



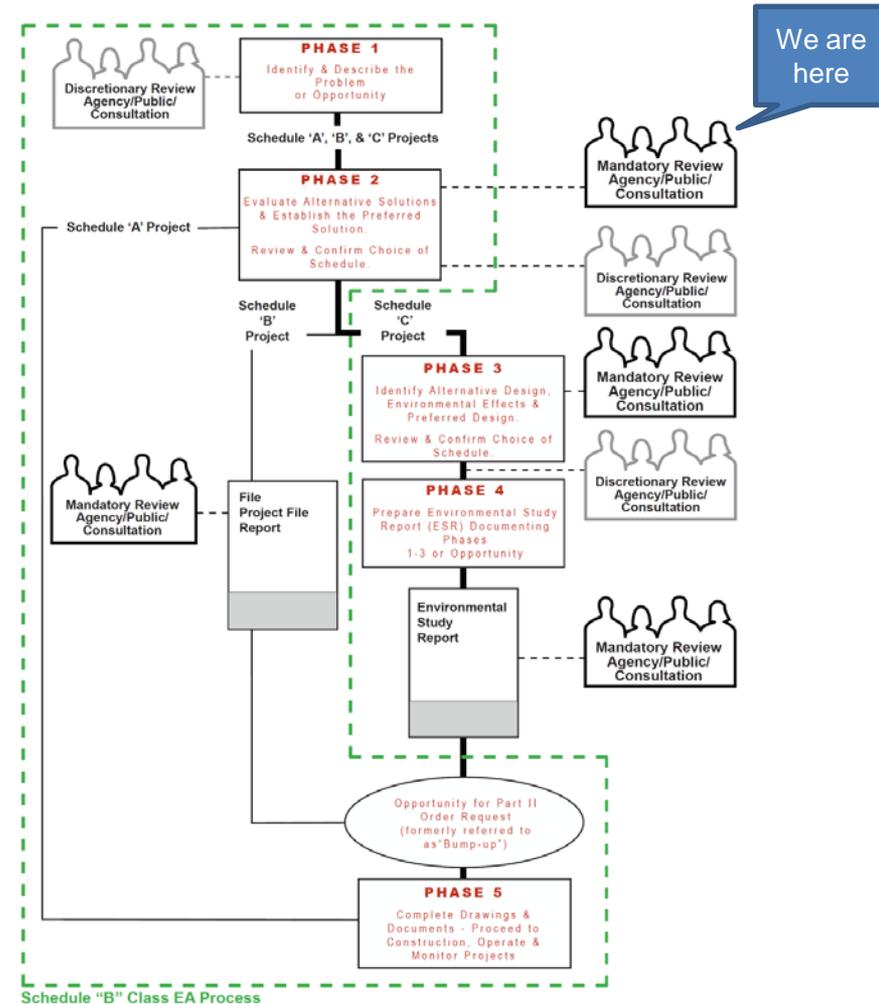
Public Open House  
Days Road Sewage  
Pump Station  
Schedule 'B' Class  
Environmental Assessment

April 25, 2018, 6 p.m. to 8 p.m.  
Frontenac Secondary School  
1789 Bath Road, Kingston, ON

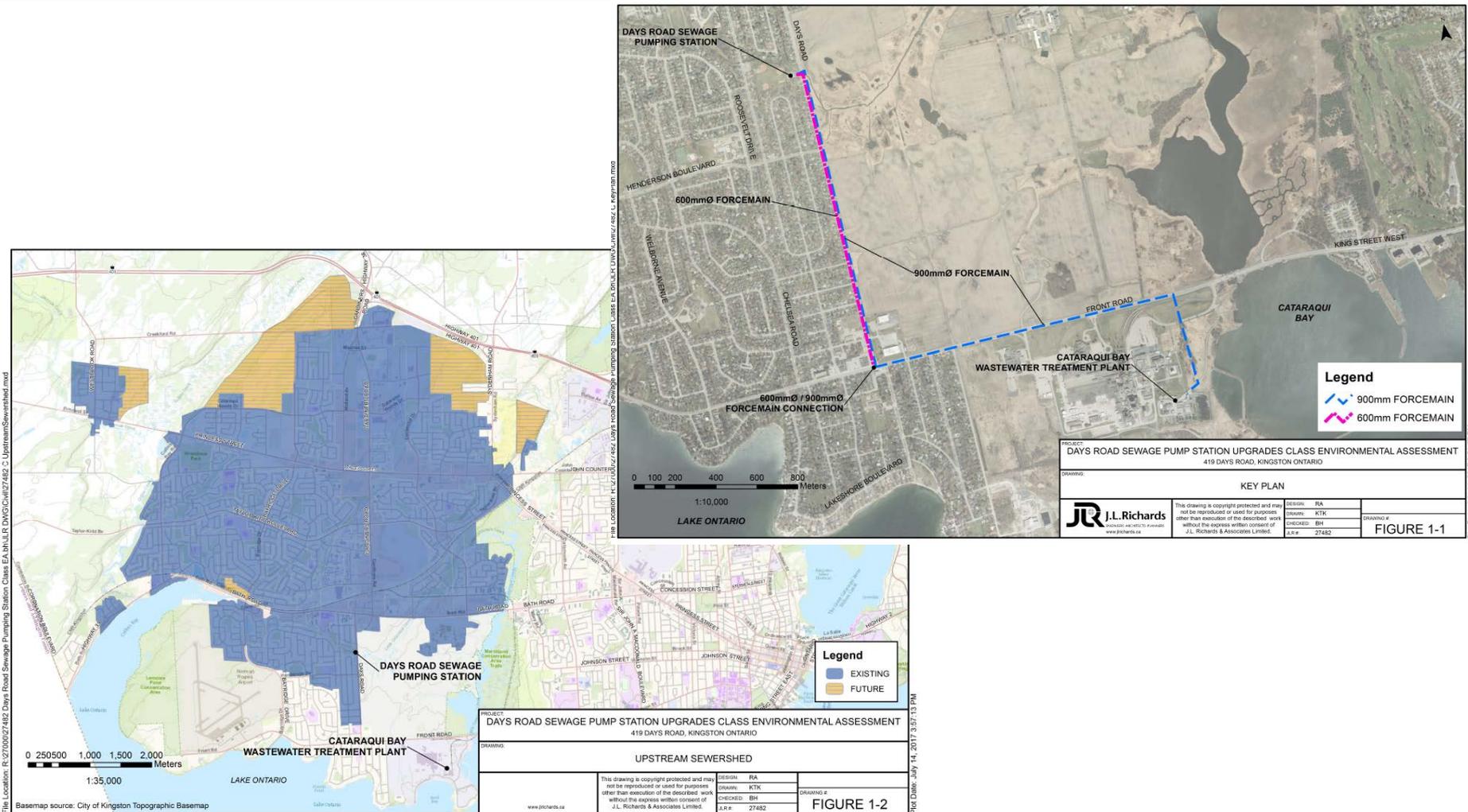
Welcome! Please Sign In.

# Overview of Schedule 'B' Class Environmental Assessment Process

- A Class Environmental Assessment is a study intended to systematically address a particular problem or opportunity for a proposed project.
- Class Environmental Assessments are completed in accordance with the Class Environmental Assessment Act
- Projects vary in environmental impacts and are grouped into Schedule A, A+, B or C undertakings. This Class Environmental Assessment is currently proceeding as a Schedule 'B' undertaking.
- A Schedule 'B' Class Environmental Assessment includes the identification and evaluation of potential environmental, community and economic impacts of identified potential solutions and design concepts.
- Public consultation is a key component to the process.

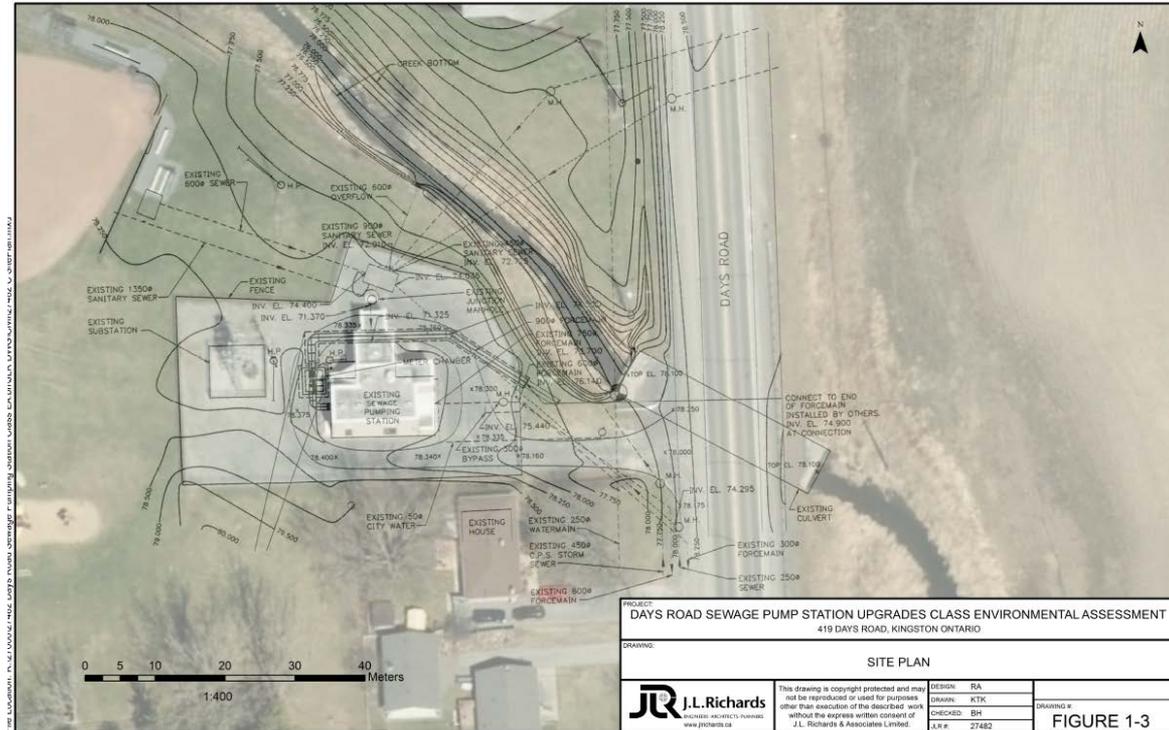


# Existing Conditions – Upstream Sewershed and Key Plan



# Existing Conditions – Days Road Sewage Pump Station

- The existing facility was constructed in 1978 and upgraded in 1995. Several key components are reaching the end of their design life.
- The facility consists of a below-grade concrete wet and dry well superstructure and an above-grade concrete building envelope.
- Four (4) gravity sewers outlet to the facility. Two (2) forcemains convey sewage to the Cataraqui Bay Wastewater Treatment Plant.
- The pump station houses four (4) extended shaft, vertical end suction centrifugal pumps.
- The overflow sewer currently does not function as intended, presenting a risk of backflow to the facility.
- There are safety concerns associated with the close proximity of the electrical substation to the park and residential areas.



# Problem and Opportunity Statement

---

## Why are we doing this Study?

- Many of the station's internal components are reaching the end of their intended service lives and are in need of refurbishment or replacement to ensure that the station remains reliable for its intended purpose.
- The station does not currently have the capacity to accommodate some of the historical incoming flows and, as a result, there is a risk to upstream flooding and/or station damage under extreme wet weather events. Planned development within the upstream sewershed will further increase flows received by the station in the future, compounding this risk.
- An opportunity also exists to improve a number of process related elements within the station in order to optimize operations and maintenance.

# Identification of Alternatives

- Sewage Design Flows:

Design Parameters	Existing	Future (20-year)
Minimum Day Flow	164 L/s	164 L/s
Average Daily Flow	250 L/s	297 to 353 L/s
Peak Hourly Flow	1,270 L/s	1,373 L/s
Pumping Station Rated Capacity	900 L/s	1,430 L/s

- Five (5) feasible alternatives were identified to address the problem/opportunity statement:

Option	Description	Screening
Option 1	Do Nothing	Does not address problem statement. Not carried forward.
Option 2	Construct equalization storage structures in lieu of pumping capacity increase, refurbish existing facility	Carried Forward
Option 3	Upgrade and expand the existing pumping capacity	Carried Forward
Option 4	Replace existing facility on existing site, and expand into La Salle Park	Carried Forward
Option 5	Replace existing facility on a new site	Carried Forward

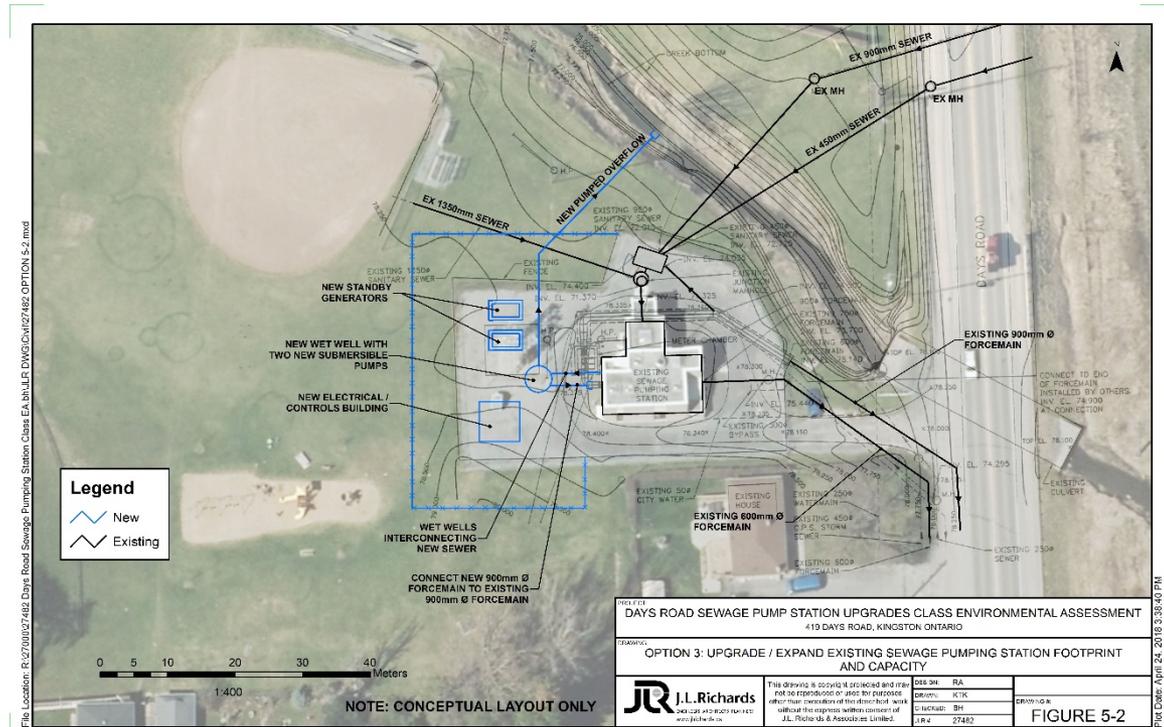


# Option 3 – Upgrade/Expand Existing Pump Station Capacity

- Provide a new stand-alone wet well structure to house new pumps to increase pumping capacity to 1,430 L/s
- Provide condition upgrades similar to those identified in Option 2
- Provide a new pumped overflow to Little Cataraqui Creek
- Provide a new stand-alone control building to house expanded electrical, instrumentation and control systems
- Opinion of Probable Construction Cost: \$13,700,000

**Advantages:** Lowest construction cost

**Disadvantages:** Building envelope and wet well structures would not be upgraded, complex construction sequence, increased risk of sewage bypassing during construction



File Location: R:\2700\027482\_Days Road Sewage Pumping Station Class EA\_bh\ULR DWG\027482\_OPTION3\_5-2.mxd

File Code: 027482\_24\_2018\_030640\_P&I

PROJECT DAYS ROAD SEWAGE PUMP STATION UPGRADES CLASS ENVIRONMENTAL ASSESSMENT 419 DAYS ROAD, KINGSTON, ONTARIO			
DRAWING OPTION 3: UPGRADE / EXPAND EXISTING SEWAGE PUMPING STATION FOOTPRINT AND CAPACITY			
<p>J.L.Richards 240-225-4120/221-140-1431 www.jlr.ca</p>	<p>This drawing is to be used for reference only and not to be reproduced or used for purposes other than those intended without the express written consent of J.L. Richards &amp; Associates Limited.</p>	DESIGN: RA	DATE: 08/10/18
		DRAWN: KTR	CHECKED: BH
		FIGURE 5-2	

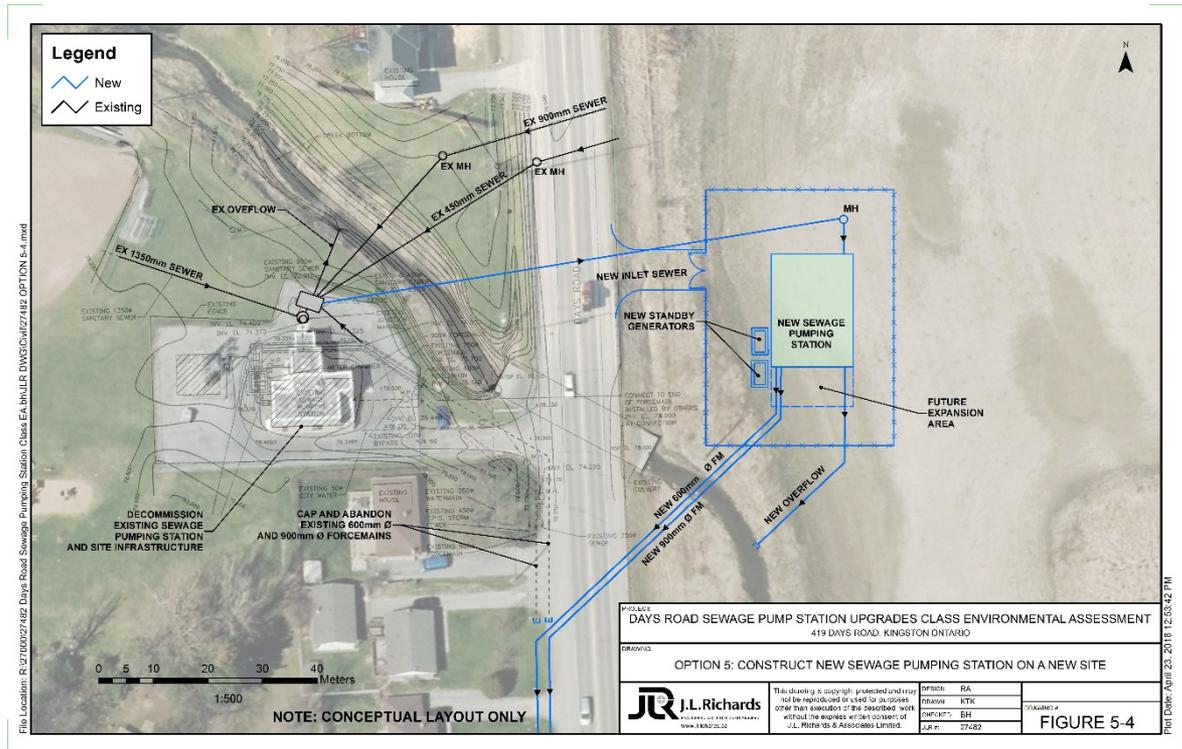


# Option 5 – Construct a New Pump Station on a New Site

- Construct a new pump station on Correctional Service Canada lands
- Construct new sewers, forcemain connections and a new pumped overflow to Little Cataraqui Creek
- Decommission the existing pump station and site infrastructure
- Opinion of Probable Construction Cost: \$15,500,000 (excluding land purchase cost)

**Advantages:** Reduced impact on park land, minimal impact on operations, potential for new public parking spaces

**Disadvantages:** High construction cost, schedule implications due to federal environmental screening and assessment timelines, and land purchasing process risks



# Evaluation and Selection of the Preferred Alternative

Evaluation Criteria	Description	Assigned Weight
Natural Environment	including groundwater, fish/aquatic life, terrestrial vegetation, wildlife, soils and geology	16/100
Social Environment	including residential, industrial, commercial, institutional, and recreational impacts, public health, aesthetics, noise and air quality/odours	23/100
Cultural Environment	including archaeological and heritage resources	6/100
Technical Environment	including expandability, constructability, schedule, operations flexibility, and climate change resiliency	20/100
Economic Environment	including capital costs, and operation/maintenance costs	35/100

Impact Level	Score Multiplier
High Positive Impact	100%
Moderate Positive Impact	80%
Low Positive Impact	65%
No Impact	50%
Low Negative Impact	30%
Moderate Negative Impact	15%
High Negative Impact	0%

	Option 1	Option 2	Option 3	Option 4	Option 5
Natural Environment	6.3	7.7	7.5	9.4	9.4
Social Environment	6.6	16.6	15.6	13.8	18.7
Cultural Environment	3.0	0.9	3.0	0.9	0.9
Technical Environment	2.1	12.1	4.5	18.0	13.2
Economic Environment	0	15.9	27.5	26.5	25.1
<b>Total Score</b>	<b>18.0</b>	<b>53.2</b>	<b>58.1</b>	<b>68.6</b>	<b>67.3</b>

**Preferred Alternative**

## Summary of Consultation Activities

---

- June 2017: Notice of Commencement issued to the public and stakeholder agencies
- February 12, 2018: Meeting with Correctional Service Canada to discuss feasibility of Option 5 (e.g., federal environmental screening/assessment, land purchasing process, consultation with other stakeholder agencies)
- March 2, 2018: Meeting with City of Kingston Recreation and Leisure Services Department to discuss feasibility of Option 4, impact on La Salle Park use and impact on proposed recreational pathway along Little Cataraqui Creek
- Various self-assessments recommended by Transport Canada, Canadian Environmental Assessment Agency, Ministry of Tourism, Culture and Sport.
- Ongoing consultation with Cataraqui Region Conservation Authority on the flood plain and storm water management guidelines
- Various comments received from residents

## Next Steps

	Timeline
Host a Public Open House	April 25, 2018
Evaluate Comments Received from Public Open House	May, 2018
Issue Schedule 'B' Class Environmental Assessment Project Notice of Completion (30-day Public Review Period)	May, 2018
Incorporate Comments, Select Preferred Alternative and Finalize Class Environmental Assessment Documents	June, 2018
Proceed to Preliminary and Detailed Design	To Be Determined (Design Phase – 6 to 8 months; Construction Phase – 12 to 18 months)

# Thank you!

---

Your Comments are Important to Us

Please complete a comment sheet and place it in the box provided or mail/email to us at the noted address by

May 2, 2018

**Your comments will be considered in the Assessment and Evaluation of the Preferred Solution**

Ongoing information about this project can be found at

[www.utilitieskingston.com](http://www.utilitieskingston.com)