

ENVIRONMENT & SUSTAINABILITY

Year End Report
2016



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COMMUNITY OUTREACH

Engineers PEI Poster Contest

March 4, 2016

National Engineer Month was held in March with Engineers PEI hosting its 21st Annual Bridge Building and Artwork Contest on March 4th. The artwork theme for this year was “**Water Conservation**” and was sponsored by the Water & Sewer Department.

Key Objectives:

- Engage children in Kindergarten to Grade 6 to use their imagination to show the public what water conservation means to them.
- Give the public an opportunity to see their artwork and to think about water conservation and the effect it has.

Number of People Reached:

The art display had the potential to reach a high number of people as all the artwork was posted at the Charlottetown Mall on March 4th. The display was close to an entrance and the Bridge Building Contest drew a crowd in excess of 300. The artwork was available for viewing for the afternoon.

Description:

Engineers PEI organized the event and put out the call to the schools for the poster contest. Over 100 entries were received within the two main categories – Class Mural and Individual Artwork. Each category was broken down into three divisions (Kindergarten-Grade 2, Grade 3-4, and Grade 5-6). For the Individual Artwork category, there was a 1st Place, 2nd Place and 3rd Place winner whereas there was one winner in each of the divisions under the Class Mural category.

There were three winners from Charlottetown schools: Class Mural: Grade 5-6 Division: Grade 5/6 Classes at LM Montgomery School and Honourable Mention for Zion Kindergarten; Individual Artwork: 2nd Place - Size Mqwenya in Grade 6 at West Royalty Elementary School.



Lessons Learned:

- There is an amazing amount of talent within the Kindergarten-Grade 6 age category with a good understanding of water conservation.
- The posters were created and printed by Engineers PEI, but the proof submitted did not reflect the final size poster. The City logo provided was based on one application whereas another was used and it did not reproduce well. Since there is different media types available, it is important that the correct logo format is provided to suit the media that is being used and that full size proofs be reviewed.

Budget:

Item	Cost
Prizes	\$295.00
Total	\$295.00

Community Vegetable Planter Expansion

June 2016

Key Objectives:

- Address Food Security Issues in Charlottetown: Food security essentially ensures access to healthy food for all members of a community. Typically initiatives to increase food security involve addressing poverty, increasing healthy food awareness and empowering people to grow some or all of their own food in the spaces that are available to them. Food security is an essential component of community sustainability.

Description:

A joint initiative between the Sustainability Department and Parks & Recreation led to the expansion of the vegetable planter program to include three raised bed community vegetable gardens in Orlebar park. This location was selected because there is an active community organization in the area (North of Euston Community Group), there is ample greenspace and the surrounding neighborhood is very diverse economically and culturally. A community planting day was organized with Parks and Recreation and the North of Euston Community Group.

Budget:

\$1050 was required for material to build the planters. Cost was shared between the Sustainability Department and Parks and Recreation. The North of Euston Community Group built the planters, provided the soil and plant material, and maintained the gardens for the season.

Rainbow Crosswalks

July 2016

For Pride 2016 the City of Charlottetown showed their support for the LGBTQ community by painting (4) crosswalks at the Great George St and Kent St. intersection in a rainbow pattern.



Key Objectives:

- PEI Pride 2016: The rainbow has become a symbol synonymous with Pride and the LGBTQ community. City hall flies the rainbow flag each year during PEI Pride and the idea for the rainbow crosswalks was intended to take this show of support one step further and demonstrate that Charlottetown is an inclusive City.
- Placemaking: The rainbow crosswalks add color to the City streets.

Number of People Reached:

The rainbow crosswalk initiative was viewed by thousands of people. Our social media post was the most liked, shared, and commented on post to date on the Charlottetown- Great Things Happen Here Facebook page. The press release was picked up by both the Guardian and CBC who both published a photo and story on the project.

The intersection that was chosen for the 'rainbow crosswalks' is located along the PEI Pride 2016 parade. The parade itself had hundreds of people in attendance who would have been happy to see the crosswalks. It is a busy intersection that hundreds of people come across (often multiple times) each day, and in such a popular location that tourists would frequently come across them as well.

Description: Early on the morning of Sunday, July 24th 8 volunteers gathered at the Kent and Great George intersection to spray paint the rainbow crosswalks. There were 5 City employees and 3 external volunteers. Plywood stencils and road marking spray paint were used to create the rainbow crosswalk sections of the road. The crosswalks are faded but still visible 4 months later in November 2016.



Lessons Learned:

- Utilize cardboard along with stencils to ensure no excess spray paint marks up the pavement outside of the plywood stencils.
- Early morning application (We chose to apply on Sunday, July 24th at 6:00am) with the assistance of public works barricades and flashing lights vehicle is important to ensure safety of volunteers and avoid mishap with a vehicle.
- Bring **chalk** and a **measuring tape** and mark out the half-way point of crosswalk and outlines for where to lay stencils.

Budget:

Item	Cost
Plywood Stencils	\$100
Spray-paint	\$435.89
Total cost	\$535.89

Newcomers Orientation Sessions

October, November, December 2016

In the fall of 2016 the City of Charlottetown hosted three newcomers orientation sessions. These sessions were intended to welcome Newcomer’s to Charlottetown and inform them of the different services offered by the Municipality. At the December session both the Sustainability and Water/Utility Department heads spoke to the newcomer’s about their services and initiatives. These sessions were a great opportunity to engage with the newcomer community on issues surrounding sustainability such as the micro-grant program, waste management, sustainable transportation options, and energy efficiency programs offered by the province.

Rainworks

November 2016

A water repellent spray was used to write messages on Charlottetown sidewalks that only show up in the rain.

Key Objectives:

- Inspire Positivity: The main objective of this project was for the City of Charlottetown to show its residents some love on rainy days when people need a pick-me-up. The messages were chosen with the intention of inspiring positivity, optimism, and creativity in the people who came across them.
- Place-making: People enjoy seeing unique and note-able things on their City streets. This project fits that mandate as it is an unexpected approach to outreach and community engagement that citizens appreciate.

Number of People Reached:

It is difficult to gauge exactly how many people will be reached by this initiative but it is safe to say the number would be quite large. The CBC covered the story (radio, online, and compass) and it was shared almost 500 times on social media. This is not counting the number of people who would come across the strategically placed messages in high traffic areas on the streets.

Description:

The messages were created using a patented 'Rainworks' spray and stencils. The messages were printed on thick paper using the plotter printer and the stencils were cut out using an x-acto knife. In Charlottetown, on the evening of November 14th the following messages were applied and can be found at these locations:

- 1) 'Wait for the rainbow' - located at the corner of Kent and Queen st. at the crosswalk in front of the post-office facing City hall.
- 2) 'Pay it forward' - located at the corner of Grafton and Queen st. at the crosswalk in front of CIBC facing Cows.
- 3) 'Think (outside the box)''- located on Queen st. on the sidewalk in front of the library.
- 4) 'Water is life' - located on the corner of Great George and Fitzroy at the crosswalk in front of the 105.5 fishbowl facing the Olde Triangle.
- 5) 'Kindness Grows' - located on the path between Province House and the George Coles building in front of a large tree.
- 6) 'You can go your own way' - located on the UPEI campus next to the Duffy lecture theatre in front of a bike rack.
- 7) 'Find your silver lining' - located at the Charlottetown mall bus stop in front of bench.



Lessons Learned:

- Apply on clean/dry surface and check the forecast to ensure it won't rain for another 24 hours after the product is applied.
- Ensure that there is a high contrast between wet/dry on the area of concrete or asphalt chosen. Test this by spraying a bit of water nearby and see if there is a large variation in the look of the concrete when it is wet vs when it is dry. If there isn't enough contrast it may not show up enough in the rain.

Budget:

Item	Cost
Rainworks Spray + tax/shipping	\$200
24lb color bound paper	\$48
Total:	\$248

City Funding Support for Community Initiatives

In addition to the micro-grant recipients, the City's Sustainability Office has also sponsored the following community events and initiatives in 2016; Earth Day Expo 2016, Sierra Club WildChild program, the Banff Mountain Film Festival, the PEI Organic Producer's Organic Harvest Meal and the Friends of the Farm: Kite Flying on the Farm event

Sustainability Department Contributions to Community Events & Initiatives	
Earth Day Expo	\$500.00
Sierra Club Wild Child	\$1,500.00
Banff Mountain Film Festival	\$1,500.00
Organic Harvest Meal	\$520.00
Kite Flying on the Farm	\$100.00
Total	\$4, 120.0

EDUCATION

Fix-A-Leak Week

March 14-20, 2016

Officially launched by the Environmental Protection Agency (EPA) in March 2009, Fix A Leak Week is to encourage water efficiency. In 2016, the City of Charlottetown did a joint event with the Town of Stratford and Town of Cornwall.

Key Objectives:

- Engage community members to become more water efficient.
- Promote awareness as to the amount of water loss created by leaks.

Number of People Reached:

With 4' x 8" signs installed in all three municipalities in locations well-travelled by the general public, there would be a high number of people reached. A video was made and was available for viewing via YouTube as well as social media accounts being used to promote the week.

Description:

The City had two 4'x 8' signs that were professionally designed for the event a previous year. The design layout was used by Cornwall and Stratford with all signs reflecting the logos of the three participating municipalities. These signs were placed in each municipality in highly visible locations.



A Twitter account was set up with residents encouraged to submit photos of repairing a leak within their home. The City and Stratford also utilized its Facebook accounts to promote the event. The promotion also noted that residents could visit their respective municipal office for a free toilet flapper and/or free toilet tummy.

Each municipality recruited two students (Grade 4-5 level) to participate in a video. The video included the students' answers in response to set questions with a clip on them identifying and repairing a leak. The recording took place on a Saturday at Stratford Town hall with the final version uploaded to YouTube for viewing. Each student received a T-shirt that advertised the week and the municipality they represented.

Lessons Learned:

- There were some challenges with the three municipalities working together on a project. It is important in a joint project to work together, be informed, stay in contact and make sure all are providing the same information.
- There was little response to the "fix a leak" contest even though there was a prize of a low-flow toilet offered (provided by Sumner Plumbing Supply). To get a better response, more promotion in a variety of ways is recommended. An agreed to suggestion is that a removable decal promoting any contests/prizes be added to the sign.
- With the high cost of each municipality purchasing two t-shirts, having them all the same and done at the same time will reduce costs.

Budget:

Item	Cost
Advertising and website	\$470.64
T-shirts	\$101.16
Video related	\$83.24
Signage changes	\$76.30
Total	\$731.34

Grade V Education Program

Spring 2016

In 2011, the Utility provided funding to the Sierra Club Atlantic Chapter and the Grade V education program began. Prior to 2016, the Utility hired a co-ordinator to take on the responsibility of the classroom visits and organizing the field trip. The Projects Officer took on the responsibility for the 2015-2016 school year.

Key Objectives:

- Provide Grade V students with an opportunity to see where their water comes from and show the basic functions of the watershed.
- Schedule fieldtrips that include activities to give students a hands-on experience in watershed protection and restoration.
- There are nine English language schools in Charlottetown that have fourteen Grade V classes and eight classes combined with either Grade 4 or Grade 6. The objective is to include as many each year and/or develop a rotation to ensure that all schools can participate.
- The ultimate goal is to ensure that Charlottetown’s young people are connected to and feel a responsibility to their water source.

Number of People Reached:

Approximately 170 students participated in the classroom visits for 2016. This included eight classes in three schools (West Kent Elementary, West Royalty Elementary and LM Montgomery Elementary).

Description:

The program is comprised of either 2-45 minute or 1-90 minute classroom visit with a one-day field trip at Union Station late May-early June. The classroom visit includes water related activities and discussion on the water cycle and watersheds.

With the water cycle included in the Grade V curriculum, it is an excellent opportunity to educate youth about water conservation and watersheds.



A full day field trip is included with the program and is held at Union wellfield. The field trip starts with water related activities such as a game (demonstrates the importance of trees in the watershed), tour of Union pumping station, information on the Winter River watershed, and groundwater simulation. Late morning, the students walk over to the tree planting area and receive a nature talk along the way. After lunch, there is a session learning about animals of the forest and all students get an opportunity to plant trees.

Lessons Learned:

- One school went with all 90-minute classroom visits. It is difficult to hold the students’ attention in the 45 minute class and a 90-minute session needed more physical activity to keep them engaged. Any future classroom visits should be no longer than 45 minutes.
- For the program to be successful, a co-ordinator should be hired to be able to dedicate the time to have as many schools as possible participate. With a regular work schedule and the three schools wanting all Grade V classes participating, it was difficult for the Projects Officer to schedule more schools during the season.

Budget:

Item	Cost
Portable Toilets	\$272.50
Miscellaneous Field Trip Supplies	\$283.28
School Buses for Field Trip	\$758.99
Total	\$1314.77

Sustainability Workshop Series

October 2016

The workshop series consisted of (6) free workshops covering a range of topics relating to sustainability.

Key Objectives:

The objective of the series as a whole was to provide an engaging opportunity to learn about different ways to minimize your environmental impact, the City’s environmental initiatives/goals/action plans, and why sustainability is important.

The workshop series served as a good opportunity for the Sustainability Outreach Coordinator to meet community members who are interested in the topic of sustainability and interested in learning more. I was able to make some meaningful connections with presenters and community participants and learned a great deal from the overall organization and experience of the series.

Number of People Reached:

Attendance at each of the six workshops varied from anywhere between 12- 24 people. Overall the series would have reached about 90-100 people. Feedback was overwhelmingly positive from those who attended and those who didn't make it but wanted to express their appreciation and desire for similar events in the future.

Description:

- **Energy Efficiency in the Home**

When: October 6th 2016, 7-8:30PM

Where: West Royalty Community Center

Presenters: Mike Proud: Manager of Efficiency PEI, Nic Cahill: Energy Efficiency Coordinator City of Charlottetown

Nic's presentation was about 20 minutes long and he covered his role with the City and some of the energy saving upgrades and initiatives he has researched and spearheaded. He was able to provide the audience members with figures for emissions and money saved by making the energy efficiency upgrades.

Mike's presentation was about 45 minutes and covered ways to save money and increase the efficiency of your home. Lots of audience questions related to common myths and best ways to save. Presentation can be found on sustainability drive. Audience very interested in Passive Home design.

- **Climate Change 101**

When: October 12th, 2016 7-8:30PM

Where: Next Door Lounge (Merchantman)

Presenter: Hope Parnham (UPEI Climate Lab)

Hope provided a presentation on the basics of Climate Change on an international, national, and local scale. She had great visuals of Charlottetown from the Climate lab and projected influenced of climate change over the next 20-30 years. She covered what types of climate change mitigation techniques have already been implemented and new ways to deal with sea level rise, erosion, and storm surges. She had a few trivia questions on climate change throughout her presentation.

- **The Natural Home and Body**

When: October 15th 9-12PM,

Where: Health Within

Presenter: Jennifer Gallant

Jennifer talked about the basics of how she became interested in natural products and her journey into becoming a holistic practitioner. She went over some of the regulations in the beauty industry (or lack thereof), and risks associated with some ingredients and what to watch for (ie. 'fragrance'). We then made a 'natural hand sanitizer' using aloe vera gel, witch hazel, and essential oils and two natural cleaning products: a multi-purpose spray cleaner, and a gentle cleaning scrub. Jennifer purchased all the ingredients and materials needed for each person to make the products and guided everyone in the recipes.



- **Nature in the City**

When: October 15th 1-3pm

Where: Victoria Park Arboretum

Presenters: Bonnie Hayden, Daniel Roper (Fox Club Society)

Bonnie and Daniel gave a brief presentation on the importance of spending time in nature as a part of a balanced lifestyle and that it is important to make time to enjoy the natural spaces even if you live in the City. We got into teams of 3-4 and did a scavenger hunt all around Victoria Park. For the most part we had to take pictures of the items so as not to disturb any of the natural ecosystem but we were encouraged to pick up garbage we found along the way. It was a great way to get out and explore the park and natural space in the City.



- **The Conscious Consumer**

When: Oct 16, 10-1pm

Where: The Charlottetown Farmers Market

Presenters: Laura DeGrace (Green Eye Designs), Carolyn Peach Brown (Dir. Environmental Studies UPEI), Tyler Gallant (Gallant's Shellfish and Seafood)



The Conscious Consumer workshop included 2 presentations and a local lunch. Laura DeGrace provided a presentation on re-thinking how we shop to be more sustainable. She had participants do a group activity where they discussed a local event focused on sustainability that they would like to see in Charlottetown and try to plan it.

Carolyn talked about Green Washing as a marketing tactic commonly used by companies who wish to appeal to consumers and appear more environmentally and socially conscious than they are. She went through the 7 sins of greenwashing that companies commit. She had a wide variety of products for participants to inspect and consider if and how they are committing greenwashing in their packaging. She also handed out a list of recognized eco-labels to look out for when trying to shop sustainably.

Tyler Gallant of Gallants Shellfish and Seafood prepared a lunch using completely local and in season ingredients.

- **Reduce, Reuse, Recycle: Revamped**

When: October 29 10-12PM

Where: The Farm Center

Presenters: Floyd Gaudet(IWMC) + Phil Ferraro (Farm Center)

Floyd Gaudet offered a presentation on the history of the current waste management system on PEI, proper sorting, and ways to reduce waste. It was very interesting and the audience had many questions for him (very engaged). The presentation went slightly over-time cutting into Phil's time due to the large volume of audience questions. IWMC brought gift bags for each person.

Phil offered a presentation on backyard composting. This is a good way to reduce the amount of waste that you send to the compost site and gives you an opportunity to produce high quality nutrients for your garden/lawn. We finished the workshop with a tour around the legacy garden where Phil pointed out the composting system there as well as the rest of the operation and plans for the future of the garden.

Lessons Learned:

- Promotion is integral to the success of these types of events. It may be worth it to pay to boost social media ads in the future for events like this.
- Scheduling – ensure scheduling doesn't conflict with another major event. The Conscious Consumer workshop was held on the same day as the PEI marathon and that may have influenced attendance levels.

Budget:

Workshop	Cost
Energy Efficiency in the Home	\$214.00
Climate Change 101	\$213.00
The Natural Home and Body	\$620.00
Nature in the City	\$175.00
The Conscious Consumer	\$764.00
Reduce, Reuse, Recycle: Revamped	\$550.00
Promotion: Buzz Ad	\$701.50
Total Cost:	\$3,237.00

Green Storm-water Management Workshop*November 2016*

In partnership with Clean Foundation, the City of Charlottetown also hosted a Green Storm-water Management Workshop to raise awareness for the essential role of green storm-water management when adapting to increased storm-water flows due to climate change. Green Communities Canada, with their program "Rain Community Solutions", as well as Sustainable Prosperity, from Ontario presented to a large group of local decision-makers, including municipal engineers, planners, developers, community organizations and service providers on their programs. Participants learned about practical ways to implement and finance green infrastructure for storm-water management on both public and private land and how they can increase their community's resilience to climate change.

**Budget:**

Item	Cost
Sustainability department	In kind support only
Other sources of funding	\$8,000
Total	\$8,000

Fox Education

The City partnered with the PEI Division of Forests, Fish and Wildlife to update an educational brochure on reasons not to feed foxes in Charlottetown. The brochure was promoted through a public service announcement in the spring of 2016. The Sustainability Office continues to field inquiries from residents regarding foxes and intentional feeding of foxes.

Sustainability Guide

The sustainability outreach coordinator developed content for a sustainable living guide for Charlottetown residents. The booklet addresses things like waste and property management, energy efficiency, water conservation in the home, sustainable transportation, and sustainable shopping practices. It includes a removable insert of a 'sustainability checklist' that can be posted in the home and used as a benchmark of achievements towards minimizing your environmental impact.

The guide is currently with Insight Design and Marketing. They are the same firm that is working on the Integrated Community Sustainability Plan and the guide will match the design of that document.

ENERGY

This section includes capital projects as well as operational spending by both the Public Works and Sustainability departments. Projects contained herein are limited to those of which the sustainability department played a significant role. A brief summary of each project is provided along with the final cost, budget cost, and anticipated annual savings. Actual savings are currently being monitored and will be reported on once more data is available.

City Works Garage

Indoor Lighting

Indoor lighting at the City Works Garage Facility was converted to LED as per the allocated capital budget. Originally, the project did not account for a ballast replacement however, following discussions with industry experts it was determined that replacing ballasts along with the tubes would be a better investment in the long term. This additional component is directly linked to the higher than anticipated cost.

Budget Price: \$20,000

Final Price (Before Tax): \$22,882.38

Anticipated Annual Savings: \$4,153

GHG Reduction: 11 Tones CO₂e

Outdoor Lighting

The outdoor lighting at the City Works Garage facility is to be completed by the end of December 2016 as per the allocated capital budget. As of writing this document, products have been ordered from Graybar Canada and are expected to arrive no later than December 21th 2016. All work is expected to be completed by December 31st 2016.

Budget Price: \$18,800

Final Price (Before Tax): \$15,208

Anticipated Annual Savings: \$2,920

GHG Reduction: 4.9 Tones CO2e

Heat-pumps – Public Works / Utility

A number of heat-pumps were installed to provide more efficient heating and cooling to the Public Works/Utility offices as per the allocated capital budget. On top of energy efficiency, this was also completed in order to ensure occupant comfort in the space.

Budget Price: \$25,000

Final Price (Before Tax): \$19,995

Anticipated Annual Savings: Unknown

GHG Reduction: Unknown

Heat-pumps – Parks & Rec / Security

Expanding on the Public Works / Utility heat-pump initiative, the Public Works Department installed two additional heat-pumps in the Parks & Recreation and Security Booth areas. This was done primarily for occupant comfort, but will also help improve overall energy efficiency. The cost was covered entirely by the Public Works department.

Budget Price: \$0

Final Price (Before Tax): \$7,350

Anticipated Annual Savings: Unknown

GHG Reduction: Unknown

HVAC Controls -2015

In the fall of 2015, a control system was put in place to monitor and optimize the supply temperature of the boiler system at the City Garage. This project was the result of work done by Xavier Hanna – an OJT student from Holland College’s Energy Systems Engineering Technology program in the spring of 2015. This control system came complete with a front-end graphic interface and remote internet accessibility.

Budget Price: \$0

Final Price (Before Tax): \$11,650

Annual Savings: Est. \$19,400 (11.5% Fuel savings)

GHG Reduction: 51 Tones CO2e

HVAC Controls

Originally, HVAC controls in the 2016 capital budget included adding a variety of new sensors and controllable outputs to modulate air flow and supply air temperature. Due to new health and safety concerns that have not yet been addressed, the proposed project has been scaled back for the time being. The new scope of the project includes the integration of the existing air handling unit controls onto the recently installed building automation system (BAS). Once completed, the control system will enable us to build schedules, view system operation, and monitor system performance. Annual Savings and GHG reductions were based on a 20% reduction in system operation. All work is to be completed by December 31st 2016.

Budget Price: \$30,000

Final Price (Before Tax): \$6,450

Anticipated Annual Savings: \$2,120

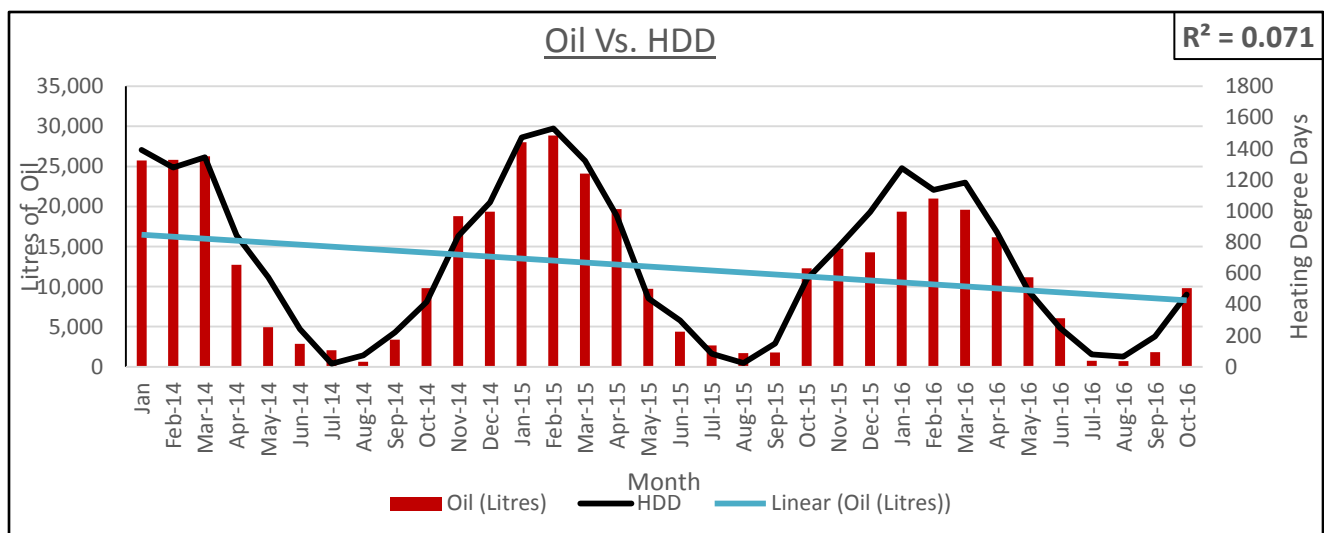
GHG Reduction: 6.05 Tonnes CO₂e

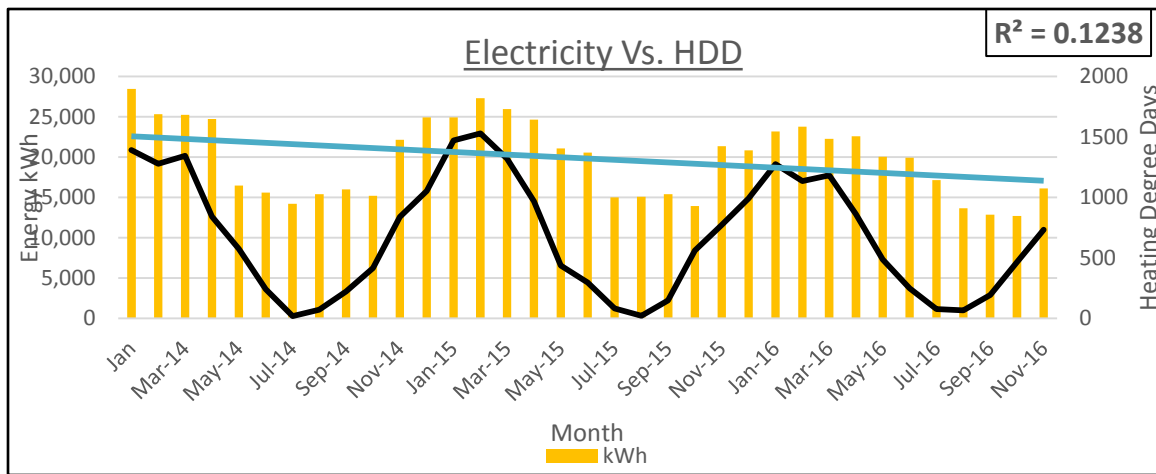
Ceiling Insulation

One of the projects slated to be completed in 2016 was the insulating of the ceiling throughout the City Works Garage facility. This project was dropped due to a dramatic increase in price and a more complex installation than originally anticipated. Following this decision, \$33,291.11 of the allocated funds were able to be transferred over to the Parkade Lighting project to cover higher than anticipated price.

Savings to Date

The two graphs below show the oil and electricity consumption at the City Works Garage on a monthly basis. They are plotted against the monthly Heating Degree Days (Number of degrees under 65F per day, per month) to demonstrate the correlation between energy use and heating requirements. As you can see, the overall energy use throughout the facility has been declining since starting energy initiatives. We are expecting to see a dramatic reduction in oil over the 2016/2017 heating season.





Parkade Lighting

Project Overview

Shortly after awarding the parkade lighting project to Hansen Electric, they commissioned a final review to be performed by Bob Sear of Richardson Associates. This review would look at all the proposed specs and confirm that they will perform as required. Unfortunately, obtaining this final review took three months, therefore setting the project back significantly. Once the review was received, there were a number of small changes to be made to the specifications. In most cases these changes were small and did not significantly impact the project, with the exception of the Pownal St. Parkade main area lighting, which now may be changed completely following more tests and reviews. Now, approaching the end of 2016, installation will start as products are delivered. We are hoping to see the completion of the Fitzroy, Queen, and (Partial) Pownal Street Parkades by the end of winter 2017.

Budget Price: \$210,000

Final Price (Before Tax): TBD

Anticipated Annual Savings: \$62,099

GHG Reduction: 122 Tonnes CO2e

Fitzroy & Queen St. Parkades

As a result of the review conducted on the parkade lighting product specifications, the Fitzroy and Queen St. Parkade lighting projects have been significantly delayed. Due to circumstances outside of our control, these projects are expected to be completed in 2017.

Final Price (Before Tax): \$202,870

Anticipated Annual Savings: \$49,550

GHG Reduction: 100 Tonnes CO2e

Pownal St. Parkade

As a result of the review conducted on the parkade lighting product specifications, it was decided that further testing would need to be done on the Pownal St. main area lighting in order to determine the best course of action. This component of the project was therefore paused for the time being. Other

areas such as the rooftop area lighting and the wall packs will be replaced in early 2017 in accordance with the revised specifications.

Final Price (Before Tax): TBD

Anticipated Annual Savings: Est. \$12,549

GHG Reduction: 22 Tonnes CO₂e

West Royalty Community Center

Heat-Pumps

Following the failure of one of the wall-mounted air conditioning units, it was decided that replacing it and the two other AC units with heat-pumps would be a smart investment as all three AC units were approaching the end of their life and operating inefficiently. This project was an initiative of the Public Works department and was paid for through their operational budget.

Budget Price: \$0

Final Price (Before Tax): \$7,500

Anticipated Annual Savings: \$853

GHG Reduction: 2.55 Tonnes CO₂e

Attic Insulation

Following the sizing of the heat-pump system, it was determined that adding additional insulation to the attic above the space would be beneficial. Consequently, it was determined that all attic spaces throughout the building should receive additional insulation as well. This project was paid for through the sustainability department's operational budget.

Estimated Price: \$12,000

Final Price (Before Tax): \$12,890

Anticipated Annual Savings: \$2,100

GHG Reduction: 5.5 Tonnes CO₂e

Roofing & Ventilation

After noticing premature decay of the shingles, it was determined that there was a need to increase ventilation in the attic spaces. Roof vents and attic vent chutes were installed to increase the airflow to National Building Code standards. This renovation was paired with the replacement of a particularly damaged section of the shingles. All expense were paid for by the Public Works department as part of regular building maintenance.

Estimated Price: \$17,650

Final Price (Before Tax): \$10,600

Anticipated Annual Savings: \$840

Conclusion

In summary, the majority of capital projects approved in 2016 have been completed. Despite delays, the large parkade lighting upgrade project is expected to be partially completed by the end of the year, with the remainder being completed in early 2017

Projects that have faced major set-backs, such as the Pownal Parkade and Air Handling Unit Controls, will still be partially completed in 2016. The remaining components of the projects will be analyzed in 2017 and a decision will be made at that time on how best to proceed.

Below is a table summarizing all of the projects budgeted for, completed, and in progress for 2016. The final cost and savings summary at the end includes only projects that will be completed in 2016. It should be noted that as of writing this document, some savings are not known (i.e heat-pumps)

Project	Budget Cost	Final Cost	Project Status	Account
City Works Garage				
Insulation	\$80,000	N/A	CANCELED	Sustainability - Capital
Office Heat-Pump (P.W / U)	\$25,000	\$19,995	COMPLETED	Sustainability - Capital
Office Heat-Pump (P&R / S)	\$0	\$7,350	COMPLETED	Public Works - Capital
MUA Controls	\$30,000	\$6,450	IN PROGRESS	Sustainability - Capital
Ballasted LEDs	\$20,000	\$22,882.38	IN PROGRESS	Sustainability - Capital
Outdoor LEDs	\$18,800	\$15,208	IN PROGRESS	Sustainability - Capital
Parkade Lighting				
Pownal St.	\$210,000	TBD	IN PROGRESS (Partial)	Sustainability - Capital
Fitzroy St.		\$168,913.44	IN PROGRESS	Sustainability - Capital
Queen St.		\$56,929.47	IN PROGRESS	Sustainability - Capital
Additional Cost (Queen & Fitzroy)	N/A	\$3.350	N/A	Sustainability - Capital
West Royalty Community Center				
Heat-pumps	N/A	\$7,500	COMPLETED	Public Works - Operational
Attic Insulation	N/A	\$12,890	COMPLETED	Sustainability - Operational
Attic Ventilation	N/A	\$10,600	COMPLETED	Public Works - Operational
Re-shingling			COMPLETED	Public Works - Operational

Expenditure (2016)

- Sustainability Expenditure: \$77,425.38
- Public Works Expenditure: \$25,450
- Total Expenditure: \$102,875.38

Savings (2016)

- Total Cost Savings: \$12,986*
- GHG Reduction: 30 Tonnes CO₂e

*Includes CWG: MUA Controls (2016), Ballasted LEDs, Outdoor LEDs | WRCC: Heat-pumps, Attic Insulation, Attic Ventilation

ENVIRONMENTAL ACTION

Brook Trout Conservation Plan

Update:

Brook trout habitat restoration efforts have been showing signs of success in Ellen's Creek. In 2016, the largest and longest smelt run ever observed and recorded occurred, as well as the first observation ever of smelt spawning below the Charlottetown By-Pass box culvert. Overall, the quantity and size of brook trout have increased and they've expanded their territory. This observation is supported by the return of angler's to Ellen's Creek.

The focus for 2017 will be on restoring a self-sustaining brook trout population in Hermitage Creek Pond in partnership with the Environmental Studies class at Charlottetown Rural. This project will allow the Hermitage Creek to fully develop its potential as a unique educational eco-system within the City.



Green Storm-water Management Demonstration Site:

The Atlantic Storm-water Initiative is a project through the Clean Foundation in Nova Scotia. They received funding through Environment Canada for a 2-year, \$200,000 project to promote low-impact development (green storm-water management) and set up demonstration sites in each of the Maritime Provinces. The goals of the project are to improve water quality, increase groundwater recharge, support healthy ecosystems, reduce erosion and reduce stress on traditional storm-water



infrastructure. Additionally, the goal is also to educate government decision makers, developers and homeowners on the benefits of slowing down rain water and allowing it to soak up into the soil instead of allowing rapid storm-water run-off from hard surfaces directly into storm sewers. All of these goals contribute to climate change adaptation strategies for municipalities.

The City of Charlottetown participated in this program and installed a demonstration site at the Simmons Arena property. This location was chosen because the Simmons Arena parking lot experiences flooding during periods of heavy rainfall when existing storm-water infrastructure becomes overwhelmed. Clean Foundation worked with CBCL to design a storm-water solution for the site that includes a combination of permeable pavers and a bio-swale. The objective is to slow down storm-water and allow it to be absorbed into the soil (rather than enter the catch basin). It is anticipated that this strategy will greatly reduce or potentially eliminate flooding in the parking lot during rain events.

The project was implemented using funding from Clean Foundation and donations from CBCL, Island Construction, Island Coastal and Earth Form to develop the site according to the site plan. Both the Sustainability Office and the Parks & Recreation Department also contributed a total of \$3,500 for the project. The overall project value is estimated at between \$40,000.



Budget:

	Cost
Sustainability Department	\$1,175.00
Parks and Recreation	\$1,175.00
Other Sources of Funding	\$36,450.00
Total	\$38,800.00

Living by the Creek

Ellen's Creek Watershed Group in partnership with the City was able to secure \$19,194 in Federal funding for a project entitled 'Living by the Creek'.

Key objectives:

- To encourage landowners to provide high quality in-stream brook trout habitat and riparian cover habitat through best management practices.
- To protect and foster the expansion of the 15m buffer zone
- Have a long term positive impact on water quality, fish habitat, and storm water management

Description:

The 'Living by the Creek' project will have individuals working directly with property owners along Ellen's Creek to address concerns surrounding riparian zone management. The project will have, \$6,420 worth of native trees, shrubs and plants planted free of charge on the properties of participating Charlottetown property owners, and on City Property. The 'Living by the Creek' project is only one example of how we, in partnership with the City, are identifying and seizing opportunities. For every dollar the City contributes, we have been successful in leveraging 4 dollars from the Federal government.



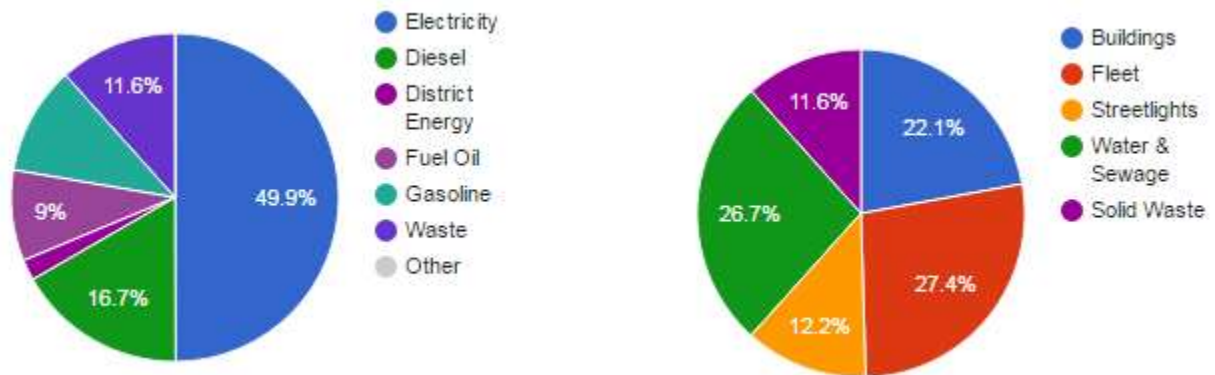
Cosmetic Pesticides Bylaw

At the regular monthly Council meeting on July 11, 2016, Charlottetown City Council passed a Cosmetic Pesticides Bylaw. The Bylaw becomes effective January 1, 2017 and will regulate the use of non-domestic cosmetic pesticides through the City. The bylaw was developed in partnership with the Towns of Cornwall and Stratford, which both passed bylaws that became effective January 1, 2016. The City continues to work with Cornwall and Stratford in its plans for implementing and enforcing the bylaw in 2017 and will deliver a cosmetic pesticide education campaign in collaboration with the two neighboring municipalities.

Corporate Greenhouse Gas Inventory

The finalized version of the corporate greenhouse gas inventory is now available for viewing through the PCP milestone one tool. This inventory provides us with crucial information about our carbon footprint and energy spending. This tool will be an invaluable resource as we continue developing our energy plan as it will allow us to set goals and better focus our efforts.

In 2015, the City Corporation was responsible for 7,592 Tons of CO₂e emissions. This number includes emissions from buildings, fleet, streetlights, water & sewer infrastructure, and solid waste disposal. These sectors also account for \$3,597,827 in spending. The two charts below show a breakdown of our emissions by sector and fuel type.



Wildlife Conservation Funding- Wright's Creek

Key Objectives:

- Reduce the levels of sedimentation entering Andrew's Pond. The sediment is produced by high levels of storm water washing away soil from unlined storm water channels and from the bottom and sides of the creek leading to the pond. This goal includes:
 - Rock lining storm water channels leading to the stream
 - Building and maintaining sediment traps
 - Monitoring the levels of siltation by measuring the turbidity of the water entering Andrew's Pond
 - Working with the City to create bylaws that will reduce erosion from storm water
 - Modifying stream bed areas to reduce erosion
- Plant trees along the watercourse.
- Develop a system of public trails along the watercourse.

- Hold public meetings and public tours of the watercourse to help engage the public in environmental improvements in the watershed.
- Investigate the possibility of creating a passage for fish around the 220 year old, 20 foot high Andrew's Dam.
- Monitor the fish population in the system and stock the pond when necessary.

Description:

Funding from the PEI Wildlife Conservation fund was provided for the development of a large, easily accessible and healthy natural area within the City of Charlottetown for nature appreciation, exercise, boating and fishing. The chosen location was Wright's Creek and the nature enhancement project was undertaken by the Wright's Creek Watershed Environmental Committee. The water quality in Wright's Creek is often deleteriously affected by nearby residential and commercial construction projects that do not handle storm water runoff in a manner that maintains good water quality in nearby streams and ponds. Although progress is being made in trying to promote better storm water management before the water reaches watercourses, there is still a lot of work needed to build and maintain siltation traps and to shore up stream banks carrying ever larger amounts of water. A lot of our work is to reduce the effects that storm water is having on Wright's Creek and Andrew's pond and in this way we are directly benefiting the wildlife that inhabit the area.



EVENTS

Earth Day Expo

The City's Water & Sewer Department, Parks & Recreation Department and Sustainability Office shared a booth at the 2016 Earth Day Expo at the Farm Centre. The booth provided information to participants on invasive species, tree care, creating wildlife habitat on your property, rebate programs and sustainability initiatives.

Garden Days

The City's Water & Sewer Department, Parks & Recreation Department, Public Works, Mayor's Office and Sustainability Office worked together to hold Garden Days in June 2016. This event includes guided walking tours, and emphasized the importance of home gardening and environmental initiatives with informational workshops on home landscape design and xeriscaping. The schedule also included a special addition of Art After Dark with a garden themed painting. Garden Days also included the annual Barrel planting competition with Charlottetown City Councillors, City Hall staff and local businesses. All events and workshops were free of charge, with the exception of the Art After Dark activity, and were open to the public.



Micro-Grant Pitch Party

6:30pm, May 12 2016

The 2016 micro-grant recipients were chosen by the public at the Micro-Grant Pitch Party held at the Murphy's Community Center on May 12th, 2016.

Key Objectives:

- Engage community members in sustainability initiatives: Opening up the sustainability micro-grant proposals to be heard by the public and voted upon by them was an effective way to include the public in the selection process. The ripples of this event may be continually felt as people who attended may have been inspired to submit their own proposals in the years to come.
- Give the public a say in where government funding is allocated: The voting process demonstrated transparent decision-making and an opportunity for the City to try out participatory budgeting.
- Promote the micro-grant program: The event expanded exposure for the micro-grant program to those outside the regular scope who would typically apply.

- The event provided a fresh, fun and engaging way to connect the community and the City in achieving shared, positive outcomes.

Number of People Reached:

Approximately 150 people attended the event. The amount of people reached through the micro-grant projects once they were put into action would be significantly higher than that number.

Description:

There were twelve, five-minute pitches made over the course of the evening and voting opened once all the pitches had been heard. Attendees were given five votes that they would cast as they chose, however, they were not allowed to vote for the same project more than once. There were snacks, coloring pages on the tables, and refreshments available. Successful grant recipients were announced at the end of the event. City



staff tallied the votes and Deputy Mayor, Mike Duffy made the announcement of the winners. In the end, ten out of the twelve projects were funded. The City plans to work with the two projects that received the least amount of votes and were not successful in receiving the micro-grant funding in hopes of finding other avenues of support or funding for them.

Lessons Learned:

- It is recommended that due to the success of this event, that the City continues to experiment with open government processes and that the format for the micro-grant program in 2017 be structured in much the same way.
- Open bowls for voting may have influenced peoples casting – they may have chosen a bowl that had more or less ballots just based on the fact they seemed more or less likely to win already.

Budget:

Item	Cost
Buzz Ad	\$400.00
Venue + Catering: Murphy's Centre	\$800.00
Promotion: Facebook Ad	\$50.00
Miscellaneous Supplies	\$80.00
Total	\$1350.00

Cycle Our City

September 11th, 2016

Key Objectives:

- Show support for cycling community and provide opportunity for newcomers/bikers of all different levels of experience to meet and learn about cycling in Charlottetown.
- Bike Safety: A Bike Rodeo was held in the events ground parking lot with the help of Peter MacFarlane of Cycle PEI and Parks and Rec staff volunteers. This component of the event was geared largely toward children but open to all. Different stations help teach about bike safety, proper bike/helmet fitting, and hand signals.
- Bikeable Routes: The event started at Hillsborough Park Community Center where bikers gathered to do a group ride to Joe Ghiz memorial park. Bikers of all ages and skill levels cycled the 4.2 km journey without incident. There were 4 'guides' who each led a group of participants. This portion of the event was intended to showcase the Confederation trail and its connectivity to different areas in Charlottetown making it each and accessible for anyone to cycle on. The City developed bike map of Charlottetown that was handed out at the event. The map outlines 'preferred' routes for cyclists and is color coded varying levels of difficulty.
- Sustainable transportation/healthy living: Increasing cycling awareness and a bike culture in Charlottetown meets the underlying objective of cutting back on emissions from motor vehicles and promoting healthy/active lifestyles.
- Basic Bike Maintenance: Peter MacFarlane of Cycle PEI (bike mechanic) offered a bike repair clinic, utilizing the bike fix it station, to participants at the event. He offered to provide simple tune ups and teach participants how to do their own from now on, utilizing their own tools or the fix it station.



Number of People Reached:

There were about 80 adults and children in attendance. The Guardian covered the event and a photo of the Sustainability Outreach Coordinator and Sustainability Officer were on the front page promoting Cycle our City. Through the Guardian article, social media posting, and CBC coverage we reached hundreds of people with knowledge that the event was happening and that Charlottetown supports cycling and cyclists in the City.

The following organizations were in attendance and contributed to the event in various ways: Brain Injury Association of PEI, Cycle PEI, The Heart and Stroke Foundation, Island Trails, and PEI Cycling Tours.

Description:

The Cycle our City event was held on Sunday, September 11th from 1-4PM. The event started at Hillsborough Park Community Center where cyclists were separated into groups, each with a experienced cyclist as a guide, before biking to Joe Ghiz Memorial Park. It was a 4.2km bike ride with minimal road exposure (most on confederation trail) and a police escort assisted at road crossings. Once at Joe Ghiz park cyclists took part in the Bike Rodeo, and Bike Repair Clinic. There were light snacks and water offered. Each registered guest received a re-usable canvas bag with the I bike Charlottetown logo on it, a cycling map, and some included other prizes (bells, bike lights, locks, etc.)



Cycle our City: Event Schedule		
Time	Location	Activity
1:00 pm	Hillsborough Park Community Center	Start time- registration check in
1:20 pm	Hillsborough Park Community Center	Commence group ride
1:50 pm	Joe Ghiz Memorial Park	Arrive at Joe Ghiz: info booths, snacks, games, prizes
2:00 pm	Event grounds parking lot	Bike Rodeo
3:00 pm	Joe Ghiz Memorial Park	Bike Repair Clinic Session
4: 00 pm	Joe Ghiz Memorial Park	End time

Lessons Learned:

- Bike Rodeo should come before group ride. The bike rodeo is a chance to ensure cyclists are aware of hand signals, have a good bike/helmet fit, and there are no major mechanical issues with the bicycle. Luckily we managed the group ride without incident but in the future the bike rodeo should be the first part of the event.
- September is a busy time for cyclists as there are many races held around this time of year. It is a good idea to connect with Cycle PEI earlier and plan a date that works well with their schedule as they are invested in the same outcomes the event is aiming to achieve.
- Events ground parking lot is a great space for the bike rodeo.

Budget:

Purchase	Cost
Giveaways/Prizes	\$300
Tote Bags/Tshirts	\$1,090.00
Logo design	\$100
Other	\$20
Bike Rodeo/Repair Clinic	\$100
Buzz Ad	\$695.40
Total	\$2,305.40

Park(ing) Day

September 16th, 2016

Key Objectives:

- Promote sustainable transportation: A large part of this global initiative is demonstrating to the public that so much 'prime real-estate' in downtown areas is allocated to parking motor vehicles. If more citizens biked, walked, carpoled, or chose transit over driving their own vehicles downtown we could transform those parking spaces into something that everyone could enjoy instead.
- Opportunity to gather feedback from the public: One feature of the 'park' was a feedback board where citizens were welcomed to share what they loved about Charlottetown, or what they feel is missing and would like to see more of. The response was overwhelmingly positive.



- Community Engagement: The ‘park’ offered many features, free of charge, that were exclusively for the public’s enjoyment. Elements such as: bubbles, sidewalk chalk, a basketball net, washer toss, seating, snacks, and a lending library were available to people all day long to stop by and take as long as they wanted to enjoy. There was also a tarot card reader, and a registered massage therapist offering free readings and massages as a way to de-stress.

Number of People Reached:

This event was a great opportunity for community engagement. Approximately 100 people stopped by the park to see what it was about, sit for a moment, or utilize some of the featured elements. City staff seemed to enjoy the set-up of the park and utilized their breaks to come and check out the park and spend some time there.



Description:

The City of Charlottetown participated in a global initiative called Park(ing) Day on Friday, September 16th 2016. On Park(ing) Day citizens all over the world occupy metered parking spaces in their city with something other than a vehicle and turn them into a space for the public to enjoy. The City of Charlottetown’s park for Park(ing) Day was located in two metered parking spaces on Kent Street beside City Hall and was open from 10AM-4PM. Jessica Brown, the Sustainability Outreach Coordinator, teamed up with members of Fusion Charlottetown (Jesse Hitchcock, Shallyn Murray, Derek Ellis, and Steve Love), Reading Town PEI (Becka Viau), the Fox Club Society (Daniel Roper) to turn these two parking spaces into a greenspace. The City’s Parks and Recreation Department and Public Works supplied materials needed for the park and assisted with set-up and tear-down.

Lessons Learned:

- In future years it would be great to promote this initiative more and perhaps bring in the business community or other community groups to participate in creating parks of their own. The more people we are able to reach the more effective the initiative will be in delivering the overarching message. We did not see much back-lash from people about the loss of those parking spaces on that day which is a positive take-away.

Budget:

Item	Cost
Snacks & Supplies	\$38.72
Tarot card reader (1hr of service)	\$75
Registered Massage Therapist (1 hr of service)	\$75
Total	\$188.72

Biz-2-Biz Expo

In October 2016 the Sustainability Department and the Economic Development Department hosted a booth at the Biz-2-Biz expo at the Eastlink Center. The sustainability department shared information about the Certified Sustainable Business program and networked with businesses and managers who were interested in taking part.

INTEGRATED COMMUNITY SUSTAINABILITY PLAN

The City's Integrated Community Sustainability Plan (ICSP) was originally adopted by City Council in February 2010. After several years of use it became apparent that an update to the original goals and objectives of the ICSP was needed. There had been significant progress in accomplishing many of the goals of the ICSP by that time and some of the structure and processes were due for a review.



In order to ensure that the updated ICSP was a true reflection of the priorities of the community, the City undertook an extensive public consultation process. Stakeholder Meetings were held in January 2016. Approximately 60 organizations, city partners and interest groups were invited to attend these focus-group style discussions hosted by a third-party facilitator. The groups were an eclectic mix of community representatives that represented different aspects of community sustainability.

Meet & Speak

On February 4th, from 1-3pm at the Delta Hotel, the City held a public visioning session, Inspired City Meet & Speak, hosted by a trained facilitator and a master of ceremonies. The goal was to give the public an opportunity to review and provide feedback on the 2010 ICSP and its implementation, and offer a chance for engaged citizens to connect and build community. City Staff and local community members facilitated and recorded discussion at each table and participants had the opportunity to comment on each of the four pillars of sustainability – economic, social, cultural and environmental. Over 200 people attended this successful session.



That same day, from 7-10pm the City hosted a Community Expo which provided an opportunity to celebrate the successes over the past five years in community sustainability and recognize the contributions of many community organizations to sustainability goals and objectives. The event provided an opportunity for residents to connect with organizations in the community and learn more about their mandates. Over 30 community groups were represented at the community expo.

Consultation & Completion:

In February-March 2016, the City distributed a public engagement survey to further seek feedback from the wider public on the original ICSP and direction for the updated ICSP. The City received well over 400 responses to the survey.

In April-May, 2016, after receiving the first draft of the community feedback for the updated ICSP, the Sustainability Officer held meetings with all City department heads and with Committee of the Whole. The feedback received from these sessions was then provided to the consultant hired to complete the report on the community consultation process and to develop a draft of the updated ICSP.

The final draft of the ICSP report was received at the end of June 2016. At this time the City hired a marketing and design firm to use the draft report to develop the final product. The updated ICSP is still under development and has been through several rounds of edits in the fall of 2016. The final product from the designer will be received by year end. The final plan will then need to be reviewed by senior management, the Environment & Sustainability Committee, the Committee of the Whole and then forwarded to Council for adoption. It is anticipated that the launch of the plan will occur in early 2017.

Budget:

Item	Cost
Consultant fees (facilitators, event support and report development)	\$11,100.00
Event fees (community stakeholder sessions, meet & speak, community expo)	\$5,000.00
Promotion (video production, advertising)	\$2,100
Graphic Design Fees	\$3,500
Total	\$21,700

PROGRAMS

Communities in Bloom

The sustainability outreach coordinator was given the task of gathering and organizing all of the 2016 information into the Communities in Bloom document. She operated off of the 2015 Communities in Bloom document, utilizing it as a template. All photos and sections were updated with information from June 2015-May 2016. A new section titled 'Signature Events' was added in 2016.

The City of Charlottetown was the winner of the Class of Champions (Medium) category. We received a 5 Blooms Silver rating and a special mention for 'Working Together'.

Dishwasher Rebate Program

June –September 2016

Introduced in June 2016, the Charlottetown Water & Sewer Utility offered a \$100 rebate to customers who purchased an Energy Star® certified dishwasher. The Utility also continued to offer a \$100 rebate to customers who purchased an Energy Star® certified clothes washer in 2016. Both rebate programs ended in September.

Key Objectives:

- Provide customers with an incentive to purchase an Energy Star® certified dishwasher instead of one that uses a higher volume of water per cycle. Energy Star® certified dishwashers use about 20% less water and 10% less energy than standard dishwashers.

Number of People Reached:

There were 55 applications with 50 being approved. There was a press release issued June 17th followed up with brochures being available at the payment and Utility counters, information available on the City's website with a link to it from the Be Water Friendly website, and advertisements in "The Buzz".

Description:

There were 50 rebates available at \$100 per rebate. It was very well received by customers and the rebates were quickly used. The applicant was required to be a water and sewer customer and the purchase was to be an Energy Star® certified dishwasher.

The applicant was required to complete an application form and submit it with the original receipt and a copy of the EnerGuide that comes with the dishwasher.



Lessons Learned:

- Although the rebates went quickly, a review of the applications indicate that the program was probably not reaching customers who needed the financial assistance in order to be able to upgrade their purchase to an Energy Star® certified model. With this in mind, the Utility will be looking at other programs that may be of more benefit to financially assist its customers in upgrading to reduce water consumption.
- By replacing an old and inefficient dishwasher with an Energy Star® certified one, water use can be reduced by nearly 3,790 L/year (3.79m3). At a consumption cost of 0.844/m3, the rate of return on the \$100 investment is longer than the life of the dishwasher.

Budget:

Item	Cost
50 rebates at \$100 each	\$5000.00
Advertising	\$279.04
Printing (estimate)	\$50.00
Miscellaneous Supplies	\$80.00
Total	\$5409.04

Community Sustainability Micro-grant Program

The Community Micro-grant Program was developed in 2011 in order to support community groups and individuals in their sustainability-focused projects that support the goals and actions of the City’s Integrated Community Sustainability Plan. In 2016, the budget for the grants was increased from \$15,000 to \$20,000 in order to support more projects.

2016 grants approved - \$20,700 final expenditure: \$20,200

2016 Micro-Grant Recipients

1. PEI Food Exchange - Community Food Preservers Program

The Community Food Preservers program (CFPP) will be offered to individuals who are interested in teaching canning and food preservation methods (drying, root cellar technology, fermenting, freezing) and sharing this knowledge in their community. Properly preserving locally grown food to maximize nutritional value, increase food security, and promote sustainability is the CFPP’s goal. Mastering this heritage skill and passing it on to others will allow members of the community to have access to locally grown, nutritious food all year round.

2. **Betty Begg - Buy-Local, Eat-Local Community Kitchen**

Buy-Local Eat Local Community Kitchen will provide hands-on training on how to source and prepare good healthy food on a low income budget. The project will focus on a variety of different food related skills to provide students with a broad range of applicable knowledge in the kitchen. Examples of skills training include: Safety in the kitchen, packing and storing food, proper knife use, meal planning, sourcing healthy food at best price, recipes, buying local.

3. **Patricia Borque - My Two Worlds**

This photography exhibit at the Guild will showcase Mi'kmaq culture and dancing against the backdrop of urban and rural PEI landscapes. It will be held from June 22nd- July 3rd 2016. The artist, Patricia Borque, captures and expresses her experience of being a Mi'kmaq on Prince Edward Island through the lens of her camera.



4. **Fusion PEI - Solar Powered Mobile Phone Charging Station**

Fusion has been working on the design of a semi-portable solar powered charging station for mobile devices to both inform and inspire users to consider the potential and current availability of solar power in our everyday lives. The station will be set up in a busy public location such as around Vic Row where people can plug in for a few minutes and get a free charge for their phone. It will also serve as an educational tool with infographics built into the station with content pertaining to the benefits of solar energy. Fusion is working with Birdmouse, an artisan woodworking shop in St George's, to come up with a novel design.

5. **The Farm Centre - Breaking Ground Workshop Series**

The Farm Centre Legacy Garden "Breaking ground: workshop series is an extensive series of hands-on workshops that will provide fun, informative, and engaging opportunities for Islanders of all ages. A few examples of workshops being offered are: Introduction to planning and planting your own home garden, Cooking with seasonal food, Building accessibility garden beds for the elderly and people with mobility impairments, Planting fruit trees, maintenance, and pruning, and How to grow nutritious mushrooms indoors.

6. **Reg Porter - Trinity United Church**

The History and Archives committee of the Trinity United Church in Charlottetown want to showcase and inform the public about the unique architecture of the Trinity United Church. This

project is part of an awareness campaign of the wonder of this historic church - one of three public buildings present when the Fathers of Confederation met in 1864. Reg Porter is very well versed on the building's structure and history. He will deliver the presentation in an entertaining, engaging manner for the enjoyment and learning of all who attend.

7. UPEI Food Collective - Panther Pantry

The UPEI Panther Pantry Food Collective addresses food insecurity on campus by preparing and serving healthy, locally supported lunches to students, free of charge. The Panther Pantry is operated exclusively by student volunteers and provides food for 50-100 students on serving days. The student volunteers would use the funds provided by this micro-grant to renovate their kitchen to allow them to maintain this much needed service on campus.

8. Chris Sallie - Charlottetown Junior Sous Chef Program

The Charlottetown Junior Sous Chef Program is an interactive and inclusive program aimed at youth age 8-16 that seeks to improve health and wellness through food literacy, foods skills training, and kitchen confidence. Over the course of 6 classes and 1 field trip, we will provide hands on workshops that focus on key areas of meal planning while allowing the children to work in an environment that is safe and fun. The goal is to reach 80 children with the help of this micro-grant funding.

9. BGHJ Architects - Urban Bee-Hive

BGHG Architects in Charlottetown have come up with a creative and innovative project seeking to educate the public on the importance of honeybees in relation to food security and sustainability in the community. They have designed four honeybee hive structures to be placed at the Farm Centre Legacy Garden. The hives will be fully functional for housing honeybee operations and will provide an aesthetically pleasing interactive learning platform for the community.



10. Sperenza - Bike Co-op

Sperenza plans to operate a bike co-op in downtown Charlottetown. A variety of bikes and helmets will be available for people to sign out and use free of charge. It allows persons of all ages and economics the joy of riding bicycles, helping to create a healthier happier City. It targets tourists, persons on fixed incomes and families living apartments who would otherwise not have the opportunity of having a bike.



Treekeeper Mobile Programming

September 2016

Key Objectives:

- Increase efficiency of operations for City staff in urban forestry. This software will allow for easy access to the inventory data and allow for real-time updates directly from the field.

Description:

The Treekeeper inventory project has streamlined the City's process of tree management and is an asset to administrative staff, field staff and management. The inventory provides information on the location, species, age, health, pruning needs and ownership of each street tree in the City, along with several notable park trees. It makes identifying work needs, developing maintenance schedule and resolving disputes on ownership and responsibility much easier and faster for staff. In order to further enhance the usefulness of the software the City invested in TreeKeeper Mobile® for use in the field. Before implementing this software information had to be compiled by pen and paper in the field and then returned to the office to be manually entered into the inventory software. With TreeKeeper Mobile®, changes can be made to the inventory in the field from any location in the City.

Budget:

Item	Cost
Broadband enabled tablet	\$875 + tax
Annual software license	\$400
Service fees	\$466.47
Total	\$1,741.47

Certified Sustainable Business Program

November 2016



Key Objectives:

- The main objective of this program is to encourage sustainability in the workplace. The program is intended to educate, assist, and reward businesses on making changes in their business operations to be more sustainable. The sustainability checklist is a comprehensive overview of different ways that they can minimize their environmental impact and maximize their positive impact on the community.

- Promote businesses who make an effort to operate sustainably. The spotlight article in the Buzz is a way to provide extra promotion to businesses that become certified under the program. There are other avenues for exposure on the City’s social media and website.
- Complete the goals and actions in the Integrated Community Sustainability Plan by working with the business community to achieve these goals. The business community in Charlottetown is directly linked to all 4 pillars of sustainability outlined in the document (Economy, Environment, Social, Culture). Including them in the City’s goals is a major step towards achieving them.

Number of People Reached:

The program was launched November 1, 2016 and so far we have gone through the process certified one business, Buns and Things Bakery. We have had 4 other businesses express interest in the program and they are currently going through the first step of reviewing the checklist in comparison to their business operations. Our goal is to work with one business per month and have them certified.



Description:

This program is open to all Charlottetown businesses to voluntarily participate. It is comprised of a checklist of sustainable practices that we feel are attainable and worth striving for. If a business meets the required number of checklist items/points to be deemed a City certified ‘Sustainable Business’ they will receive certification and a logo marking their certification status to display in the workplace for employees and patrons to see. Each month a spotlight will be placed on one of Charlottetown’s Sustainable Businesses and they will be featured on the City’s social media accounts, website, and in the Buzz with an additional description of what makes this particular business a star in sustainability. This program is open to all Charlottetown businesses to voluntarily participate. Part of the certification process includes a site visit where the sustainability outreach coordinator, the energy efficiency coordinator, a water conservation expert, and a staff member from IWMC will visit the business and identify ways that they are already operating sustainably, and suggest some improvements that will help minimize their environmental impact in each of the categories on the checklist.

Lessons Learned:

- It is challenging to utilize one checklist for all different types of business which is why the site visit is so important. This gives a good opportunity to review that businesses unique challenges and efforts.
- Businesses that are operating in buildings that they do not own are limited in what they can do to operate sustainably in the workplace but this is a good opportunity to appeal to the building owner or managers and help them see more sustainable ways to operate.

Budget:

Item	Cost
Graphic Design (logo, checklist, decals, certificates)	\$1144.25
Buzz ads (November + December)	\$800.40
Total	\$1,944.00

Skunk and Raccoon Removal Program

The City’s Sustainability Office continues to offer a free service for residents that encounter issues with skunks and raccoons on their property. Residents must ensure that all potential locations for skunks and raccoons to create their dens on their property are secured. The removal service is offered by a local pest management company. Residents can contact the City to make arrangements to have the skunk or raccoon trapped and removed from their property.

TRANSPORTATION

Cycling

UPEI, PEI Climate Lab and City of Charlottetown Bikenomics Project

In partnership with the UPEI Business School and the PEI Climate Lab, the City participated in delivering a 3rd year business course focused on the theory contained in the book *Bikenomics: How Bicyling Can Save the Economy*, which states that not only can cycling improve community health and save individuals and cities money but that it can also generate economic wealth.



Eighty students were broken down into thirteen teams and then were required to conduct a business case analysis of one aspect of cycling infrastructure. The projects tended to fall into three categories; investments in cycling infrastructure; implementation of bike share networks for tourists and residents; and school-age education programs. The presentations were completed during the month of March and were evaluated by Dr. Adam Fenech (UPEI Business School Professor and Director of the PEI Climate Lab), David Simms (Cycling PEI), Derek Ellis (UPEI Ph.D. Student and avid cyclist) and Ramona Doyle (SO). This panel narrowed down the presentations to the top four groups.

These finalized presented their projects to members of Council and the City management team and were awarded cash prizes for their effort.

The course has also led to a strong partnership being built between the City, the Climate Lab, the UPEI Business School and Cycling PEI and could lead to further collaboration on this topic in the future. All of the final reports will be provided to the City for further review or for use as background material on any cycling project the City may want to implement in the future.

Total cost for prizes (City) - **\$1,000**

Bike Racks

The City of Charlottetown added four new bike racks in the following locations:

- Simmons Arena
- Hillsborough Park Community Centre
- West Royalty Community Centre
- Malcolm J. Darrach Community Centre

This initiative was a partnership between Parks and Recreation and Sustainability. Parks and Recreation created a bike rack inventory of all of the existing bike racks in Charlottetown and from this we identified where there was an existing need for more bike infrastructure. The sustainability outreach coordinator worked with the Planning Department and Parks and Recreation to decide on the best design for the new bike racks.

The cost of the bike racks was: **\$540.00**

Bike Fix-It Station

One of the cycling initiatives put forth was the implementation of a bike fix it station in Charlottetown. Bike fix it stations provide all the necessary tools and equipment for a cyclist to manually perform routine maintenance and tune-ups to their bike. The Bike fix it station was installed at Joe Ghiz Memorial Park for its proximity to the Confederation Trail, the downtown core, and the Holland College campus.

The cost of the bike fix it station was: **\$2,265.00**

Bike Map

The sustainability department joined forces with Parks and Recreation, the Planning Department, and avid cyclists in Charlottetown to develop a 'Preferred Cycling Routes' Map of Charlottetown. The map showcases a color coded legend of bikable routes in Charlottetown based on their trail type and level of difficulty. The map also displays all bike rack locations, the bike fix it station, community centers, and other major landmarks or places of interest.

The map was designed and printed in house so did not cost any additional funds.

Cycling projects Budget:

	Cost
UPEI 'Bikenomics' Project	\$1,000.00
Bike Racks	\$540.00
Bike Fix it Station	\$2,265.00
Bike Map	\$0.00
Total Cost	\$3,805.00

Transit

2016 has been a very successful year for public transit. With one month remaining for reporting, ridership is anticipated to exceed 450,000 riders in Charlottetown which would represent a 16% increase over 2015 which had a total annual ridership of 387,551.

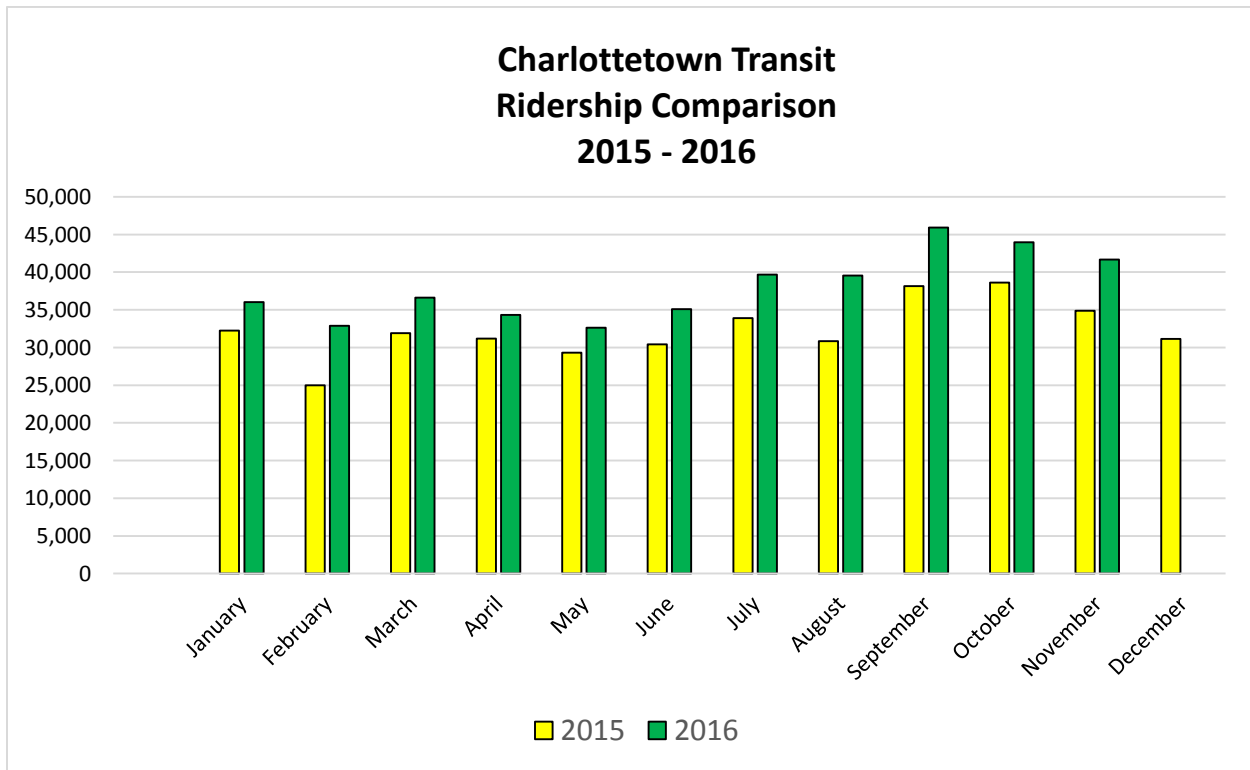


Table: to be updated with December statistics in January 2017.

Pilot Projects & Trials

One trial program was implemented in the City in 2016 which included providing 5-day per week service to Geneva Villa. The service provided one drop-off and one pick-up each day, Monday through Friday and brought riders to the Grafton Street bus stop downtown where they could connect with other routes.

Marketing & Outreach

T3 Transit participated in a variety of outreach and marketing activities in 2016 including several information sessions at UPEI, sessions at Holland College, participation in the City's Meet & Speak Event in February, participation in the Earth Day Expo in March 2016, participation in the City's three newcomers orientation sessions in the fall of 2016. These sessions enable residents to speak directly with T3 transit operators and staff and learn more about how the transit system can work for them.

A RideGuide was developed in October 2016 which pulls together all transit schedules into one fold-out pocket-size pamphlet. These RideGuide schedules are a major improvement for riders. RideGuides can be found in the Tourism Centre at City Hall as well as at the main reception desk on the main floor of City Hall.

Fleet Renewal

In August, 2016 following the formal federal announcement of the Public Transit Fund, the PEI Department of Transportation, Infrastructure, and Energy announced Federal funding of over \$515,000.00 and Provincial funding of over \$257,000.00 for T3 Transit Bus Upgrades. In order to access this funding, the municipalities had to also contribute 25% of the total project cost (\$257,000). These contributions were split according to the standard cost-sharing formula between the three municipalities for transit operation – 75% Charlottetown, 25% Stratford and 10% from Cornwall.

The Capital Area Transit Coordinating Committee, which includes the CAOs of Stratford, Cornwall and Charlottetown as well as the City's Sustainability Officer and the City's Records Management Clerk, worked with the T3 Transit operator to purchase eleven buses from Calgary that were shipped to PEI and have been completely refurbished and rebranded for use in the three municipalities. As of November 30, 2016 ten of the eleven buses were in regular service and the feedback from the community on the look at feel of the new buses has been overwhelmingly positive.

The buses are 24 passenger and are fully accessible. They have directional displays on the front and side making it easier for riders to know the end destination of the route they are on. Bike racks have been purchased for each of the buses and they will be installed in the spring of 2017. The project will also include installation of automated vehicle location (AVL) hardware, security cameras and will be equipped with free Wi-Fi for riders.



Budget:

Item	Cost
Purchase & refurbish (11) buses	\$810,000.000
City contribution (total)	\$152,000.000

YOUTH INTERNSHIP & EMPLOYMENT

The City's Sustainability Office hosted two Holland College interns in the spring of 2016.

Energy Systems Engineering Technology Intern

Nathan DeHaan a graduate of the Energy Systems Engineering Technology program at Holland College worked with the Sustainability Officer and the Energy Efficiency Coordinator to identify energy saving opportunities at West Royalty Community Centre. His preliminary research has been instrumental in identifying energy savings opportunities that were implemented in the fall of 2016 and in identifying capital projects for 2017 efficiency upgrades.

Sustainability Outreach Coordinator

Jessica Brown, a graduate of the Environmental Applied Science Technology program worked with the Sustainability Officer on several outreach and education initiatives including the Micro-grant Pitch Party.

The Sustainability Officer identified an opportunity to work with Career Development Services and access funding from their Career Pathways program to create a 22-week position for Jessica Brown as a Sustainability Outreach Coordinator. This program is geared at graduates under the age of 30 and provides funding at \$8/hour for a four month term. The employment term has since been extended until March 31, 2017 as it has been clearly identified that the Sustainability Outreach Coordinator plays a significant role in moving the City forward in its sustainability objectives.

Budget:

Sustainability Outreach Coordinator- Contract Position	
Sustainability Funding 2016	\$13,000.00
Career Development Services Funding 2016	\$5,280.00
Total	\$18,280.00