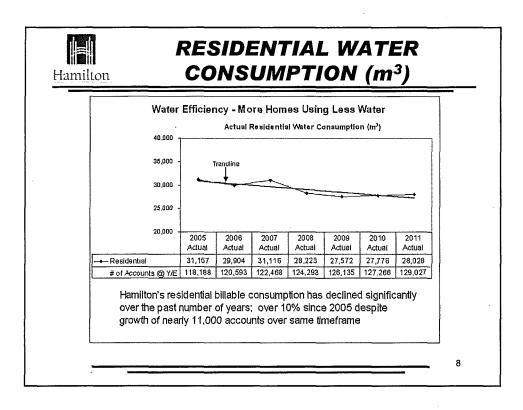


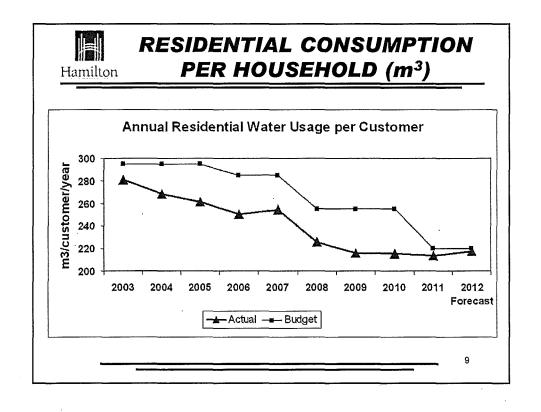










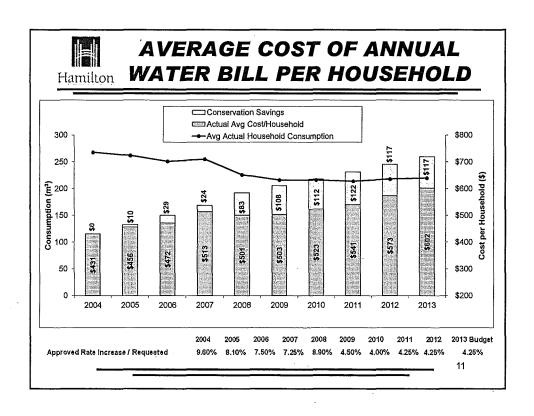




# RESIDENTIAL WATER CONSUMPTION



- This year, Hamilton's residential actual average usage is forecast to be 218m<sup>3</sup> of water
- For 2013, average residential water/wastewater annual billing of \$602 based on budgeted average usage of 220m3 of water





# RATE INCREASE MITIGATION

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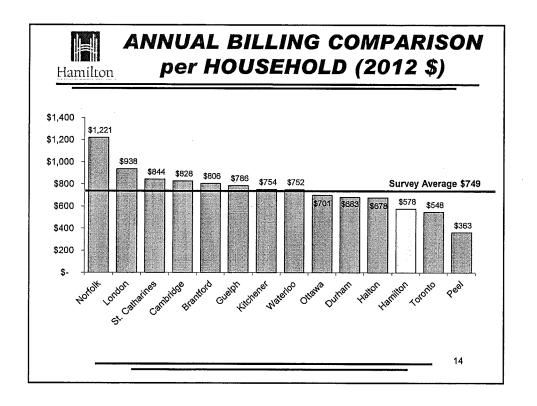
	RATE \$/ m³	Avg. Actual Res Billing	Avg Act Res Usage m³/yr
2007	\$ 0.913	\$513	255
2012	\$ 1.174	\$573	218 forecast
Change 🛆 💮	<b>1</b> 29%	12%	<b>17</b> %



# Hamilton

# IMPACT ON A TYPICAL RESIDENTIAL WATER BILL

IMPACT OF RECOMMENDED 2013 WATER AND WASTEWATER RATE INCREASE ON'A TYPICAL RESIDENTIAL BILL				
(based on annual water consumption of 220n	n³)			
2012 Residential Bill	\$578			
2013 Residential Bill	\$602			
Recommended Change (\$) Recommended Change (%)	\$24 <b>4.25</b> %			



Hamilton

# MUNICIPAL WATER\* RATE INCREASE TREND

MUNICIPALITY								2007-13
	2007	2008	2009	2010	2011	2012	2013	Avg
Guelph	7.1%	8.9%	6.6%	5.6%	6.2%	6.8%	8.0%	7.0%
Halton	4.0%	5.9%	6.7%	0.0%	6.0%	3.5%	4.9%	4.4%
London	N/A**	8.0%	8.0%	8.0%	0.0%	8.0%	7.0%	6.5%
Norfolk	7.1%	8.9%	6.6%	4.9%	6.2%	6.8%	7.2%	6.8%
Ottawa	9.0%	9.0%	9.0%	9.0%	3.9%	6.0%	TBD	7.7%
Toronto	10.8%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0% (P)	9.3%
Hamilton	7.3%	8.9%	4.5%	4.0%	4.25%	4.25%	4.25% (P)	5.3%
Average	7.5%	8.4%	7.2%	5.8%	5.1%	6.3%	6.7%	6.7%

<sup>\*</sup> Most municipalities have separate water and wastewater rate increases; generally wastewater rates are higher than water rates

(P) = proposed



# **2013 RATE INCREASE COMPARISIONS**

	2013 Combined Rate				
Municipality	Increase % *	Avg	Res \$		
Cambridge	9.50%	\$	· 84		
Toronto	9.00%	\$	67		
Guelph	8.00%	\$	58		
London	7.40%	\$	58		
Norfolk	7.20%	\$	93		
Halton	4.80%	\$	37		
Hamilton	4.25%	\$	24		
* Blended water & wastewater increase					

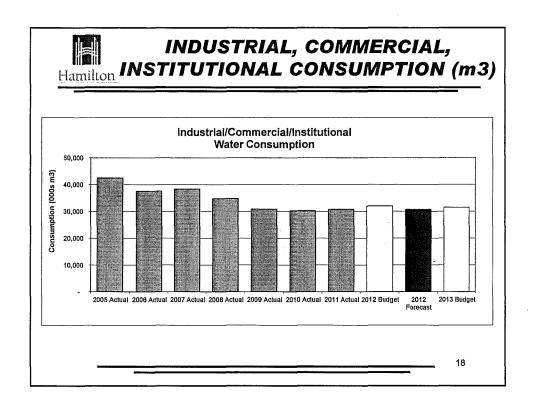


#### Hamilton

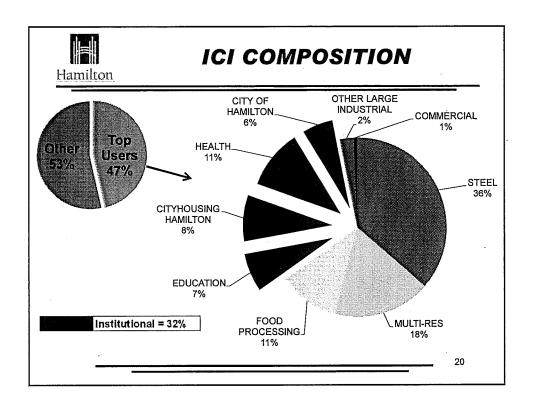
# **AFFORDABILITY**

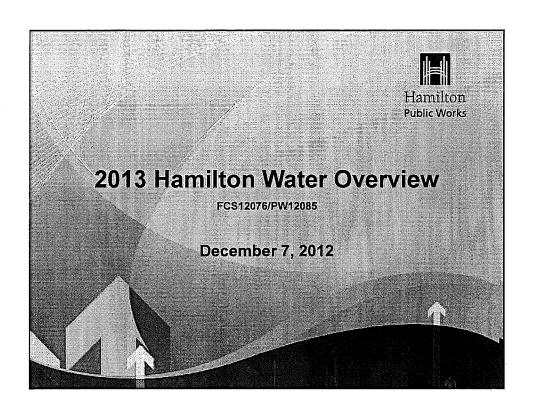
			2011
		2011	Water/WW as
	2011 Avg.	Residential	a % of
	Household	Water/WW	Household
Municipality	Income (\$)	Costs (\$) *	Income
Mississauga	100,306	355	0.35%
Toronto	89,151	571	0.64%
Burlington	108,632	709	0.65%
Ottawa	94,649	748	0.79%
Waterloo	100,236	802	0.80%
Hamilton	77,221	622	0.81%
Guelph	84,666	794	0.94%
Cambridge	85,014	845	0.99%
London	76,546	771	1.01%
Kitchener	79,920	825	1.03%
Brantford	70,911	892	1.26%
St Catherines	68,364	879	1.29%
Sudbury	74,691	972	1.30%
Windsor	68,121	1,102	1.62%
BMA Study Average	87,280	825	0.95%

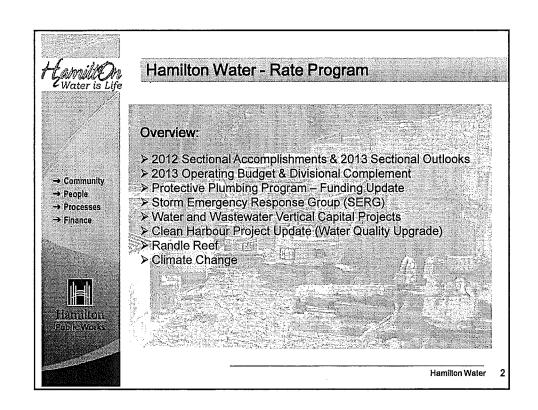
Source: BMA Management Consulting Inc. - Municipal Study 2011 \* Based on 250m3 p.a.



		Small	N/	ld-Size	Lara	e Com/Ind	
Municipality	1	nmerdal		om/Ind		2.727m3	D – Declining Block structur
, manapolity		325m3		272m3		2.7.2.1.1.0	for largest users
Brantford	\$	1,134	3	7.239	\$	71,058	•
Cambridge	\$	1,158	\$	7,484	\$	71,790	
Durham	\$	903	\$	5,633	\$	42,881	D
Guelph	\$	1,071	\$	6,347	\$	61,780	
Halton	\$	876	\$	5,475	\$	44,027	D
Kitchener	\$	1,113	\$	7,782	\$	77,842	
London	\$	1,093	\$	5,170	\$	44,752	D
Norfolk	\$	1,597	\$	7,053	\$	58,270	
Ottawa	\$	1,020	\$	6,994	\$	69,136	
Peel	\$	536	\$	3,749	\$	37,497	
St. Catharines	\$	1,138	\$	6,590	\$	63,864	
Toronto	\$	809	\$	5,657	\$	56,583	
Waterloo	\$	1,095	\$	7,495	\$	74,383	
						1111	
Average_	(\$	1,026	\$	6,352	\$	59,134	
	-		· .	- 4	1 4	7	•
Hamilton	\$	825	\$	6,263	\$	54,009	
Comparison to Avg *	\$	(201)	\$	(89)	\$	(5,125)	
% Comparison Avg *		(20%)		(1%)		(9%)	









#### Compliance & Regulations Section

#### 2012 Key Accomplishments

- > Standard of Care training for Council and Management (SDWA)
- > Acquired Divisional training software full roll out in 2013
- Established Sewer Use Bylaw compliance deadlines for three of Hamilton's largest industrial water users
- Maintained Laboratory accreditation and MOE licensing for drinking water testing.

#### 2013 Outlook

- Amended Sewer Use By-law (Report to Council Q2 2013)
- > Review of the Wastewater Abatement Program
- > Maintain Operating authority accreditation for all drinking water systems
- > Purchase of new equipment to allow for in-house testing of PCBs and simultaneous testing of PAHs.

**Hamilton Water** 

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#### **Sectional Updates**

#### Customer Service & Community Outreach Section

#### 2012 Key Accomplishments

- Protective Plumbing Program
  - Provided \$5.1M in grants representing over 2,550 BWVs in 2012
- > Drinking Water Backflow Prevention
  - 80% of surveys and 25% device compliance
- > Hansen 8 Migration
  - Phase 1 of 3 of Implementation (Customer Service, Permits & Licensing, and Assets & Work Orders).
- Outreach Events
  - 5th Annual Children's Water Festival and 8th annual World Water Day Walkathon (to date these events have reached over 13,500 students and raised over \$147,000 to install 30 wells in Haiti)
  - · Annual Rain Barrel Sale

#### 2013 Outlook

> Implementation of new water meter contract



#### Infrastructure & Source Water Planning Section

#### 2012 Key Accomplishments

- Completed PICs and Community meetings (Rothsay/Gage Park SWM; Cherry Beach Erosion; West Harbour Shoreline; Parkside/Kipling Storm Water Solutions)
- Updated computer models for the Water Distribution System (WaterCAD), and Wastewater Collection System (Mike Urban).
- Real Time Control (Conceptual Design Completed and Land Acquisition at 3 sites to enhance the existing RTC).
- > Co-chair the corporate Class EA Working Group
- Develop Policy for the City Official Plan related to Source Protection Planning.

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#### Sectional Updates

#### Infrastructure & Source Water Planning Section

#### 2013 Outlook

- Completion of Source Protection Plans; Policy Implementation; Accreditation for Risk Management Official
- Class EA (B-Line; SCUBE Subwatershed; East Mountain Water Servicing Conceptual Design).
- Storm Water Service Analysis and Solutions (Flooding/Drainage Response Procedure, Robb Ave Slope Stability; Rothsay/Gage Park SWM, Whitfield Ave Flooding, Rosedale, Jasper/Bland 2013 construction, various erosion sites).
- Class EA for Carlisle Elevated Reservoir and Well; Waterfront Breakwater/Shoreline, Cherry Beach Shoreline Erosion, and Ancaster Water Operations/Storage
- Pollution Control Plan Update; Consolidated Environmental Compliance Approval for the City's entire Wastewater Collection Network (CSP-1.2 – Prioritize Capital Infrastructure Projects)
- > Completion of groundwater studies for new Lynden well and Pump Station

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#### **Plant Operations Section**

#### 2012 Key Accomplishments

- > 2012 Drinking Water Production is 77,436 ML (7.3% reduction from 2011)
- Integration of capital replacement of 3 Large Water Stations (Kenilworth, Stone Church/Garth, Ferguson), as well as the High Lift Pumping Station.
- WWTP Influent Volume is 103,240 ML (2012 forecast 68.9% of capacity)
- > Lowest number of Bypass occurrences/hours at WWTP in 17 years.
- Installation of new Primary Sludge Thickener process and Gas Purification Facility for the production of Natural gas at the Woodward WWTP
- > Completed first phase of the WWW Facility Security Planning project



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## Sectional Updates

#### **Plant Operations Section**

#### 2013 Outlook

- > Carbon Regeneration for the module #2 filters to occur at the Woodward WTP.
- > Implementation of secondary chemical addition for enhanced TP removal at the Woodward WWTP.
- Refurbishment of the effluent tertiary filters and implementation of an optimization program at the Dundas WWTP.
- Implementation of the SCADA master plan project- Phase 2 and 3, Critical/Legacy outstations –over 60 facilities will be converted to new PLC controller standard.
- Completion of the WWW Facility Security Planning project, and implementation of recommendations.





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#### Biosolids - Processing

2012 Summary

- Year end forecast 37,028 Wet Tonnes (WT)
- Gas production forecast 5.2 Million m<sub>3</sub>

#### Biosolids - Land Application Program

- 2012 Summary
- Completing year 2 of optional 5 year contract
- Zero non-compliance incidents to-date
- 2012 forecast 44,123 WT spread on 3100 acres mainly across Haldimand/Norfolk, Brant County, Oxford County, and Hamilton
- Entering winter there is very little material in storage



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#### Sectional Updates

#### Sustainable Initiatives Section

#### 2012 Key Accomplishments

- Woodward WWTP optimization initiative
- Continued facility assessments and development of 10 year capital plan
- Revealed the emergency repair required at Ben Nevis Reservoir HDR1C
- Managed collaborations with academia and technology developers
- Corporate technical lead for Randle Reef
- Corporate lead for HHRAP

#### 2013 Outlook

- Corporate leadership on Randle Reef Project
- Continued development of Facility Asset Management system.
- Ongoing Facility Condition Assessments.
- Close out CSIF Infrastructure Program with final claims to \$75M.
- Complete the Green Infrastructure Fund Contribution Agreement for \$200M support for the Clean Harbour Project.

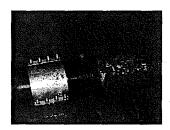


#### Water Distribution & Wastewater Collection Section

#### 2012 Key Accomplishments

- Primary focus areas continue to be sewer lateral management program, lead water service replacement, water main break repair (262 - 2012)
- Continued water loss audit and repair of 30 water main leaks reducing water loss by an estimated 8.7 ML/d
- Cross connections pilot identification of areas, investigations and repairs
- Continued odour control investigation in area of west mountain drop shaft affecting west end using the application of advanced 3-d hydrodynamic





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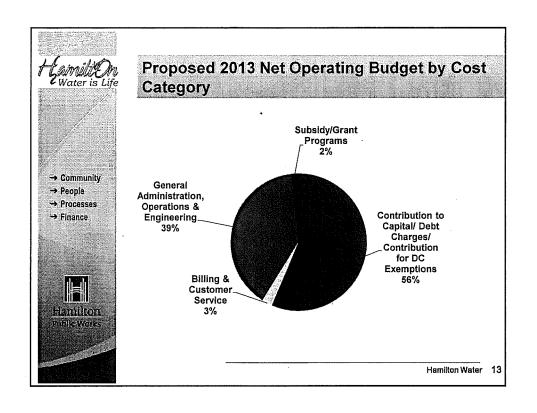
#### **Sectional Updates**

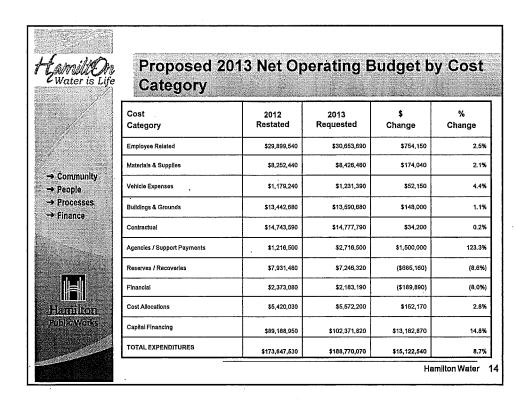
#### Water Distribution & Wastewater Collection Section

#### 2013 Outlook

- Sewer cross connections pilot project will continue to be a major focus to inform the development of a comprehensive program
- The new Ontario Underground Infrastructure Notification System Act, 2012 requires a change to the scope of services the City currently provides to contractors seeking sewer infrastructure locate data. Staff will be strategizing on what the scope of these new services are and on how they will get delivered.
- Initiation of a new water loss audit in pressure district 18 (Ancaster) beginning in 2013.









# Proposed Net 2013 Operating Budget by Cost Category (continued...)

Cost Category	2012 Restated	2013 Requested	\$ Change	% Change
Rate Revenue	(\$162,961,220)	(\$170,057,220)	(\$7,096,000)	3.5%
Non-Rate Revenue	(\$2,110,740)	(\$2,354,560)	(\$243,820)	6.8%
Reserves	(\$8,575,570)	(\$16,358,290)	(\$7,782,720)	120.9%
TOTAL REVENUES	(\$173,647,530)	(\$188,770,070)	(\$15,122,540)	8.7%
NET EXPENDITURES	_		-	

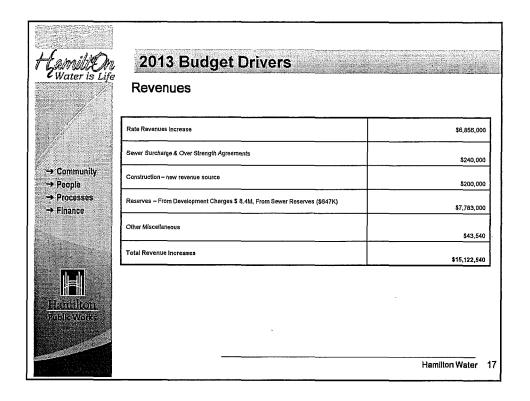
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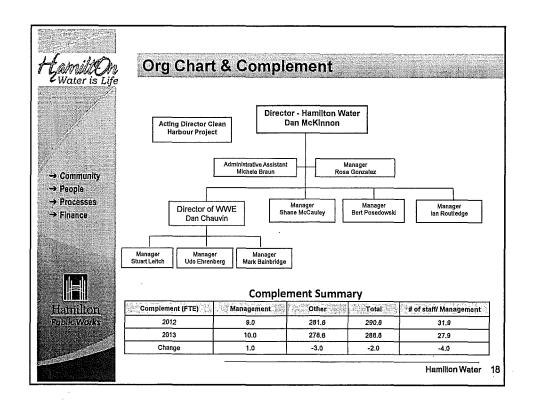


# 2013 Budget Drivers

#### **Expenditures**

Salaries and Wages	\$430,000.00
Benefits ( OMERS \$ 262K; Other \$ 56K )	\$319,000.00
Fluids and Chemicals	\$115,000,00
Hydro	\$81,000.00
Natural Gas	\$59,000.00
Horizon Utilities Service Contract	\$200,000.00
Insurance Recovery (direct)	\$85,000.00
Rent - Office & Buildings	\$143,000.00
Transfer to/from Reserves (\$3.4M), To Waterworks Reserve \$2.6M	(\$685,000)
Financial - Contingency (\$123K), Current Property Taxes (\$80K)	(\$190,000)
Cost Allocations and Other Miscellaneous	\$168,540.00
Protective Plumbing Program	\$1,500,000.00
Capital Financing -External Debt Charges \$ 17.3M, Transfer to Capital from Current (\$4.1M)	\$13,183,000.00
Total Expenditure increases	\$15,122,540.00







#### Storm Emergency Response Group (SERG)

#### Key 2012 Project s - Ongoing Investigation, Assessments & Recommendations

- Jasper & Bland Street; Whitfield Avenue; Charlton Avenue; Parkside/Kipling; Centennial Underpass; Gage Park Pond & Rothsay; Greenhill Flooding Class EA; Alleyway Drainage Improvement (South St to Hillcrest); Cumberland Ave. Drainage
- Low Impact Development evolution of technology and design standards to augment traditional storm water management Alleyway Drainage Improvement (South St to Hillcrest)
- Coordination with the Insurance Bureau of Canada
- July 22 Severe Storm in Binbrook, Upper Stoney Creek, & Southeast Hamilton Mountain
- 2012 SERG Capital Projects Delivered by PW Engineering Services

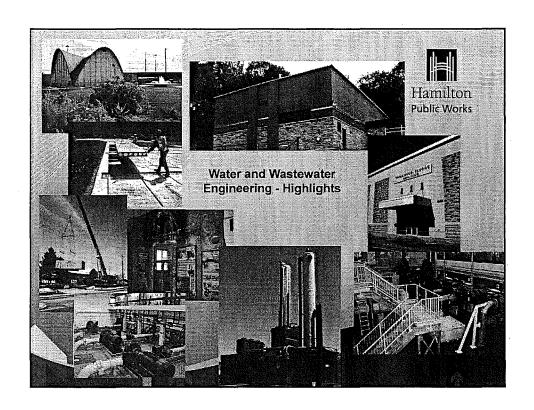
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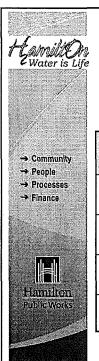


## Storm Emergency Response Group (SERG)

#### Key 2013 Project s - Initiation for Investigation, Assessments & Recommendations

- Winona Localised Flooding; Mount Albion Pond Rehabilitation; Aubrey Avenue Drainage; Mathers Drive Erosion; Stone Church at Dartnal Overland Drainage Improvement (Carpenters Union Hall)
- Low Impact Development Feasibility of LID in the Parkside/Kipling Neighbourhood
- Coordination with the Insurance Bureau of Canada
- 2013 SERG Capital Projects Delivered by PW Engineering Services





# 2012 WWW Engineering

#### 2012 Key Accomplishments

 34 Complex, Multidiscipline Capital Projects at Various Phases throughout 2012:

Phase	# of Projects	Value
RFP Preparation In Process	11	\$ 9.0M Design (estimate) \$ 74.4M Construction (estimate)
Design In Process	10	\$ 3.5M Design \$ 21.1M Construction (estimate)
Construction In Process	4	\$ 66.7M Capital
Commissioned Facilities	9	\$107.4M Capital



## 2012 WWW Engineering

#### 2012 Key Accomplishments

#### Projects In Design

- Waterdown, Dundas and Ancaster water & wastewater outstation upgrades
- New Highland Gardens Park Pumping Station
- Corrosion Control for WTP

#### **Project In Construction**

- Woodward WWTP Primary Clarifier Upgrade
- Carlisle Tower Refurbishment and Well House Replacement
- Wastewater Outstation Odour Control (Biofilters)

#### **Projects Reaching Substantial Completion**

- Dewitt/Ben Nevis Reservoir Upgrade
- New Ferguson Avenue Pumping Station
- Stone Church and Garth Pumping Station Upgrades
- Biogas Enhancement and Digester Upgrade
- Windermere Basin Wetland Implementation
- Green Road (HC056) Pumping Station
- Collection System Combined Sewer Overflow and Real Time Control

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# 2013 WWW Engineering

#### 2013 Outlook

31 Complex, Multidiscipline Capital Projects at Various Phases throughout 2013:

Phase	# of Projects	Value
RFP Preparation In Process	7	\$ 7.3M Design (estimate) \$57.2M Construction (estimate)
Design In Process	10	\$ 5.6M Design \$42.0M Construction (estimate)
Construction In Process	9	\$24.5M Capital
Commissioned Facilities	5	\$66.7M Capital

Note: Does not include \$330 Million Clean Harbour - Woodward WWTP Upgrades or Biosolids PPP Canada Project



#### 2013 WWW Engineering

#### 2013 Outlook

#### Projects In Design

- Clean Harbour Wooward WWTP Upgrades
- Ancaster, Stoney Creek and Dundas wastewater outstation upgrades
- Hillcrest Reservoir Contract 3 Upgrades
- Decommissioning Waterdown WWTP
- **Dundas WWTP Assessment Study**

#### Project In Construction

- Highland Road Pumping Station and Reservoir Upgrades
- New Highland Gardens Pumping Station

#### **Projects Reaching Substantial Completion**

- Kelly Street Stand Pipe Improvements
- Woodward WWTP Primary Clarifier Upgrades
- Carlisle Tower Refurbishment and Well House Replacement
- Wastewater Outstation Odour Control (Biofilters)

#### Capital works commissioned over last 5 years \$682 Million

(WWE - \$338 Million / Engineering Services \$344 Million)

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# Woodward Ave. WWTP - Clean Harbour Project Update

- 2011 Rate Budget: Progress on the Woodward Upgrade and Expansion was suspended due to significant decline in revenue and diminishing need for expansion, project was delayed jeopardizing Green Infrastructure Fund (GIF - \$100M)
- November 2011: City staff consult with Federal government and agree on a revised phasing plan which focuses GIF funding on a Water Quality concept while delaying the Expansion components
- August 16, 2012: Council approved Woodward WWTP Clean Harbour Project and its funding application to be submitted formally to Federal Government to secure \$100M GIF commitment
- Current Status: Federal staff in possession of information from City required to finalize "Approval-in-Principle" which will allow for completion of the actual funding agreement and initiation of the project in the new year



#### Randle Reef Update

#### 2012 Accomplishments

- > Detailed Design, Peer Review and Value Engineering all complete for the project providing the basis for Implementation.
- City of Hamilton increased its Randle Reef Investment from \$8M to \$14M encouraging local partners to close the local funding gap.
- Local partners finalized \$46.3 M in funding to cover 1/3 of project costs.
- Province of Ontario confirmed a 1/3 contribution of \$46.3M
- Federal Government expected to announce increased support



Randle Reef P	roject Funders
Environment Canada	\$46.3M
Ministry of Environment	\$46.3M
City of Hamilton	\$14M
City of Burlington	\$4.3M
Hamilton Port Authority	\$14M*
US Steel Canada	\$14M
Total Project Cost	\$138.9 M

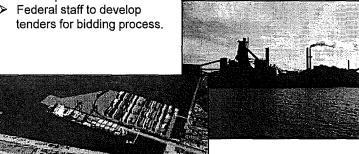
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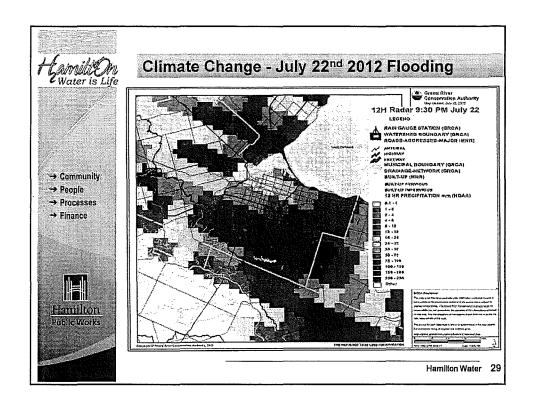


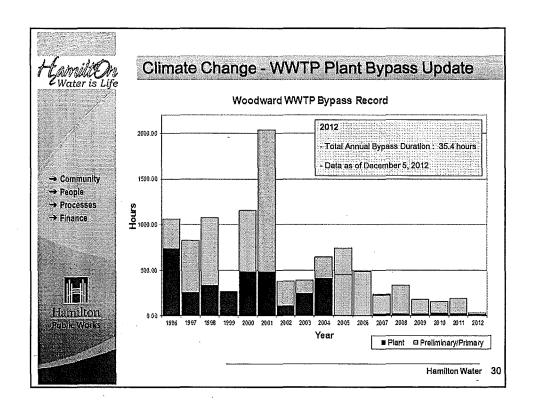
## Randle Reef Update

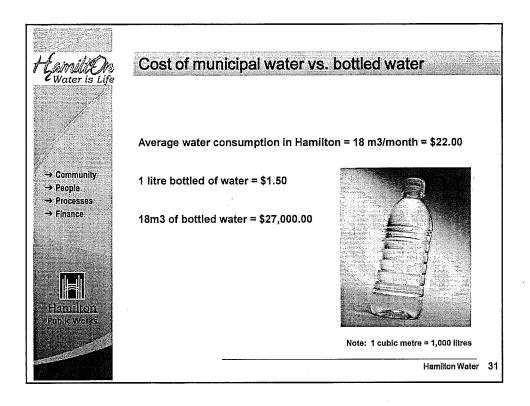
#### 2013 Outlook

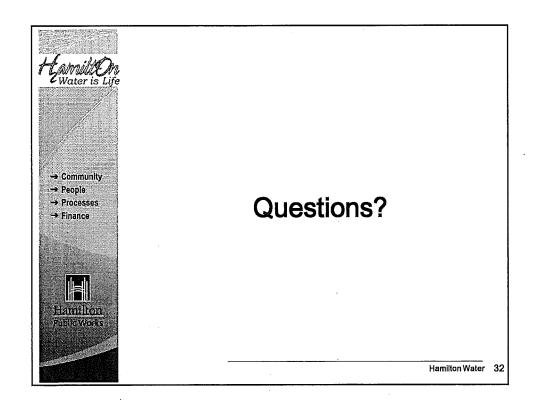
- > Environment Canada to formally confirm their \$46.3M funding.
- Complete an in water sheet pile driving test to develop data for the Tendering process.
- Complete legal agreements necessary for funding partnerships.
- Complete the EA process with final reporting after a 30 day public review process.







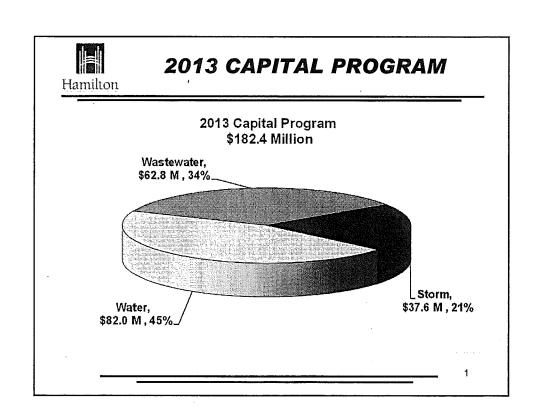


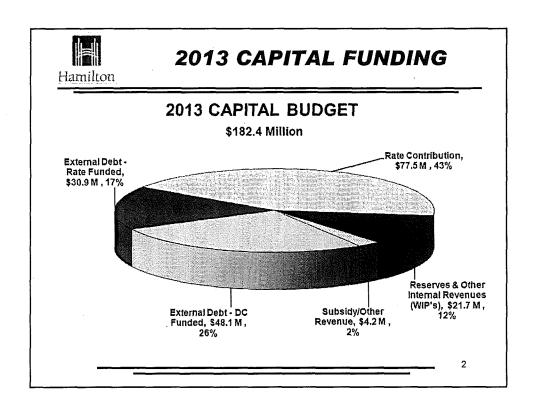


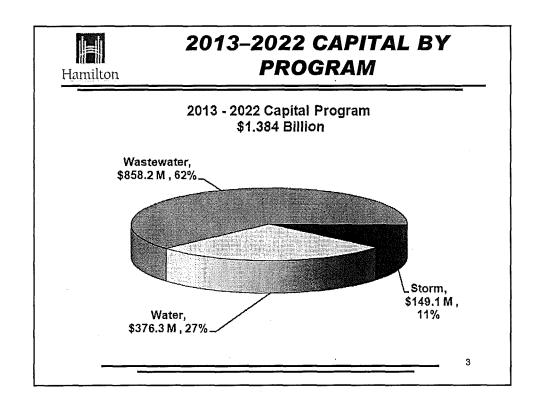


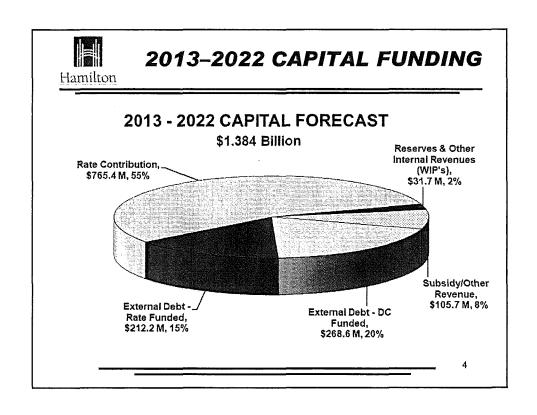
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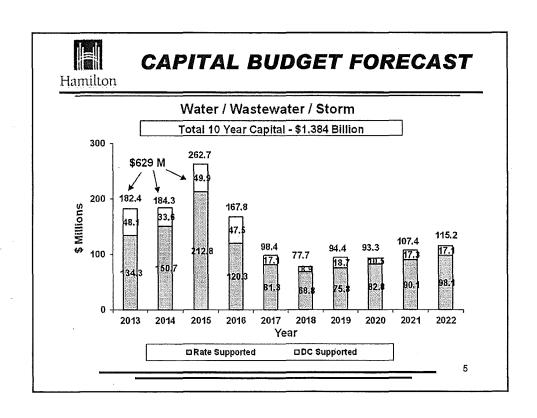
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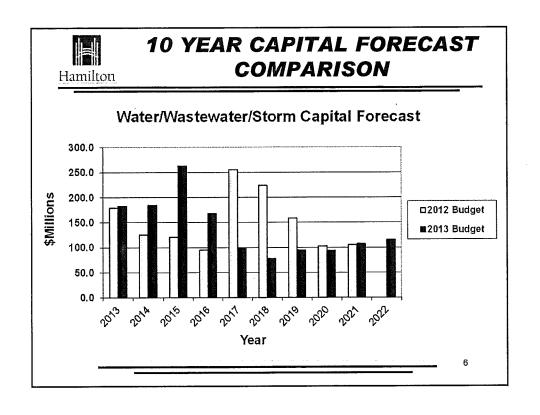


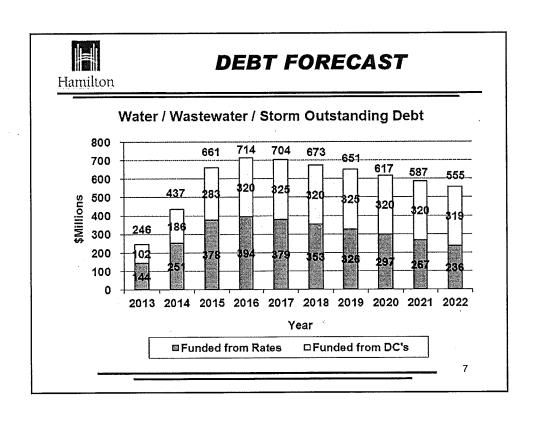


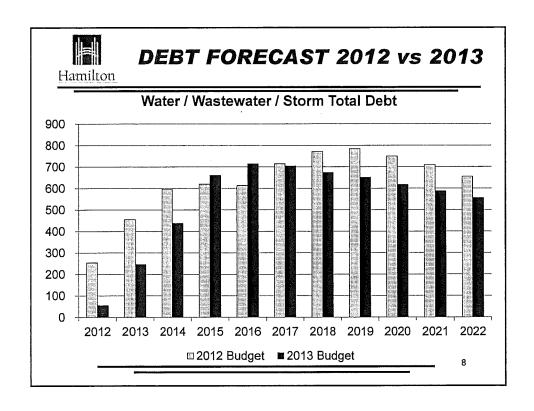


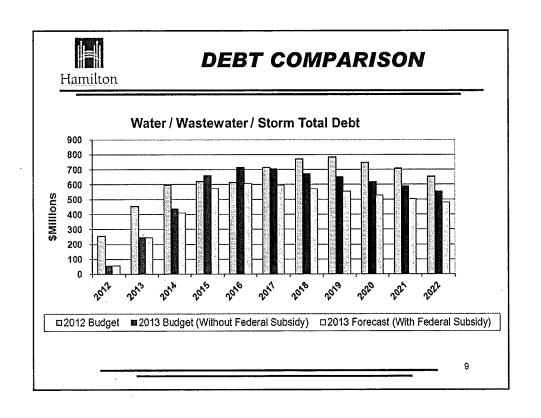


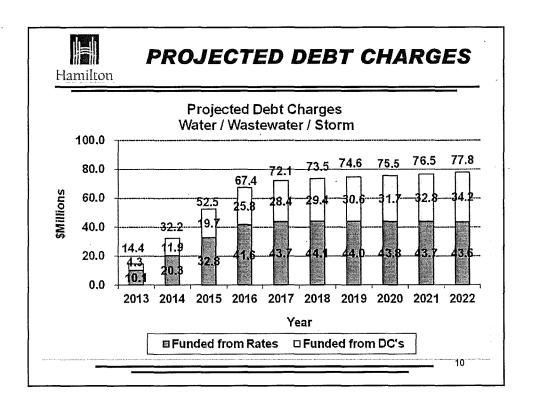


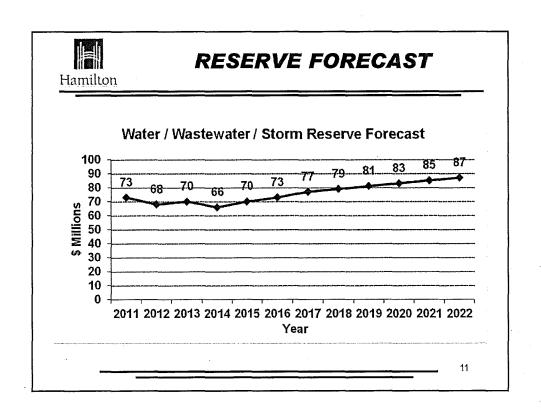














## FINANCIAL COMPARITORS

**Debt Interest Cover Ratio** (Based on 2011 FIR's)

	Water / Wastewater				
	Interest	Own Source	Ratio		
	Expense	Revenues	Interest/Revenues		
Kitchener	-	68,631,721	0.00%		
Cambridge	-	43, 144, 678	0.00%		
Torento		820,694,296	0.00%		
Hamilton	154,286	155,760,608	0.10%		
Waterico	58,360	35,428,402	0.16%		
Waterloo Region	604,052	87,691,165	0.69%		
London	2,491,630	119,598,772	2.08%		
Brantford	994,818	36,003,792	2.76%		
St. Catherines	488,621	17,645,286	2.77%		
Windsor	2,826,009	101,476,581	2.78%		
Niagara Region	4,213,696	109,886,167	3,83%		
Halton Region	6,593,312	148,425,136	4.44%		
Ottawa	12,585,857	257,657,604	4.88%		
Peel Region	25,064,000	271,589,702	9.23%		
York Region	56, 206, 481	176,529,987	31.84%		



# PRIOR FORECAST RISKS

Hamilton

- 1. Declining consumption
   (prudent to reduce budgeted ICI consumption 2011- 2013 to 2010 actuals)
- Pace of Development
  phased WWTP approach, development based on actuals versus Places to Grow
- 3. Future DCs and level of debt to be recovered from growth
  - \$325M in 2017 vs. \$525 in 2019
- 4. Reserve capacity
  - \$87M in 2022 vs. \$57m 2021



# **CURRENT FORECAST RISKS**

Hamilton

- 1. Declining consumption

   Conservative assumptions
- 2. Pace of Development
  - Not kept pace with 75% of Places to Grow forecast, growth planning on forecast 660,000 by 2031
- 3. Sustainability of grant/subsidy programs
  - Federal funding for WWTP upgrade
  - Grants required beyond 10-year forecast to support WWTP expansion
- 4. Stormwater Management
  - Funding sustainability

Hamilton	Q&A			

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