

Ms. Kristen Evers
250452380
17 Willow Wood Court
Stony Plain, Alberta
T7Z 0E4

August 17th, 2012

Dr. Ian Colquhoun
Chair, Masters of Environment and Sustainability Program
University of Western Ontario
109 Western Science Centre
London, Ontario
N6A 5B7

Dear Dr. Colquhoun,

I am pleased to present to you my final co-op report for the Masters of Environment and Sustainability program, "A Summer in Parkland County". From May 2012 – August 2012 I held the position of Sustainability Summer Student with Parkland County. My direct supervisor was Gabriel Clarke, Sustainability Services Coordinator.

I am the sole author of this report and its contents are pending approval from my employer. Confirmation of approval will be supplied to the Masters of Sustainability Program upon his return from vacation.

Sincerely,



Kristen Evers

A Summer in Parkland County:
M.E.S Final Co-op Report

Kristen Evers
250452380
Sustainability Summer Student
Parkland County
August 17th, 2012

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1.0 Introduction:

The final co-op term of my Masters of Environment and Sustainability (M.E.S) was spent working as the Sustainability Summer Student for Parkland County, Alberta, a municipality located directly west of Edmonton in central Alberta. I was employed in this position from May 7th, 2012 – August 22nd, 2012, and worked under the direct supervision of Gabriel Clarke, Sustainability Services Coordinator, a former M.E.S graduate. As the Sustainability Summer Student, I worked for the Department of Sustainability Services.

Bordered by the North Saskatchewan River to the south, the Pembina River to the west and Edmonton to the east, Parkland County is a municipality of modest size with a population of just over 30,000 (Parkland County, 2011). Although the majority of residents reside on country residential acreages and farming properties, given its close proximity to the province's capital, the county does not lack access to major amenities.



Figure 1. A pumpjack in Parkland County

Parkland County is a community rich in agriculture where canola fields are a common sight in the summer months. However, the county is likely most well known for its presence in the oil and mining industry. The oil well (Figure 1) is perhaps the most common image associated with Alberta and Parkland County certainly fits this stereotype. Scattered amongst farmers fields and alongside highways, one does not have to venture far to catch a glimpse of a pumpjack at work. Gravel mining is also popular in the county, however it is that of coal mining which is most prominent in Parkland County. The Highvale Mine (Figure 2), Canada's largest surface strip coal mine, is currently the only active mine in the county (TransAlta, 2012). In



Figure 2. Highvale Coal Mine

2010 Parkland County's Whitewood Mine ceased operations when the Wabamun power plant retired. As of 2012, 95% (1,804 hectares) of the Whitewood Mine have been reclaimed (TransAlta, 2012).

In recent years Parkland County has demonstrated a strong commitment to sustainability. An Integrated Community Sustainability Plan (ICSP) has been developed and the county has taken great strides in accomplishing the many goals outlined in the report since it was first approved by Council in the summer of 2011. Additionally, an Environmental Advisory Committee (EAC) was established in 2012. The EAC, comprised of members of council, county employees and residents representing various sectors, meets on a monthly basis to discuss and resolve environmental issues impacting Parkland County.

2.0 Overview of Roles and Responsibilities:

As the Sustainability Summer Student for Parkland County, I assisted the county's Sustainability Services Coordinator with most initiatives which the Sustainable Development Services Division was a part of. Although my routine varied from week to week, the following is a general description of a typical day:

Nearly every workday began in the trailer (Figure 3) – a portable occupied by ten county employees from various departments. My morning routine usually began with checking emails and phone messages and then responding to them accordingly. Once this task was completed I



Figure 3. Parkland County trailer

would begin my work for the day which ranged anywhere from researching metrics for the State of the Environment report, to organizing orders for our rain barrel and composter sale.

Throughout the course of the summer I also sat in on a number of meetings. Although this was not always the case, meetings often took place in the afternoon or evening. The meetings I most frequently attended were for the Environmental Advisory Committee (EAC), the Alternative Land Use Services (ALUS) expansion, and the Capital Region Municipal Sustainability Group (CRMSG).

My work environment at Parkland County was a very positive one. Working in close quarters with the Sustainable Services Coordinator meant that I could easily ask questions when needed. As well, although the other occupants of the trailer were not part of the Sustainability Department they were all quick to assist me with my inquiries. When I first discovered that I would be working from a trailer this summer I was concerned that this would isolate me from interaction with other county employees. In retrospect, I believe working in the trailer was to my benefit as it was a quieter workspace and I was able to get to know those coworkers who worked in the trailer on a more personal level.

Although supervision was available when required, the majority of my work was done independently. For the better part of the month of August both my supervisor and his superior were on vacation. As a result, during this time I did not have direct access to anyone with a “sustainability” background. The work that I completed during my summer with Parkland County aligned predominantly with the county’s Integrated Community Sustainability Plan (ICSP). This document outlines sustainability goals for the county and provides suggestions on how these goals can be realized. The majority of my job objectives were aimed at addressing these goals.

3.0 Reflections on the Work Term:

Having completed the academic components of the M.E.S. program I felt well prepared to begin my role as Sustainability Summer Student at Parkland County. Course content was especially integral to my success in completing the resident education campaign. The articles I composed for this campaign covered a variety of themes, all of which are listed below. I was able to discuss at length things such as eutrophication due to my exposure to varied environmental topics while taking M.E.S courses.

As well, my involvement with the City of London and the Thames River Clear Water Revival Project for my consulting project helped prepare me for working in the municipal sector. Through this project I gained experience working with a variety of stakeholders including individuals representing First Nations groups and municipal government employees. As the Sustainability Summer Student I have had to engage residents, members of council and county employees on varying matters.

Municipal government is known to be slow-moving in nature and I certainly experienced this at Parkland County. Here at Parkland, we are lucky to have staff, council and residents that are eager to take on sustainability initiatives. Unfortunately, due to the necessity of accountability, it often takes a long time for programs and initiatives to begin since approval needs to be granted from a number of individuals to move forward.

The following are the learning objectives I was presented with at the beginning of my work term and a description of my achievement for each objective.

3.1 Integrated Community Sustainability Plan (ICSP) Education Campaign

The county's Integrated Community Sustainability Plan (ICSP), which was rewritten in 2011 by last year's M.E.S. co-op student, called for an extensive education campaign for

residents and employees. As the Sustainability Summer Student, it was my responsibility to design, develop and deliver the campaigns. From a county perspective, this task was important to accomplish as it was mandated in the ICSP, and in order to display accountability the county is required to demonstrate that ICSP objectives are accomplished in a reasonable amount of time.

The resident education campaign required that the

following themes be incorporated:

- Water conservation
- Waste water
- Energy (green energy efficient technology)
- Green construction and renovation
- Transportation related emissions
- Reducing synthetic pesticide and fertilizer use
- Recycling and composting
- Reducing off-highway vehicle use in environmentally significant/sensitive land

To educate residents on these topics I developed a number of communication pieces. I began by designing website content which was then uploaded onto the county website. Once that was completed, articles were researched and composed to be printed in local newspapers. These articles will provide residents with information on sustainable living on a monthly basis from July 2012 to May 2013.

The themes to be incorporated in the employee education campaign included:

- Fleet-idling reduction
- Green purchasing
- Solid-waste, composting and recycling

For the employee education campaign I ended up focusing mostly on the solid-waste, composting and recycling theme. Prior to my arrival at Parkland County, recycling bins were purchased to be used by employees at the County Centre and the County Services Building. To



Figure 4. Employee recycling poster

inform employees on how to properly sort their waste I assisted in the design of an informative poster (See Figure 4). The poster now hangs above lunchroom recycling stations and outlines the importance of sorting waste and how to properly sort. Additionally, I have designed a PowerPoint presentation that will be presented to employees at a “lunch and learn” in the coming weeks.

3.2 State of the Environment Report

In its first meeting, the Environmental Advisory Committee (EAC) decided that a report on the current state of the environment should be created to help identify areas of need within the county. To prepare for the county’s first State of the Environment Report, it was my responsibility to locate, compile and analyze historical data, obtain current research results and identify the need for additional research. Data was collected predominately through government resources and compiled into a single document. The findings will be presented to the EAC when it reconvenes in September and then the composition of Parkland County’s State of the Environment Report will commence.

3.3 Partners for Climate Protection

The Partners for Climate Protection (PCP) program, supported by the Federation of Canadian Municipalities, is a network of municipalities across Canada that have committed to reducing greenhouse gas emissions. Parkland County has expressed interest in this program as it provides a framework for assessing a municipality’s greenhouse gas emissions and would also help to recognize the county as a municipality committed to environmental sustainability.

PCP has established five milestones for municipalities to attain, and one of the deliverables for my job description was to work towards the completion of milestone one – creating a greenhouse gas inventory and forecast. Although the process of taking an inventory

and making a forecast has not yet begun, I have been in contact with the PCP Program Officer and have acquired all of the materials needed to begin the first milestone.

3.4 Intelligent Communities Award

Preparing a Smart21 Intelligent Communities Award was an additional objective outlined in my job description. Although the application for this award has yet to be completed, I assisted with the collection of baseline metric data. My research focused on “knowledge workforce” and assessed educational attainment, the number of computers in schools and access to higher education within the county. If and when the county qualifies for the Smart21 Intelligent Communities Award, Parkland County would then be in the running for the top 7 Intelligent Communities Award. The end goal of this award system is to be granted the 2013 Global Intelligent Community of the Year Award, which internationally recognizes a community that is leading the way in information and communication technology.

3.5 Commercial Lighting Lifecycle Costing Program

This past year, Parkland County’s Sustainability Services Coordinator has been working on creating a lighting lifecycle costing comparison computer program to allow consumers to compare the full cost of various lighting technologies. The goal is to create a smart phone application with Parkland County’s brand that would be universally accessible. Initially it was anticipated that I would act as the resource person for this program. However, as the summer progressed, and I took on other responsibilities, our Sustainability Services Coordinator remained the main resource person.

3.6 School Board Partnership

A school board – county partnership would provide the County with an opportunity to address a number of ICSP objectives while actively engaging and educating youth. A possible objective discussed in my job description was to explore the possibility of a school board partnership and develop one if appropriate. I did open up communication with employees of the local school board, however by the time I began at Parkland County it was too late in the academic year for a new project to begin. On a positive note, a meeting has been scheduled for the end of August where discussions on a school board partnership will be had. Although I will not be in attendance, I have created an agenda for the meeting and have put forward some ideas of the type of programs that could be cultivated by a partnership.

3.7 Alternative Land Use Services (ALUS) Expansion

When I arrived at Parkland County, Alternative Land Use Services (ALUS) expansion within the county was in its infancy stages. On May 17th, 2012, I attended a tour of Tomahawk Cattle Ranch for the purpose of assessing the feasibility of having an ALUS project at this location. It has now been determined that Tomahawk Cattle Ranch will be the site of Parkland County's pilot ALUS project, and it is hoped that in the future, an ALUS project will be established in each of the county's six divisions.

ALUS provides farmers and land owners a monetary incentive to protect environmentally sensitive areas. Currently, the County of Vermillion River is the only municipality in Alberta where ALUS projects are in operation. Establishing ALUS in Parkland County will help recognize the County as a municipality that is taking an active role in environmental conservation. As well, ALUS projects could help to improve the state of the environment within the county.

My involvement in the ALUS expansion at Parkland County included attending an ALUS conference in June, preparing articles for the county website and local newspaper, preparing content for a brochure to be distributed to county residents and attending meetings with county staff and ALUS representatives.

3.8 Rain Barrel and Composter Sale

Although involvement in the county-wide rain barrel and composter sale was not listed in the objectives of my position, a large portion of my time at both the beginning and end of my work term was dedicated to this initiative. Orders for our spring sale were taken prior to my arrival at Parkland County. Over 700 units of rain barrels, composters, compost turners and kitchen bins were purchased for county residents and in mid June we spent five days distributing orders. The positive response from residents was far greater than we had initially anticipated and as a result it was decided that an additional sale would be advantageous during the fall. Since mid July I have been receiving orders through email, phone and in person and compiling orders in a spreadsheet. This past week orders were submitted to our distributor and we expect to have the items available for pickup by mid-September.

To advertise for our fall rain barrel and composter sale I composed articles that were printed in three local newspapers. Information was also posted on the county website and a display was created in the foyer of the County Centre building. One of the priority areas indicated in the ICSP is “resident participation and local sustainability issues”. The rain barrel and composter sales addressed this priority area by encouraging residents to reduce their household waste through backyard composting, and conserve water by harvesting rain water using rain barrels.

4.0 Opportunity for Professional Development:

Prior to commencing my co-op position, my professional background was mainly focused on education, and more specifically environmental education. As I approach the end of my term with Parkland County, I feel significantly more confident as an environmental professional. Working as the Sustainability Summer Student has exposed me to the concept of sustainability in the context of municipal government. Although I am uncertain whether my future career will involve working for a municipality, I have found this experience to be incredibly valuable. I believe that having a strong understanding of the functioning of municipal government will prove to be beneficial in the future whether I find employment in the non-profit, public or private sector.

This summer I was presented with a number of opportunities to engage in new learning and growth. The experience which I found to be most rewarding was the two-day ALUS workshop and tour in the County of Vermillion River, *Growing a Healthier Environment*. Individuals from across the country participated in this event to learn about the functioning of ALUS in different provinces and to witness first-hand, ALUS projects in operation. This workshop proved to be quite informative and was also a great networking opportunity. Through this experience I was provided with a greater understanding of the effectiveness of ALUS projects and the benefits that they are capable of providing communities.

I also participated in a number of webinars this summer that I found to be quite enlightening. The first webinar I attended was Small Communities and Solar, put on by ICMA University. This webinar discussed the financial concerns some municipalities face when going solar and included talks from representatives from municipalities that have successfully installed solar technology at their facilities or within their community. The webinar was especially

relevant to Parkland County as it focused on small communities, and “going solar” is something the county is interested in doing. Additionally, I attended the Social Media and FuellingChange™ Webinar put on by Shell Canada. This webinar focused on how to promote a project (specifically the FuellingChange™ contest that Parkland County is enrolled in) through social media. I believe the content of this webinar will be very helpful to me in the future as many organizations now rely on social media outlets to promote themselves and their initiatives.

I found the Natural Step webinars to be a rewarding experience overall. These webinars provided a platform for reflecting on our co-op experiences and proved to be a good opportunity to remain in contact with classmates. Having the opportunity to share, as a class, the problems and successes we each were experiencing in our positions was what I found to be most beneficial. I feel that my previous work experience prior to commencing the M.E.S. program, prepared me with strong problem-solving skills in a work setting but believe that much of the content of the Natural Step webinars would be especially relevant to students with little professional experience.

Overall, I have experienced significant personal growth these past four months. The small size of Parkland County exposed me to a variety of experiences that I likely would not have had the opportunity to participate in had I been employed by a larger municipality. From this experience I have also gained better insight into the environmental issues that are affecting the province of Alberta. I am pleased with my decision to move west for the summer and have found my time at Parkland County to be both rewarding and fulfilling.

5.0 References

Parkland County. (2011). About Us. Retrieved from http://www.parklandcounty.com/About_Us.htm

TransAlta. (2012). Highvale Mine. Retrieved from <http://www.transalta.com/facilities/mines-operation/highvale-mine>

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PHOTO RELEASE

I acknowledge that the photographs included in my final report, were taken of, or by, me during my MES Co-op Work term, between May 1st, 2012 - August 26th, 2012.

I release all my rights and consent to the use of these photographs for all legal purposes (including, without limitation, advertising, display, editorial, packaging, promotion, television, etc.) by Western University.

Name: Kristen Evers

Address: 17 Willow Wood Court, Stony Plain,
Alberta T7Z 0E4

Phone number: 587-336-5356

E-mail: kevers2@uwo.ca

Signed: k. evers

Date: August 17th, 2012

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