

# Water Utility & Distribution





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Goal	KPI	Applicable System Type	Applicable Metering Level	Breakdown	Units
Ensure Adequate Capacity	Hours of water storage capacity at ADD	Integrated	All Levels	Water storage capacity at ADD	#
	Lab Service Workorders Exceeding Turnaround Time	All Systems	All Levels	Lab Service Workorders Exceeding Turnaround Time	%
Have Satisfied and Informed Customers	Percent Attainment of After Working Hours Emergency Target	All Systems	All Levels	% Attainment of After Working Hours Emergency Target	%
	Percent Attainment of After Working Hours Non-Emergency Target	All Systems	All Levels	% Attainment of After Working Hours Non-Emergency Target	%
	Percent Attainment of During Working Hours Emergency Target	All Systems	All Levels	% Attainment of During Working Hours Emergency Target	%
	Percent Attainment of During Working Hours Non-Emergency Target	All Systems	All Levels	% Attainment of During Working Hours Non-Emergency Target	%
	Water Pressure Complaints by Customers	All Systems	All Levels	High Water Pressure Complaints Low Water Pressure Complaints	# / 1,000 People Served # / 1,000 People Served
	Water Quality Customer Complaints	All Systems	All Levels	Colour	# / 1,000 People Served
				Other or unknown causes	# / 1,000 People Served
				Taste and odour	# / 1,000 People Served
				Temperature	# / 1,000 People Served
Meet Service Requirements with Economic Efficiency	Average Unit Cost of Meters Replaced	Distribution & Integrated	Universal	Unit Cost	\$ / meter
	Breakdown of Utility Revenue	All Systems	All Levels	Other	%
				Water Sales	%
				Service Charges	%
				Municipal Taxes	%
				Development Charges	%
				Grants	%
				Interest Earned	%
	Cost of Chemicals Used in Distribution System	All Systems	All Levels	Cost of Chemicals Used in Distribution System	\$ / km Length
	Cost of Customer Billing	Distribution & Integrated	Universal	Cost of Customer Billing	\$ / Number of Service Connections
	Cost of Fire Hydrant O&M	Distribution & Integrated	All Levels	Cost of Fire Hydrant O&M	\$ / hydrant
	Cost of Main Break Repairs / Total O&M Cost	All Systems	All Levels	Cost of Main Break Repairs / Total O&M Cost	%
	Cost of Meter Reading	All Systems	Universal	Cost of Meter Reading	\$ / meter
	Cost of Performing Locates	All Systems	All Levels	Cost of Performing Locates	\$ / km Length
	Cost of Water Quality Monitoring	Integrated	All Levels	Cost of Water Quality Monitoring	\$ / capita
	Cost to Provide Water	Distribution & Integrated	All Levels	Capital Cost	\$ / Population Served
				Debt Servicing	\$ / Population Served
				Indirect Cost	\$ / Population Served
				O&M Cost	\$ / Population Served
				Regional Water Purchased	\$ / Population Served
				Water Customer Billing	\$ / Population Served
	Current Capital Reserves / Replacement Value	All Systems	All Levels	Current Capital Reserves / Replacement Value	%
	Current Operating Reserves / O&M Costs	All Systems	All Levels	Current Operating Reserves / O&M Costs	%
	Debt / Annual Revenue	All Systems	All Levels	Debt / Annual Revenue	%
	Debt Payment	All Systems	All Levels	Principal Paid	
				Interest Paid	
	Debt Ratio	All Systems	All Levels	Debt Ratio	%
	FTEs	All Systems	All Levels	Laboratory	# / 100 km Length
				O&M	# / 100 km Length
				Program Support and Clerical	# / 100 km Length
				Supervisor/ Management	# / 100 km Length
				Technical/ Engineering	# / 100 km Length
	Indirect Costs	All Systems	All Levels	Administrative Overheads	\$ / Population Served
				Conservation Area Charges	\$ / Population Served
				Dividends Paid to City	\$ / Population Served
				Property Taxes	\$ / Population Served
	Internal Laboratory Services Cost	All Systems	All Levels	Internal Laboratory Services Cost	\$ / Internal Parameters Analyzed
	Metering O&M Cost	Distribution & Integrated	Universal	Metering O&M Cost	\$ / meter
	O&M Cost	All Systems	All Levels	Energy	('000 \$) / km Length
				Equipment and Materials	('000 \$) / km Length
				External Contracted Services	('000 \$) / km Length
				Internal Contracted Services	('000 \$) / km Length
				Other	('000 \$) / km Length
				Staff Training	('000 \$) / km Length
				Wages	('000 \$) / km Length
	O&M Cost + Capital Reinvestment	All Systems	All Levels	Capital Reinvestment O&M	('000 \$) / km Length ('000 \$) / km Length
	Pipe and Pump O&M Cost	All Systems	All Levels	Pipe Pump Station	('000 \$) / km Length ('000 \$) / km Length
	Pipe O&M Cost	All Systems	All Levels	Pipe O&M Cost	('000 \$) / km Length
	Pump Station Energy Consumed	All Systems	All Levels	Diesel	('000 kWh) / Total PS HP
				Electricity	('000 kWh) / Total PS HP
				Natural Gas	('000 kWh) / Total PS HP
	Pump Station O&M Cost	All Systems	All Levels	Pump Station O&M Cost	\$ / HP
	Total Laboratory Services Costs	All Systems	All Levels	Internal	\$ / Population Served
				External	\$ / Population Served
	Water Charge for a Typical Size Residential Connection Using Canadian Average Consumption Rate (210m <sup>3</sup> /year)	Distribution & Integrated	All Levels	Water Charge for a Typical Size Residential Connection Using Canadian Average Consumption Rate (210m <sup>3</sup> /year)	\$
	Water Charge for an Average Residence Using Local Consumption Rate	Distribution & Integrated	All Levels	Water Charge for an Average Residence Using Local Consumption Rate	\$

Goal	KPI	Applicable System Type	Applicable Metering Level	Breakdown	Units
Protect Public Health and Safety	Average value for THMs	All Systems	All Levels	Average THMs	mg / L
	Average Value for Turbidity	All Systems	All Levels	Average Turbidity	NTU
	Boil Water Advisory Days	All Systems	All Levels	Boil Water Advisory Days	#
	Connections Affected by Boil Water Advisory	All Systems	All Levels	Connections Affected by Boil Water Advisory	# / 1,000 Service Connections
	Cost of Cross-Connection Control Program	Distribution & Integrated	All Levels	Cost of Cross-Connection Control Program	\$ / Total # of Service Connections
	Cumulative Length Cleaned / System Length	All Systems	All Levels	Cumulative Length Cleaned / System Length	%
	Days with Total Coliform over Group Target	All Systems	All Levels	Days with Total Coliform over Group Target	#
Protect the Environment	Average Residential Daily Consumption	Distribution & Integrated	All Levels	Average Residential Daily Consumption	L / Cap / day
	Breakdown of External Lab Parameters Analyzed	All Systems	All Levels	Organic	%
				Inorganic	%
				Micro	%
				Metals	%
	Breakdown of Internal Lab Parameters Analyzed	All Systems	All Levels	Organic	%
				Inorganic	%
				Micro	%
				Metals	%
	Breakdown of Internal vs. External Lab Parameters Analyzed	All Systems	All Levels	Internal	%
				External	%
	Cost of Leak Detection Program	All Systems	All Levels	Cost of Leak Detection Program	# / km Length
	Cost of Water Conservation Program	All Systems	All Levels	Cost of Water Conservation Program	\$ / capita
	Days of Water Restrictions	All Systems	All Levels	Days of Water Restrictions	#
Provide a Safe and Productive Workplace	Number of Lab Non-Conformances	All Systems	All Levels	Number of Lab Non-Conformances	# / 1,000 Samples
	Peaking Factor	All Systems	All Levels	Peaking Factor	MDD / ADD
	Percent Metered	Distribution & Integrated	All Levels	Percent Metered	%
	Total Annual Internal Lab Parameters Analyzed	All Systems	All Levels	Total Annual Internal Lab Parameters Analyzed	# / FTE
	Cost of Overtime Hours	All Systems	All Levels	Cost of Overtime Hours	\$ / O&M FTE
	Distribution of Workforce by Age	All Systems	All Levels	20-30 yrs	%
				31-40 yrs	%
				41-50 yrs	%
				51-60 yrs	%
				61-70 yrs	%
	Field Accidents with Lost Time	All Systems	All Levels	Accidents with Lost Time	# / 1,000 O&M Labour Hours
	Lost Hours due to Field Accidents	All Systems	All Levels	Lost Hours	# / 1,000 O&M Labour Hours
	Safety Training Hours	All Systems	All Levels	Safety Training Hours	Hours / Employee
	Sick Days Taken	All Systems	All Levels	Sick Days Taken	# / O&M Employee
	Total Available O&M Hours / Total Paid O&M Hours	All Systems	All Levels	Total Available Hours	%
	Total Overtime Hours / Total Paid O&M Hours	All Systems	All Levels	Total Overtime Hours / Total Paid O&M Hours	%
	Unavailable O&M Hours / Total Paid O&M Hours	All Systems	All Levels	Expended Banked Time	%
				Long Term Leave	%
				Other	%
				Other Training	%
				Safety Training	%
				Sick Time	%
				Union Time	%
				Vacation	%
				Planned	%
Provide Reliable Service and Infrastructure	# Service Connection Repairs & Replacements / # of Service Connections	All Systems	All Levels	Emergency	%
	Average Number of Failures per Pump Station	All Systems	All Levels	Average Number of Failures per Pump Station	#
	Capital Reinvestment / Replacement Value	All Systems	All Levels	Capital Reinvestment / Replacement Value	%
	Customer Days Without Service	All Systems	All Levels	Customer Days without Service	Days / Total # of Service Connections
	Hydrants Inspected	All Systems	All Levels	Hydrants Inspected	%
	Hydrants Winterized	All Systems	All Levels	Hydrants Winterized	%
	Infrastructure Leakage Index	Distribution & Integrated	Universal	ILI	
	Inoperable or Leaking Hydrants	All Systems	All Levels	Inoperable or Leaking Hydrants	%
	Inoperable or Leaking Valves	All Systems	All Levels	Inoperable or Leaking Valves	%
	Main Breaks	All Systems	All Levels	Main Breaks	# / 100 km Length
	Main Length Replaced or Relined	All Systems	All Levels	Main Length Relined	%
				Main Length Replaced	%
	Main with Cathodic Protection / Main Requiring Cathodic Protection	All Systems	All Levels	Main with Cathodic Protection / Main Requiring Cathodic Protection	%
	Metallic Main Breaks	All Systems	All Levels	Metallic Mains Breaks	# / 100 km of Metallic Mains
	Meter Re-reads	All Systems	Universal	Meter Re-reads	%
	Non Metallic Main Breaks	All Systems	All Levels	Non Metallic Main Breaks	# / 100 km of Non Metallic Mains
	Non-Revenue Water	Distribution & Integrated	Universal	Apparent Losses	L / Cap / day
				Real Losses	L / Cap / day
				Unbilled Authorized Consumption	L / Cap / day
	Percent of Curbstops Replaced	Distribution & Integrated	All Levels	Percent of Curbstops Replaced	#
	Preventative and Corrective Maintenance Hours	All Systems	All Levels	Corrective Hours	Hours / km Length
				Preventative Hours	Hours / km Length
	System Length Tested for Leakage / km Length	All Systems	All Levels	System Length Tested for Leakage / km Length	%
	Total Corrective Maintenance Hours / Total Maintenance Hours	All Systems	All Levels	Total Corrective Maintenance Hours / Total Maintenance Hours	%
	Unplanned System Interruptions	All Systems	All Levels	Unplanned System Interruptions	# / 100 km Length
	Valves Cycled	All Systems	All Levels	Valves Cycled	%

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