



## Commercial and Institutional Water Efficiency Assessment Report

### Water Customer Information

Customer Legal Name	
Customer Operating Name	
Location of Facility	
Water Account #	
Primary contact Name	
Primary contact Title	
Primary contact Phone	
Primary contact E-mail	
Approximate Marginal cost of water and sewer (\$/m3)	\$2.10 per m3
Total Annual Water Usage (m3)	55,000 approximate
Annual Water Bill Cost (\$)	\$115,500 approximate
Size of Facility sq. ft.	xxx
Primary Customer Activity	xxx Suite Full Service Hotel, Restaurant and Meeting Center
NAICS Sector or Subsector Code	721200
Typical Operating Hours, and 5 or 7 day operation	Continuous 24 X 7
Number of Employees	xxx

### Water Assessment Consultant Submission Details

Water Audit Consultant	LeapFrog Energy Technologies Inc. 905.593.1644 <a href="mailto:ivor.dacunha@gmail.com">ivor.dacunha@gmail.com</a>
Date of Site Visit:	3 June 2010
Date of Report:	23 June 2010
File Number:	XXXXXX
Consultant Signature:	
<hr/> Ivor F. da Cunha P.Eng.	
	P.Eng. Stamp

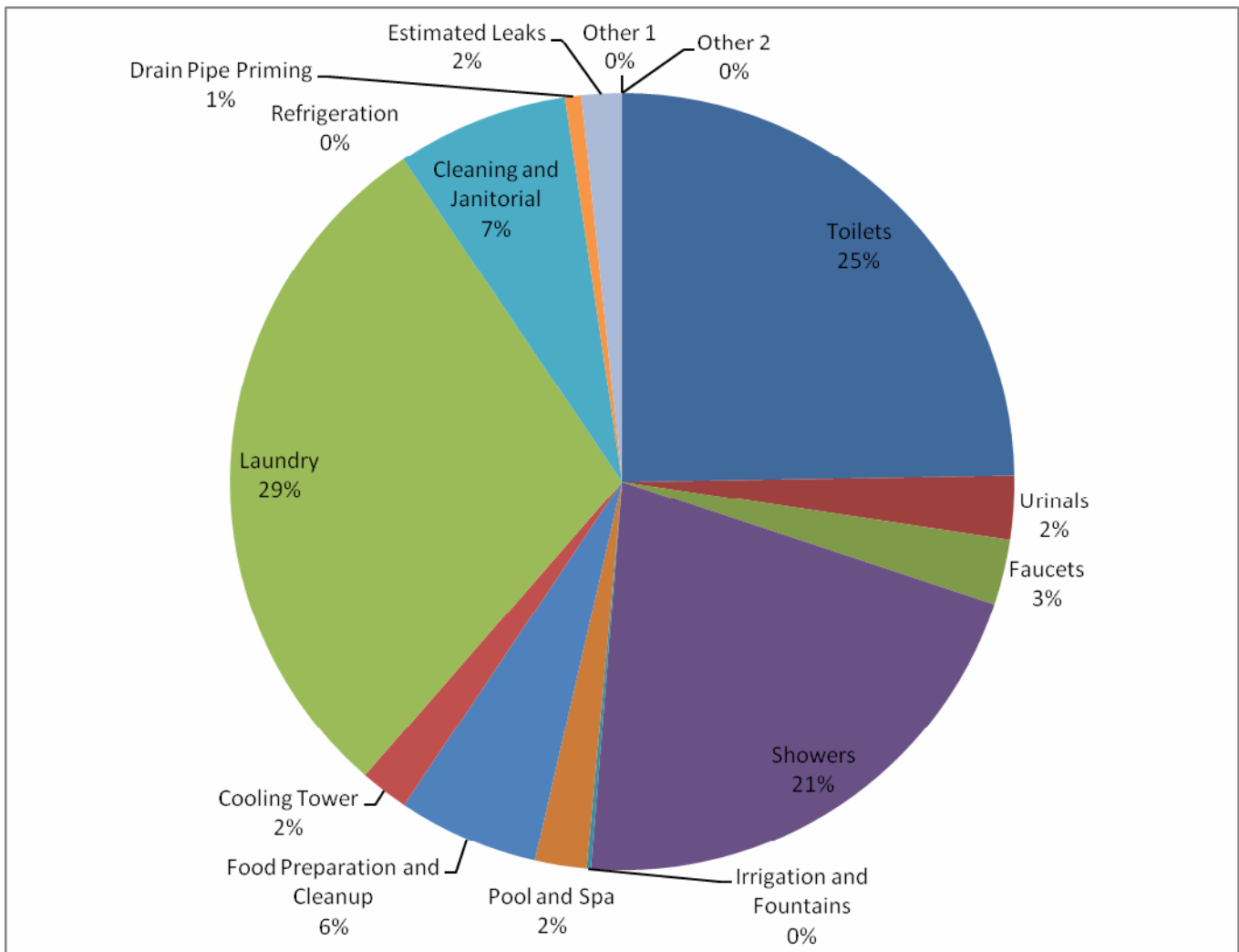
Note: This report should only be considered to be a pre-feasibility report in scope and quality. Existing water consumption patterns, capital cost estimates and potential City of Toronto water efficiency incentives are only estimates, and are based on preliminary observations and screening made during the facility walkthrough and discussion with client. Estimated water savings, capital costs, ongoing operating costs, and potential incentive amounts are not guaranteed.

### Estimated Facility Water Usage by Area or Device Category

Identify the types or areas of water usage for each major facility area and/or process	Domestic Equipment or Process Equipment Details and water consumption variables	Approximate water usage (m3) per year.	Approx. Number of Devices on Site
Toilets	xxx	13,500	459
Urinals	xxx	1,452	15
Faucets	xxx	1,475	439
Showers	xxx	11,558	428
Irrigation and Fountains	xxx	95	2
Pool and Spa	xxx	1,165	2
Food Preparation and Cleanup	xxx	3,167	7
Cooling Tower	xxx	1,092	1
Laundry	xxx	15,933	5
Refrigeration	xxx	-	0
Cleaning and Janitorial	xxx	3,869	438
Drain Pipe Priming	xxx	364	25
Estimated Leaks	xxx	910	100
Other 1	xxx	-	0
Other 2	xxx	-	0
<b>Total</b>		<b>54,580</b>	

lpm =liters per minute  
lpf = liters per flush

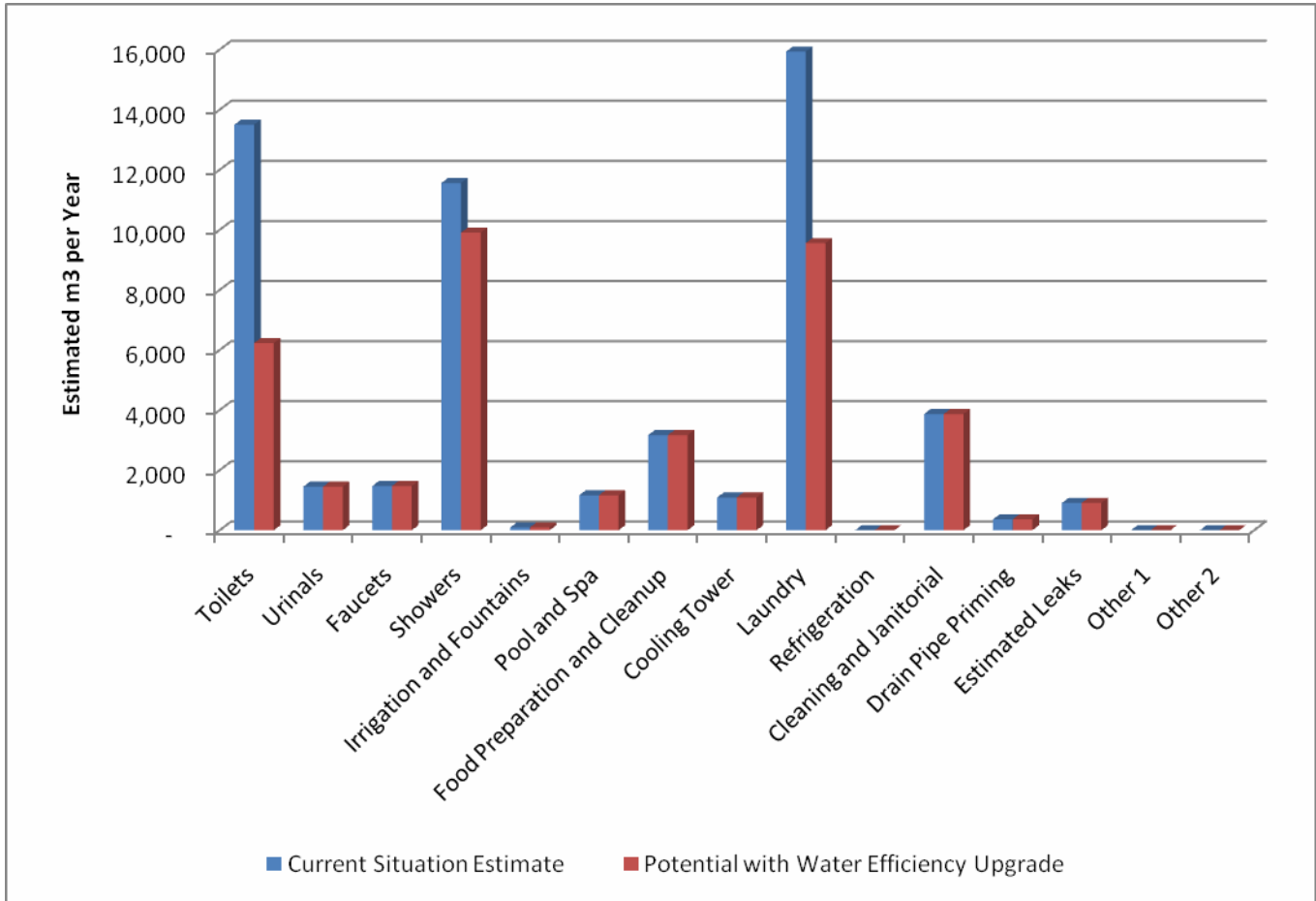
### Present Situation – Estimated Water Usage by Area or Device Category



#### Briefly describe the methods that were used to calculate or estimate water usage: (include monitoring methods)

A site inspection was conducted on June 3, 2010 with the client. A sample of domestic fixtures in the rooms, meeting space and service areas was inspected. Operating information, occupancy levels and typical scheduling information was provided by the client. A water balance was estimated and cross-checked against prior 12 months of water consumption billing information.

**Potential Water Savings by Area or Device Category**



SALE

### Estimated New Water Saving Opportunities

Description of Potential Water Efficiency Measure or Action	Measure expected to save Water Supply	Estimated Implementation Cost (\$)	Estimated Toronto Rebate (\$)	Estimated Net Capital Cost (\$)	Estimated Annual Water Use Savings (m3)	Estimated Annual Cost Savings (\$)	Estimated Payback Period (years)	Notes and Comments
Replace Toilets with 6 lpf models (estimated cost \$300 per unit with \$60 in potential toilet rebate)	Both	137,700	27,540	110,160	7,269	15,266	7.2	Marginal but consider replacing toilets in common washrooms and change rooms.
Urinals- no change	Both	-	-	-	-	-	N/A	No
Faucets- no change	Both	-	-	-	-	-	N/A	No
Replace Showers with 12 lpm models	Both	10,700	-	10,700	1,651	3,467	3.1	Yes
Irrigation and Fountains - No change	Both	-	-	-	-	-	N/A	No
Pool and Spa - no change	Both	-	-	-	-	-	N/A	No
Food Preparation and Cleanup- no change	Both	-	-	-	-	-	N/A	No
Cooling Tower- no change	Both	-	-	-	-	-	N/A	No
Laundry - install water recovery device	Both	150,000	5,238	144,762	6,373	13,384	10.8	Marginal based on water savings alone, but more attractive with natural gas savings.
Refrigeration- no change	Both	-	-	-	-	-	N/A	No
Cleaning and Janitorial- no change	Both	-	-	-	-	-	N/A	No
Drain Pipe Priming- no change	Both	-	-	-	-	-	N/A	No
Estimated Leaks- no change	Both	-	-	-	-	-	N/A	No
Other 1- no change	Both	-	-	-	-	-	N/A	No
Other 2- no change	Both	-	-	-	-	-	N/A	No
<b>Total</b>		<b>298,400</b>	<b>32,778</b>	<b>265,622</b>	<b>15,294</b>	<b>32,117</b>		

- Toilets can be replaced with 6 lpf models and this would qualify for the prescriptive incentive of \$60 per toilet.
- Shower heads can be replaced with water efficient 12 lpm units.
- The hotel is evaluating a water recovery device for laundry equipment. Based on the expected throughput of the laundry and the estimated water savings from the equipment supplier’s literature and personal communications, it is believed that approximately 6,370 m3 of water could be saved on an annualized basis. At \$0.30 per litre of average daily water savings, the potential incentive for the project would be \$5, 238. For this report, only water savings were evaluated, and there are expected to be additional water heating savings.

Notes:

- The City of Toronto Water Efficiency incentive is \$0.30/L for both water and sewer reduction, or \$0.15 for *only one* of water or sewer reduction.
- Incentive approvals are at the sole determination of the City of Toronto and are not guaranteed in this report.
- Program rules, qualification requirements and potential incentives by the City of Toronto may be modified or cancelled without notice.
- Construction costs are only preliminary estimates.

- It is the property owner's responsibility to ensure that any changes involving water distribution or utilization within the facility are done in accordance with all applicable codes, standards, permits and health and safety requirements.
- For additional information about the City of Toronto's Water Efficiency Program, please visit: <http://www.toronto.ca/watereff/index.htm>

SAMPLE