

GREENEST CITY SCHOLARS PROGRAM
UBC Sustainability Scholars Program, Summer 2018

Research project title

Water benchmarking study of restaurants, microbreweries and other businesses

Supports the following Greenest City Goal or Green Operations Plan goal area:

Greenest City Action Plan

Goal 6: Clean Water

Target 2: Reduce per capita water consumption by 33% from 2006 levels.

Green Economy Target 2 – Double the number of companies that are actively engaged in greening their operations over 2011 levels.

Green Operations

Healthy Ecosystems

Target: Reduce corporate water consumption by 33% from 2006 levels

Outline scope of project and why it is of value to City and describe how and when the scholar's work will be actionable

Overview / Background

Engineering and Real Estate and Facilities Management are collaborating to better understand the share of water consumption and sewage of restaurants, microbreweries and other businesses in the City of Vancouver. Our buildings are becoming more complex by becoming multi-functional and multi-tenanted. This water benchmark study will benefit the City in several ways.

1. The City's Real Estate and Park Board department can use the benchmark to better define water operating cost in their tenant lease agreements.
2. Restaurants, microbreweries and other businesses with excessive water consumption can be easily identified when compared to the benchmark and their peers.
3. The City can refine their water and sewer infrastructure planning and design details using the benchmark to better understand the current and anticipated water consumption of surrounding businesses.
4. Enables the City of Vancouver to develop best practices related to water efficiency, and evaluate the water consumption performance of these businesses with respect to the benchmark and their peers.
5. This study will describe a water benchmarking methodology that can be used for future studies.

Scope of Work

1. Summarize relevant water benchmarking data provided by City staff and obtained from a focused literature review.
2. Develop and document a repeatable methodology for water benchmarking in the City of Vancouver.
3. Acquire, analyze, normalize and benchmark water consumption and sewer data using internal City databases such as Tempest, VanMap, etc and external internet resources.

Submit applications here: <http://bit.ly/2DC2jpP>

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4. Conduct onsite field review of selected restaurants, microbreweries and other businesses to confirm their operation type, their maximum seating capacity and any atypical equipment.
5. Should the GCS complete the above scope of work ahead of schedule and if there are sufficient hours remaining, additional business categories would be added to this benchmarking study.

Why this Work is of Value

The Greenest City Scholar's research will inform the Water Design Branch and Real Estate and Facilities Management on potential strategies to help achieve the Greenest City Action Plan and Green Operations [water conservation targets](#).

Deliverables

- Final report for the UBC Sustainability Scholars online project library and a presentation to City staff, which will address the Scope of Work described above.

Time Commitment

- This project will take 250 hours to complete.
- This project must be completed between April 27 and August 10, 2018. The scholar is to complete hours between 7:30 am and 3:30 pm, approximately 20 hours per week.
- A draft final report submitted by Monday August 3, 2018.

- Work location: Engineering - Marine Drive Gateway (450 SW Marine Drive) (April 27, 2018 – June 30, 2018) and Engineering - Crossroads (507 West Broadway) (July 3, 2018 – August 10, 2018)

Skill set/background required/preferred

- Proficiency with MS Excel and Word, and the management of potentially complex data sets.
- Excellent documentation skills
- Excellent research, writing and verbal communications skills.
- Experience with quantitative data analysis.
- Self-directed, collaborative and able to budget time and effort to address the scope of work within the timeline.
- Comfortable working with databases.

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