

McGill University

Impact Assessment

Water Resource Management Intern of Summer 2012

Utilities & Energy Management



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The position of water resource management intern was created in order to complete a water consumption study of the McGill University downtown campus. The three main goals were to categorize water consumption, to audit as many buildings as possible to determine yearly water consumption, and to determine the yearly baseline consumption for the entire downtown campus. This was done to provide an estimate of how much water the university consumes, as there was limited information available prior to this study. The results would provide information which would allow McGill to determine the impact of the sustainability initiatives it would undertake. The study consisted of auditing 32 buildings on the downtown campus. Audits consisted of walkthroughs, analysis of water consumption data gathered from operating system software, and interviews with researchers and building users.

Academics:

- Number of students in courses with integrated SPF learning materials:
ENVR 401 is a class where a group of students work on sustainability related topics. The water consumption study was chosen and the team of students worked throughout the fall 2012 semester to verify the accuracy of the study. They chose to focus on one of the buildings and thoroughly audit the labs in order to verify key assumptions made in the study.

All projects:

- Number of hours (or days) worked on SPF project:
The project lasted 15 weeks, with 35 hours of work per week on average. The total number of hours worked is 525 hours.
- Number of Partners:
I worked with project manager Francois Turcotte and energy manager Jerome Conraud. They supplied guidance and direction during the duration of the project.
- Number of people employed/Number of jobs created:
I was the sole member of the team hired to work on this project.
- Number of Participants:
Many researchers across faculties participated by supplying information about lab water consumption and giving guided tours of the labs in question. During walkthroughs, building users and McGill employees were very helpful and cooperative.

- Was your project completed by your project deadline:
The project was completed on time which was the end of the summer.
- Number of McGill departments engaged/Number of McGill faculties engaged:
Engineering, Science, Medicine, Education, Law, Management, Arts, Chemistry, Mathematics, Dentistry, Physics, and Computer Sciences faculties all participated in one way or another.
- Chance that your project will continue once the initial project leaders or funding is gone:
It is my honest belief that water consumption will become an important topic in the near future. In the case where funding disappears, I believe the project would be brought to an end. However, I find this unlikely and trust that McGill will continue to work towards a more sustainable water use.

Land:

- Number of building audits conducted:
32 Buildings were audited. See appendix 1 for details.
- Number of buildings monitored for water usage:
Very few buildings are monitored for water consumption and the readings are done infrequently. The group of buildings of McIntyre, Life Sciences, Stewart Biology and Chancellor Day Hall are monitored for total consumption of the buildings and this information was used in the project.

Economics:

- \$\$\$ saved because of your project:
No money was saved during the course of the project, however, the areas of high water consumption were identified and this allows McGill to direct its conservation initiatives.
- 'bang for your buck':
This study was done in order to supply information which would allow McGill to make the best decisions regarding its sustainability initiatives involving water.

Media:

- Number of promotional videos produced:
One video was produced for use on the SPF youtube channel.

Water:

- Litres of water conserved:
This study offered suggestions of possible conservation initiatives based on its findings.
- Litres of Gray water re-used:
Increase of gray water use was one of the suggested initiatives in the final report.
- Litres of Rain water captured:
Increase of rain water use was one of the suggested initiatives in the final report.
- Water audits conducted at McGill:
At the time, this study was the only audit of water consumption being performed at the downtown campus.

Appendix 1: List of 32 Buildings Studied

Building #	Building Name
102	Bronfman
103	Arts
108	McLennan Library
110	Burnside
111	Stewart Biology
112	James Administration
118	MacDonald Harrington
119	Otto-Maass
122	Chancellor Day Hall
123	Dawson
130	McDonald Eng.
131	McConnell Eng.
150	Leacock
154	Strathcona Anatomy Dentistry
155	McIntyre Medical Building
157	McIntyre Garage

Building #	Building Name
158	Pulp and Paper
163	Morrice Hall
168	Education
170	MacDonald Stewart Library
177	Adams
178	Redpath Library
179	Redpath Museum
181	Redpath Hall
189	Rutherford
197	Ferrier
229	Wong
231	Gelber Law
239	Genome
240	Trottier
241	Bellini (Life Science)
246	Cancer (Life Science)



Figure 1: McGill Downtown Campus, buildings studied are designated by red.