Waste and Recyclable Materials Audit
Thompson Rivers University,
Kamloops, British Columbia

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Executive Summary

Thompson Rivers University (TRU) engaged the services of Waste Naught BC in March 2015 to undertake the first formal waste audit of the university's solid waste stream. The three main purposes of doing the audit were to 1) provide a baseline measurement for waste reduction performance measures, 2) to measure current waste diversion performance and 3) to determine the composition of waste going to landfill in order to determine the types and sources of waste generated on campus.

TRU diverts roughly 42% of its waste through recycling and composting. From Summer 2014 through Winter 2015 TRU generated an estimated 422 tonnes of material; landfilling 247 tonnes and recycling and composting 175 tonnes of waste over the period.

The audit included measurements of waste and diverted materials over a one-week period from March 9 - 12, 2015 for the major waste streams (garbage, mixed recycling, beverage containers, compost, cardboard, batteries[1]). Waste estimates for electronic, scrap metal, yard waste, and reusable items were provided by TRU. Population figures were also provided by TRU and applied to the waste output calculations to estimate the waste output for each semester. It is estimated that each person on campus landfills 1.5 kg and recycles 1.1 kg of waste every week.

The audit also measured the composition of materials in the garbage. The results show that only 21% of the garbage is actual waste. Almost half (47%) of the waste stream consisted or organic materials, and 28% of the waste was recyclable material. The remaining 5% was items considered in usable condition fit for donation or resale.

The audit also shows a break down the composition of waste from different sources on campus and the types of waste most commonly found. The sources of waste examined in the audit include:

- Public areas (with and without zero waste stations);
- Offices (with and without composting);
- Washrooms;
- Food services;
- Trades;
- Animal Health Technology;
- Science Labs; and
- Daycare.

The report concludes with a few recommendations for improving waste management on campus. There are cost savings and efficiencies to be gained by improving collection schedule and considering seasonal collection schedules to reflect population differences. Staff and student education is also important to ensuring users understand their expectations for participating in a successful waste minimization strategy, and lastly a few diversion suggestions for some of the unique waste streams such as Trades, Animal Health Technology, and the Daycare.

[1] The sample of batteries was collected over a one-month period.

[2] http://www.cityfarmer.org/petwaste.html

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1 Background and Introduction

Background

Thompson Rivers University (TRU) engaged the services of Waste Naught BC to conduct a solid waste audit at the McGill Campus in Kamloops, British Columbia in March 2015. The audit was the first formal waste audit conducted at the university. A previous waste audit was conducted in 2008 by a group of volunteers with TRU Eco Club.

TRU offers a wide variety of programs, some of which generate unique waste streams relative to your typical 'classroom-type' waste (such as Trades and Technology, Animal Health Technology, and Culinary Arts and Retail Meat). The McGill campus consists of 21 buildings and roughly 10,000 students, staff, faculty and visitors each year.

In 2014, TRU set a mission of becoming a Zero Waste Campus. As such, systems are in place to collect and divert all material types that can be diverted through provincial and regional programs. As well, TRU has an onsite industrial scale composter which composts organic waste generated throughout the facility.

Purpose

The purpose of the was audit was to:

- Estimate the amount of waste generated in each of the 21 buildings on an annual and per capita basis;
- Determine the composition of different sources of waste generated at TRU;
- Estimate the solid waste diversion rate for the facility by calculating the total weight of diverted materials as a percentage of the total waste stream;
- Provide recommendations for efficiencies in waste handling, reducing waste, and increasing diversion of recyclable materials.

Scope

To satisfy the purpose of the audit, the following scope of work was performed:

- Communication with staff and contractors was performed to understand waste handling procedures and to facilitate identification of waste materials during the sampling period;
- Samples of waste were measured and audited to obtain data about the amount and composition of waste materials generated;
- Samples of materials diverted through composting and recycling were measured and in some cases audited to determine quantity and quality of materials diverted; and
- Information was compiled, analyzed and summarized into a written report

2 Methodology

Black Bag Waste

The waste audit consisted of collecting 24-hour samples of waste from a number of buildings on campus. To identify the source of waste, labels indicating the source of waste were placed in waste receptacles across campus. Cleaning staff was instructed to tie a label to each bag of waste indicating its source on the evening prior to the scheduled audit date for each building. Appendix A shows the schedule of buildings that were audited.

Communication with the waste hauler prior to the audit ensured that waste samples would not be tipped prior to sampling. In addition, the waste hauler provided weights for waste material collected from TRU during the week.

During the waste audit, samples of waste for each of the dumpsters were weighed just prior to their scheduled collection by the hauler. The contents of each dumpster was weighed on a scale, and estimated volumes were recorded.

Sources of Waste Generation

The waste audit examined the following ten sources of waste:

- Public Areas - waste generated in hallways, classrooms, common areas, and computer labs and disposed in waste receptacles **not** adjacent to a Zero Waste Station.
- Public Areas Zero Waste - waste generated in hallways, classrooms, common areas and computer labs and disposed in waste receptacles adjacent to a Zero Waste Station.
- Offices - waste generated in office areas.
- Offices with Composting - waste generated in offices that have compost bins.
- Washrooms - waste generated in washrooms.
- Kitchen/ Café - waste generated in kitchens, cafeterias, and cafes.
- Trades - waste generated from the activities and studies in the Trades and Technology building.
- Labs - waste that is generated in laboratories in the science building.
- Animal Health Technology (AHT) - waste generated in the AHT building.
- Daycare - waste generated in the daycare.

Diverted Wastes

Data was collected for the different waste streams that are diverted on campus. The following table shows the type of waste, how the data was obtained, and the timeframe of the sample.

Table 1 - Waste Streams Methodology Summary

Type of Waste	Methodology	Timeframe	Number of samples
Corrugated cardboard	Contents of every dumpster was weighed, volume was estimated	March 9 and 12	12
Mixed recycling	Carts were weighed the morning of collection	March 12	47
Refundable beverage	Samples were weighed at the bottle	March 10 and 12	2

containers	depot after contaminants were removed and containers were sorted		
Compost A) General B) Culinary	A) Material was weighed before and after contaminants were removed. The contamination rate from the first sample was applied to the second sample. B) Material was weighed. No contaminants were believed to be present	March 10 and 13	3
Batteries	All battery bins were emptied and then one month later all the batteries were collected and weighed	March 10 - April 10	1
Scrap metal	Data was provided by TRU	May 13, 2014 - March 3, 2014	0
Yard clippings	Data was provided by TRU	2014	0
Reusable / donated items	Data was provided by TRU	2014	0
Electronic waste	Data was provided by TRU	2014	0

Calculations

Table 2 Calculations - Waste Output by Dumpster

Waste outputs for the dumpsters were calculated by summing the weekday average multiplied by five weekdays and the estimated weekend average multiplied by two days for each of the dumpster samples. A weekend average was grossly estimated by applying a weekend occupancy rate to the average weekday output. The estimated occupancy rates are shown in Table 2 (page x). The total weekly average for the campus is a sum of each of the estimated weekly outputs for all dumpsters. Note that during the audit, the hauler provided actual weights for the campus. The difference between the estimated waste output (calculated) and the actual waste output (error) was 9.2%.

Table 3 Calculations - Waste Generation and Diversion Rates

TRU provided population data for FTE students (Summer 2014, Fall 2014 and Winter 2015) as well as total staff figures (both full and part time for all campuses). Visitor and contract staff figures were not available therefor the total staff figures were added to the FTE student figures to get a gross estimate for population. The number of weeks for each semester was counted on a calendar.

Weekly waste and diversion generation rates were calculated by dividing the weekly outputs for waste and diverted materials (obtained in the audit) by the population totals for the winter semester. The waste generation rates were applied to the population estimates for summer and fall semesters to estimate the waste and diversion totals.

The diversion rate was calculated by dividing the total waste diverted by the total waste generated (waste and diverted materials).

Waste Composition Calculations

Waste composition was calculated by dividing the sample material weight by the total weight of the sample for each material. Waste compositions were calculated for each waste source examined in the audit. The estimated amount of each material was calculated by multiplying the percent composition of the material to the total annual waste output.

Assumptions

The data gathered during the audit is a snapshot of the waste stream during the audit period. In estimating total annual waste output, it is assumed that the sample period is representative of the waste stream over the year.

Limitations and Sources of Error

Waste generation and composition is variable and will fluctuate depending on the season and activities. It should be noted that this audit is only a snapshot of the waste stream at the McGill Campus over the audit period and that the data should be applied with discretion. Some limitations and sources of error to note, in addition to errors based on assumptions, are discussed as follows.

Firstly, because the sampling occurred over a one-week period, the audit may not have captured variations in waste that may occur as a result of different events, maintenance, and construction activities, or seasonal variations (e.g. refundable beverage containers tend to be higher in summer months).

A second limitation occurs due to cross-contamination of wastes. Food waste tends to get on everything; while sorting waste, high contamination was present in the compostable paper, plastic packaging, and garbage bags.

Source mixing also would have occurred during the audit, as it would be challenging for cleaning staff to perfectly segregate waste into the different sources. For example, unsoiled paper towel was often found in public area waste sources, however unsoiled paper towel is generally mostly found in Washrooms. It was likely that some of the sources of waste were mixed together during waste collection over the sampling period.

Dumpsters for collecting waste and cardboard materials are not locked, therefore anyone could be putting waste and the bins. Specifically, the sample of waste sorted from the TRU Stores highly resembled household kitchen waste. The sample of waste from AHT contained two large bags of clothing, not congruent with the type of waste expected from the building.

Another limitation to note is with the waste generated in the warehouse and by facility maintenance activities. This waste stream tends to be more variable than the rest of the waste streams. The audit was not able to capture this waste stream.

3 Waste Audit Results

Waste Outputs

Due to limitations in identifying waste sources, total waste output by building was not possible to measure. Instead, waste outputs were measured for each dumpster. The following table shows a summary of the weight and volume outputs based on the samples that were measured during the audit. The estimated weekend occupancy rate is shown and was used to calculate the estimated weekly waste output.

Table 2 - Estimated Weekly Waste Outputs by Dumpster

Dumpster location	Estimated weekly waste output (kg/week)	Estimated weekly waste output (cu.y/ week)	Total weekly capacity based on current collection (cu.y/ week)	Estimated weekend occupancy rate	Number of samples
TRU Animal Health Tech	227.5	5.0	8.0	0%	1
TRU Arts & Education	142.6	5.0	12.0	1%	2
TRU Campus Activity Centre	1044.1	17.6	30.0	2%	4
TRU Culinary Arts	1105.3	17.0	20.0	0%	2
TRU Culinary Arts					
TRU Daycare	450.3	12.5	24.0	0%	2
TRU Daycare					
TRU International Building	190.0	11.0	12.0	0%	2
TRU Library	94.6	2.8	8.0	3%	2
TRU Old Main	794.5	7.1	30.0	15%	2
TRU Open Learning Centre	83.0	4.4	8.0	0%	3
TRU Science/Gym	206.3	5.1	12.0	5%	2
TRU Stores	97.5	1.5	12.0	0%	1
TRU Trades	1966.5	14.8	18.0	0%	1
TRU Trades	298.9	8.7	18.0	5%	1
Total	6701.0	112.6	212.0	--	29

The above table shows the estimates of waste output based on samples of waste that were measured over the audit period. The waste hauler weighed all waste from TRU each day. To calculate the total weekly waste output, the weights provided by the hauler was added to the samples of waste audited on the Friday and Saturday of the audit (as those would not have been included in the weights provided). The total actual waste output for the week was 7382.8 kg, resulting in an error of 9.2%.

Total and Per Capita Waste and Diversion

The following table shows a summary of the waste and diversion output projections based on the population data provided by TRU using the calculated winter semester weekly waste output over the sample period. TRU landfills an estimated 247 tonnes of waste per year, and diverts an estimated 175 tonnes of material per year through recycling and composting giving a diversion rate of about 42%. Note that construction waste was not included in the audit and would likely have a significant impact on the diversion rate.

Table 3 - Total and Per Capita Waste and Diversion Outputs

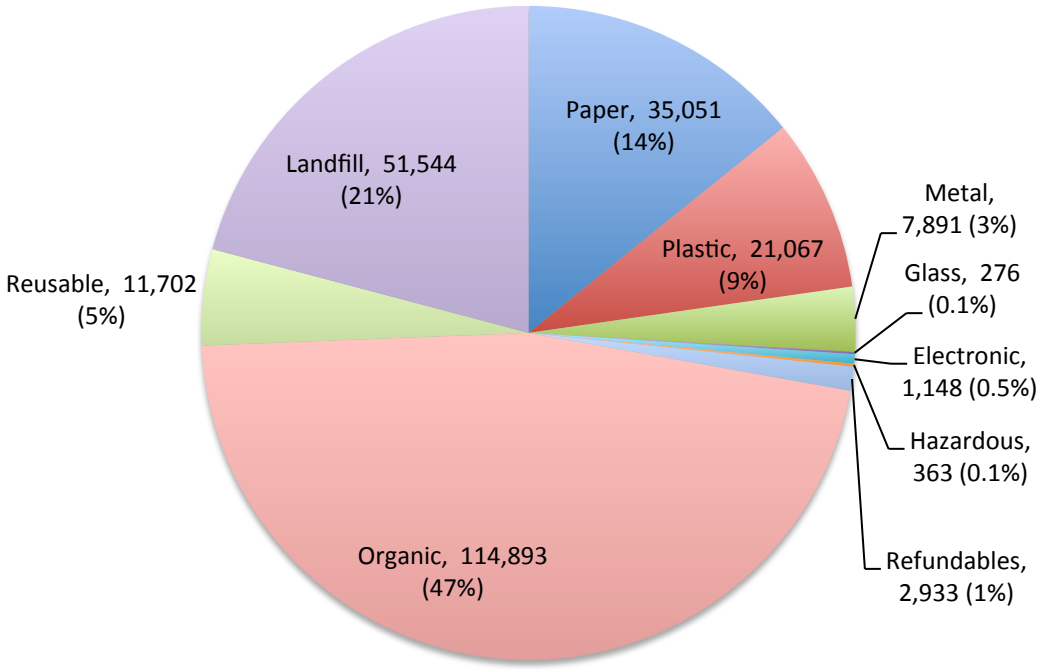
	Summer 2014	**Fall 2014**	**Winter 2015**	**Total Annual (kg)**
Number of weeks	7	14	16	37
Weekly waste output	3,260	7,566	7,383	18,209
Weekly diversion output	2,390	5,548	5,044	12,983
FTE students	578	3,449	3,208	7,235
Staff (full and part time) at all TRU campuses	1,595	1,595	1,595	4,785
Total staff and students	2,173	5,044	4,803	12,020
Weekly waste to landfill generation rate (kg/person/week)	2	2	2	N/A
Weekly waste diverted generation rate (kg/person/week)	1	1	1	N/A
Waste to landfill (kg)	***22,817***	***105,924***	***118,128***	***246,869***
Waste diversion (kg)	***16,732***	***77,678***	***80,704***	***175,114***
Total waste and diversion	**39,549**	**183,602**	**198,832**	**421,982**
Diversion rate	**41.7%**			

Waste Stream Composition

The following table shows the composition and estimated annual waste output for the entire campus waste stream. Nearly half of the waste stream is organic, resulting in over 114,000 kg of organics going to the landfill each year. Recyclable material (including paper, plastic, metal, glass, electronic, hazardous and refundables) accounted for about 28% of the waste stream resulting in roughly 69,000 kg of recyclables going to landfill. 5% was considered reusable items (clothing, equipment, supplies), which is approximately 12,000 kg of material. The remaining 21%, or 52,000 kilograms was actual garbage.

The results of the audit for the overall and for each source of waste are shown in Appendix A.

Figure 1 - Overall Waste Composition and Estimated Annual Output (kg/year)

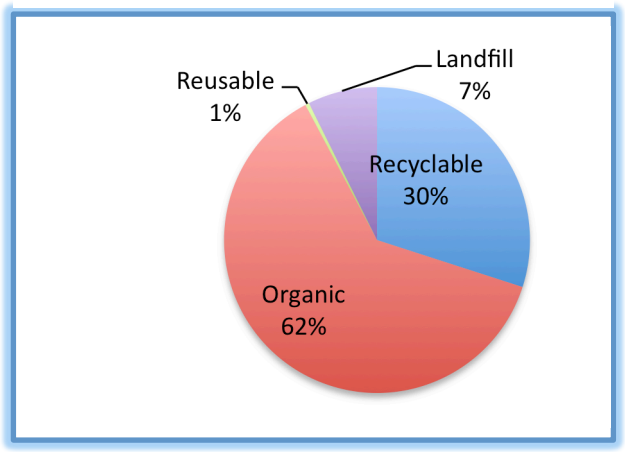


Waste Composition by Source

The following charts show the composition of the different sources of waste examined in the audit. The sources include: food services (samples from kitchen and café areas); washrooms; offices with and without composting; and public areas with and without composting.

For each source, the compositions are shown as organic, recyclable, reusable and landfill. As well, the most abundant materials based on the waste sort categories are listed.

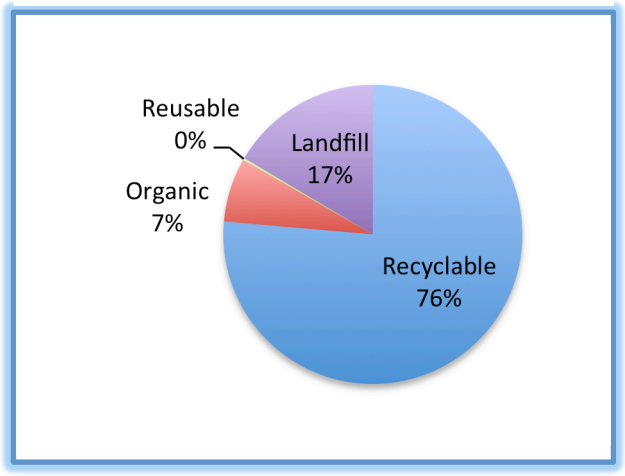
Figure 2 - Food Services Waste Composition



Samples from food services areas were highest in organic material. The most abundant materials in the food service areas were:

- 32% uneaten food;
- 15% coffee grounds;
- 13% plastic packaging;
- 10% food scraps;
- 8% plastic film; and
- 6% compostable paper.

Figure 3 - Washroom Waste Composition



Samples from the washrooms were highest in recyclable material (although clean paper towel was classified as recyclable, it can also be composted). The most abundant materials in the washrooms were:

- 66% paper towel;
- 9% garbage bags; and
- 6% landfill (hygiene products and disposable gloves, etc.).

The following two charts show the compositions of the samples sorted from the offices. It should be noted that the sample from offices with composting came from only one sample and should be taken as a rough estimate only. The high amount of organic material in this sample could be because this area of campus tends to more people are consuming food in this area than in the other office areas.

It should be noted that a large amount of electronic waste was found in one sample of office waste. The high density of electronic waste relative to other materials generally found in waste is reflected in the results.

The most abundant materials found in offices were:

- 13% food scraps;
- 7% electronic waste;
- 7% office paper;
- 7% other recyclable paper;
- 6% paper food packaging;
- 5% plastic packaging; and
- 4% uneaten food.

Figure 4 - Offices Waste Composition

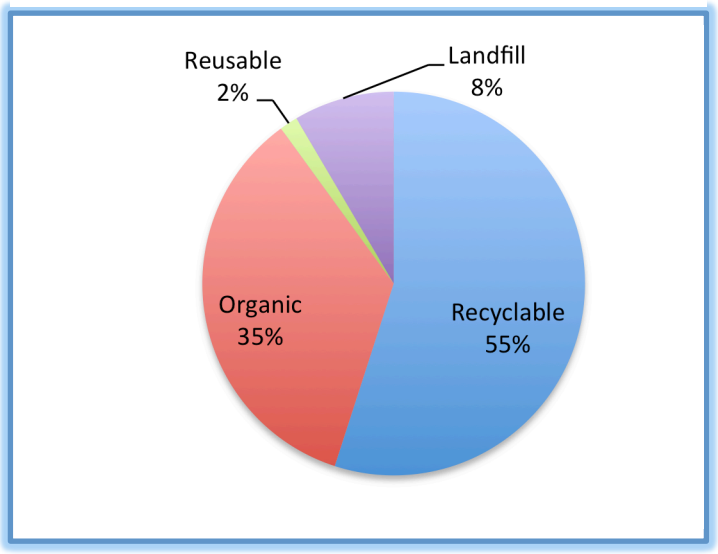
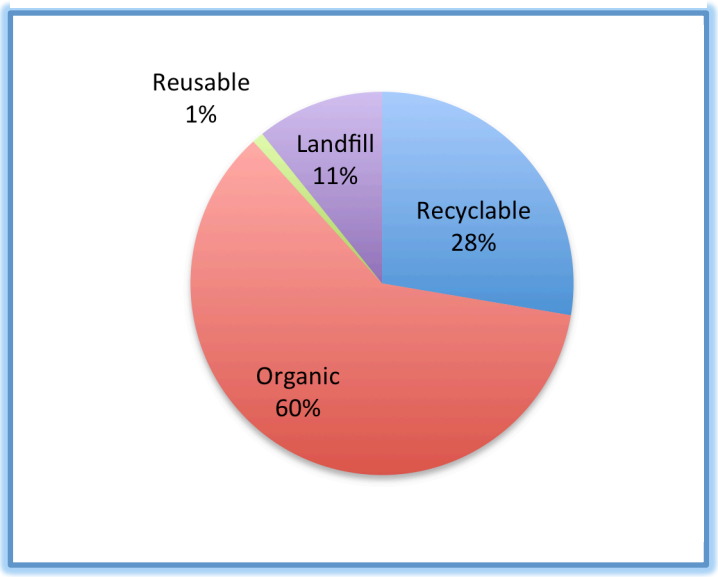


Figure 5 - Offices with Composting Waste Composition

The most abundant materials found in offices with composting were:

- 29% food scraps;
- 20% paper food packaging;
- 12% food scraps;
- 9% remainder (garbage);
- 8% plastic packaging; and
- 7% office paper.



The following two charts show the results of the samples taken from public areas. The chart above is from areas with single waste receptacles, whereas the chart below shows the composition of waste in areas where waste is collected from a zero-waste station.

Figure 6 - Public Area Waste Composition

The most abundant materials found in public areas were:

- 20% uneaten food;
- 17% paper food packaging;
- 15% food scraps;
- 10% coffee cups;
- 8% plastic packaging;
- 6% garbage bags;
- 6% remainder (garbage); and
- 5% liquids

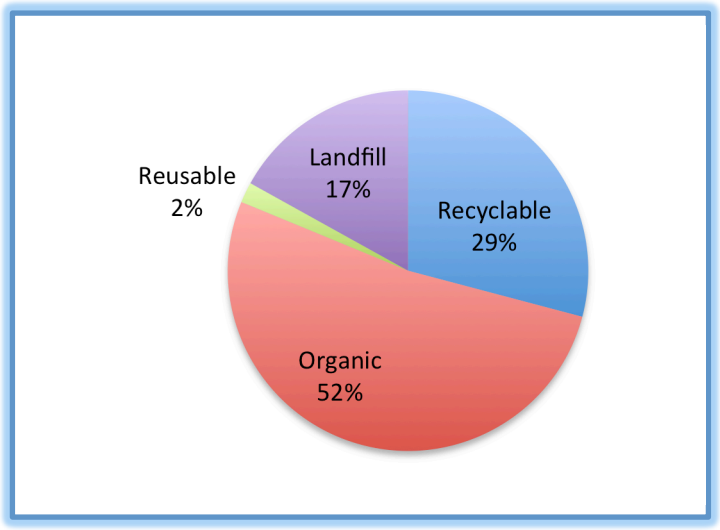
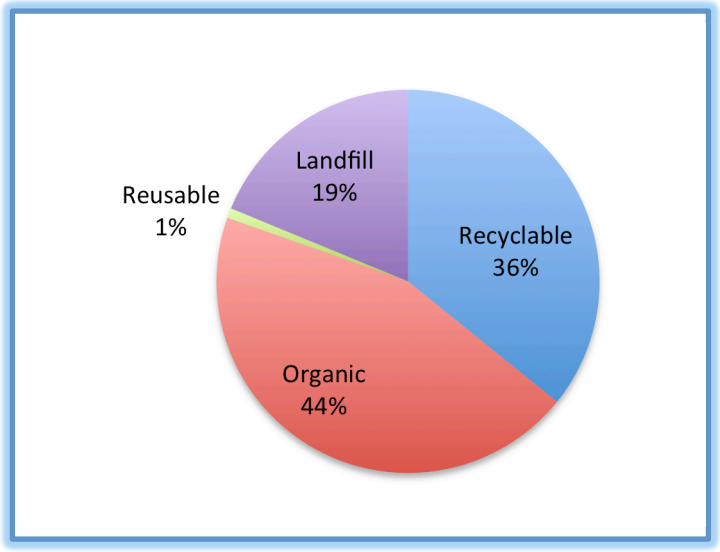


Figure 7 - Public Area with Zero Waste Stations Waste Composition

The most abundant materials found in the samples from public areas with zero-waste stations were:

- 19% paper food packaging;
- 17% plastic packaging;
- 14% uneaten food;
- 12% food scraps;
- 8% remainder (garbage);
- 6% garbage bags; and
- 5% liquids.



The Trades and Technology building has three dumpsters, one dumpster for sawdust, one for bagged waste, and the other for "trades" type waste. The sawdust bin was not audited, and the bagged garbage samples are included with their respective source (food services, offices, public areas, and washrooms).

The composition of the "trades" type waste is what waste managers call demolition, land clearing and construction (DLC) type waste, and it is unique relative to the rest of the campus, which is more typical of industrial, commercial, and institutional (ICI) type waste. The results for the trades type waste are presented to reflect the types of materials that should be source separated in DLC waste.

Figure 8 - Trades Waste Composition

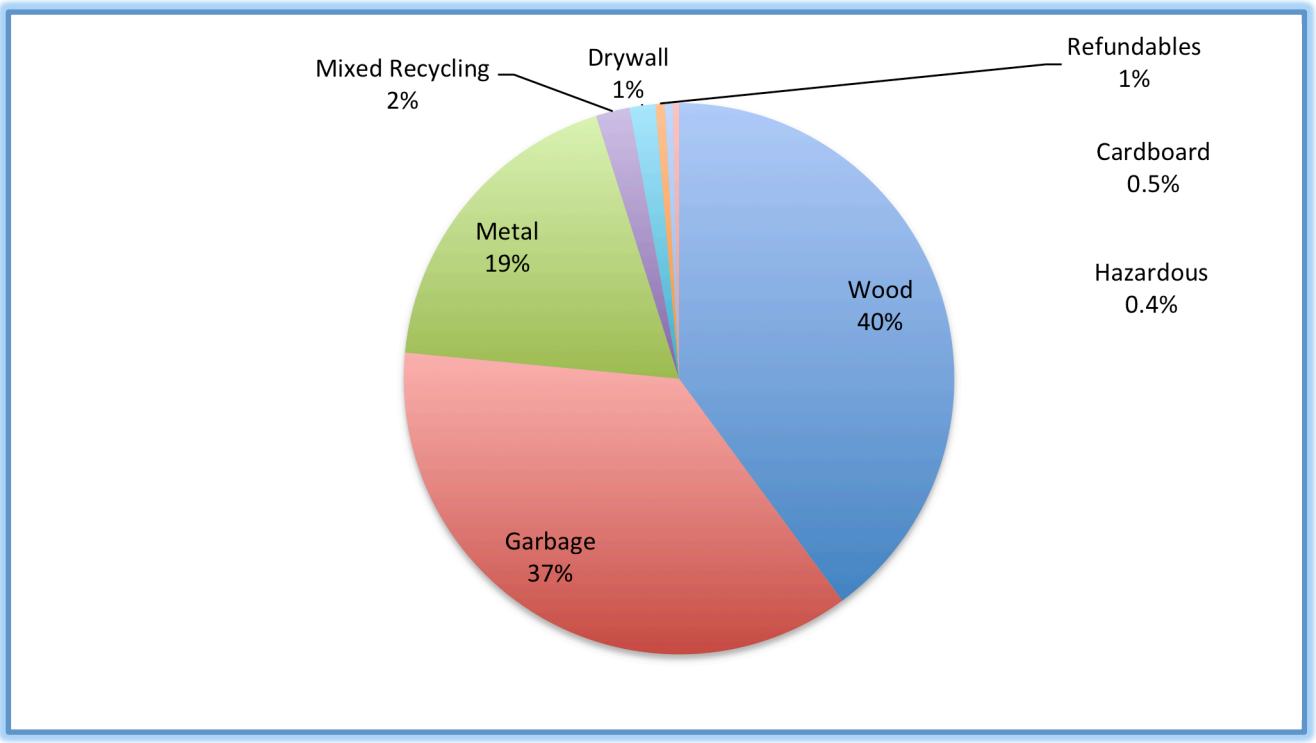
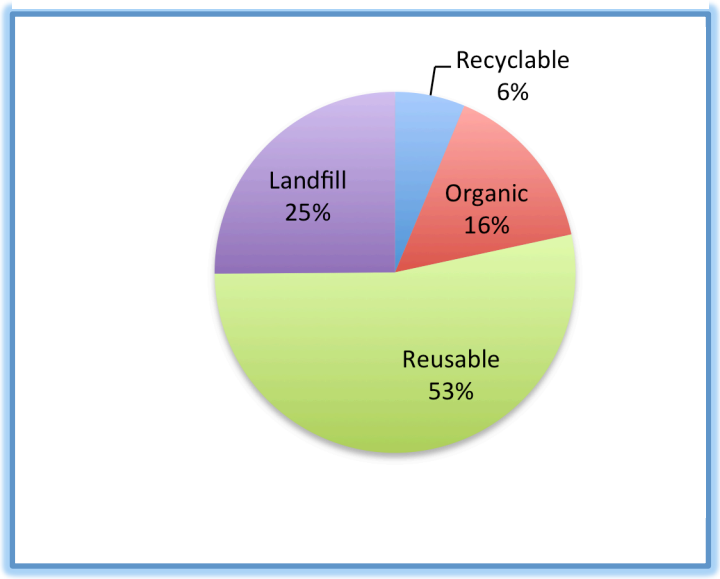


Figure 9 - Animal Health Technology Waste Composition

The chart on the right shows the composition of waste from the Animal Health Technology (AHT) building. The most abundant materials found in the sample were:

- 53% reusable items (several large bags of clothing in good condition);
- 20% animal feces; and
- 9% animal food.



The final two sources of waste that were examined in the study are the daycare and the labs in the science building. The chart above shows the composition of waste from the daycare and the chart below shows the composition of waste from science building labs.

The most abundant materials found in the labs were:

- 35% paper towel;
- 11% food scraps;
- 7% paper food packaging;
- 4% coffee cups; and
- 4% plastic packaging.

Figure 10 - Science Labs Waste Composition

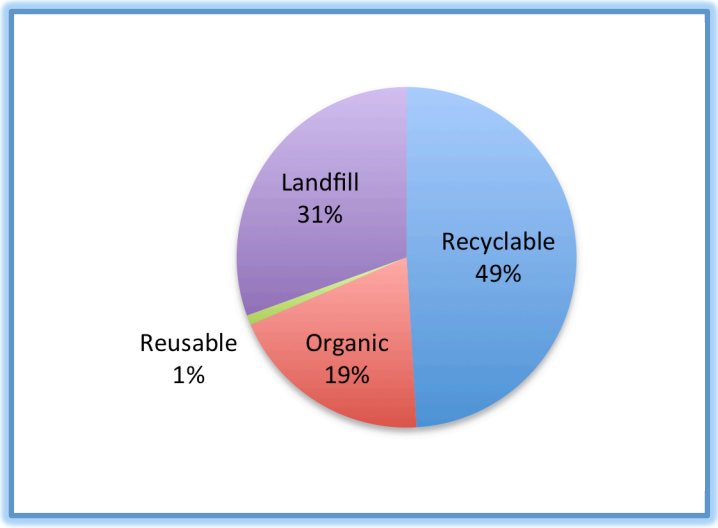
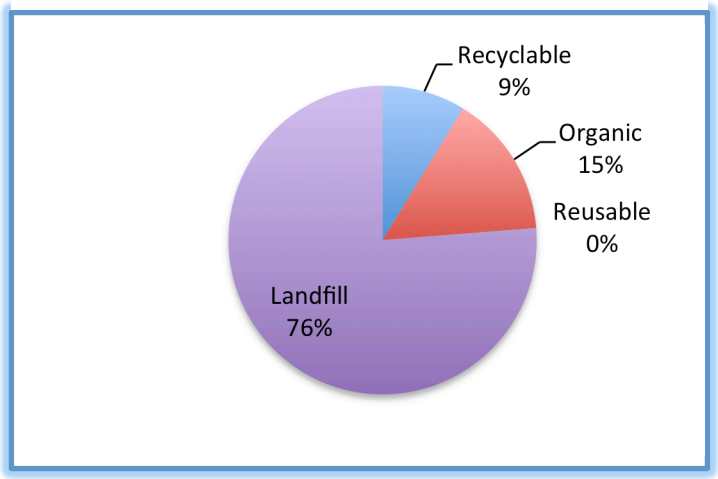


Figure 11 - Daycare Waste Composition

The most abundant materials found in the daycare were:

- 73% diapers;
- 8% paper towel;
- 8% uneaten food
- 8% paper food packaging



Conclusion and Recommendations

Overall, TRU is on the right track diverting approximately 42% of its waste through recycling and composting. There are systems in place to capture many different types of waste and plans to roll-out zero waste stations all over campus and expand organics diversion through the purchase of additional in-vessel composting.

It is understood that TRU has a plan to in working towards being a zero waste campus. Having set a zero waste goal in 2013, TRU has identified strategies that will be rolled out over the next few years to work towards this goal. These recommendations will only highlight some findings of the audit that stand out.

Improve Hauling Efficiencies

Firstly, several of the dumpsters on campus are very underutilized, particularly the dumpsters adjacent to Open Learning and to the Library. There are considerable cost savings that could be realized through improving efficiencies with the hauling schedule.

Table 2 shows the estimated outputs and the weekly capacity based on the current waste collection schedule. As shown in the table, TRU is utilizing a little over half of the capacity in the dumpsters based on the current hauling schedule. It is recommended that TRU review Table 2 their hauling schedule and determine an appropriate reduction in collection.

Data in Table 3 shows the estimated waste output by semester. It is recommended that TRU use the data in table 3 to modify hauling frequency for each semester to reflect population totals. By applying waste and diversion generation rates to the expected population, TRU can estimate waste output on campus.

Student and Staff Education

The overall waste composition data shows that only 21% of waste going to landfill is actual garbage that cannot be recycled or composted. Education campaigns targeting students and staff to educate on what materials can be recycled and composted and proper disposal of these materials.

Figures 4 and 5 on page 12 show the results of the composition of waste in offices with and without composting, respectively. The data shows that offices without composting had a higher composition of organic waste than offices with composting. The higher percentage of organic material found in offices with composting could be because more food is consumed in offices with composting, or it would be a lack of education on organic waste diversion among staff.

Figures 6 and 7 on page 13 show the results of the composition of waste in public areas with and without zero waste stations. Both areas had high amounts of recyclable and organic material, showing a further need to educate users about proper waste disposal.

In rolling out zero waste stations, it is recommended that TRU engage volunteers to stand near waste stations during special events, and from time-to-time to help educate users about proper waste disposal. Face-to-face interaction with users helps to ensure that messages result in the desired action (placing waste in the proper bin). This strategy has been very successful in places like the Langley Events and Conference Centre, where they engage volunteers as well as celebrities during special events to deliver messages about proper waste handling.

Trades Waste

The composition of the trades "DLC" bin shows that there is also room to improve diversion in the trades building. Source separated loads of DLC are charged a lower rate at the landfill than mixed loads. Source separated materials accepted at the landfill which are charged a lower rate include: wood, gypsum, asphalt roofing, and crushable aggregate (concrete, asphalt, etc.). It is recommended that TRU put in place systems to source separate DLC materials, ensuring that the hauler will pass along savings for source separated loads.

Animal Health Technology Waste

The sample of waste audited from AHT consisted of a large amount of reusable clothing and household items. It was not clear whether these items were from operations of AHT, or if waste had been illegally dumped into the AHT dumpster. If the reusable items were from AHT operations, then TRU should notify staff in the building of options to dispose unwanted but still usable items through thrift and second hand stores. If the items were illegally dumped, then TRU should consider locking their bins to prevent illegal dumping.

The sample from AHT also consisted of a significant amount of animal feces. Animal feces can be composted in several methods in either a well-managed above ground compost pile, or in an underground waste digester. There are several great resources to set-up animal waste composters, such a City Farmer's Pet Waste Composting Guide[2] or United States Agricultural Department Composting Dog Waste Guide[3].

Daycare Waste

About three quarters of the waste audited from the daycare was diapers. Only two bags of waste were included in the sample from the daycare and so it is likely that a sampling error occurred in this waste stream and the composition of diapers is likely a little less than what was captured in the sample. However, it is believed that diapers are a significant part of the daycare waste stream and options to eliminate diaper waste should be considered.

To minimize diaper waste, the daycare could engage a cloth diaper service through a local business called Snugglee Bums. The cost of the service is $3.20 per bundle of 10. The average child uses four diapers per day, so the cost would be $1.30 per child per day. The service includes delivery of clean and pick-up of dirty diapers each week.

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[2] http://www.cityfarmer.org/petwaste.html
[3] http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_035763.pdf

Appendix A - Waste Audit Data Results - Overall and by Source

		All			Café		
Secondary Category				**Weight in sample (kg)**			**Weight in sample (kg)**
Total		**100.0%**	**100.0%**	**625.31**	**100.0%**	**100.0%**	**96.68**
Office paper	Paper	14.2%	1.7%	10.88	5.8%	0%	0.21
Cardboard			2.7%	16.92		3%	2.5
Coffee cups			4.5%	28.42		2%	1.8
Paper towel (clean)			3.3%	20.50		0%	0
Other recyclable paper			1.9%	12.07		1%	1.12
Plastic packaging	Plastic	8.5%	6.2%	38.92	20.3%	13%	12.3
Plastic film			2.3%	14.44		8%	7.3
Metal food packaging	Metal	3.2%	0.7%	4.48	2.0%	2%	1.62
Metal products			2.5%	15.51		0%	0.3
Glass food containers	Glass	0.1%	0.1%	0.70	0.0%	0%	0
(as defined in the Recycling Regulation)	Electronic	0.5%	0.5%	2.91	0.0%	0%	0
Hazardous waste	Hazardous	0.1%	0.1%	0.92	0.0%	0%	0.03
Refundable beverage containers	Refundables	1.2%	1.2%	7.43	1.9%	2%	1.8
Coffee grounds	Organic	46.5%	4.4%	27.80	62.3%	15%	14.2
Food waste - scraps			8.1%	50.62		10%	9.5
Food waste - preventable			25.7%	160.71		32%	30.6
Compostable paper			8.3%	51.89		6%	5.9
Compostable plastic			0.0%	0.00		0%	0
Items deemed to be in usable condition	Reusable	4.7%	4.7%	29.64	0.4%	0%	0.4
Garbage bags	Landfill	20.9%	2.9%	18.03	7.3%	2%	2.4
Diapers			0.6%	3.90		0%	0
liquids (water, soap, other liquid)			2.2%	13.56		1%	0.8
Remainder / miscellaneous			15.2%	95.07		4%	3.9

Appendix A - Waste Audit Data Results - Overall and by Source

		Offices with Composting			*Offices*		
Secondary Category				**Weight in sample (kg)**			**Weight in sample (kg)**
		100.0%	**100.0%**	**10.23**	**100%**	**100.0%**	**29.78**
Office paper	Paper	12.7%	6.8%	0.7	22.7%	9.4%	2.8
Cardboard			0.0%	0		0.0%	0
Coffee cups			3.9%	0.4		3.7%	1.1
Paper towel (clean)			0.0%	0		2.4%	0.7
Other recyclable paper			2.0%	0.2		7.2%	2.15
Plastic packaging	Plastic	11.7%	7.8%	0.8	11.1%	7.7%	2.3
Plastic film			3.9%	0.4		3.4%	1
Metal food packaging	Metal	1.2%	0.2%	0.02	1.2%	0.5%	0.14
Metal products			1.0%	0.1		0.7%	0.22
Glass food containers	Glass	0.0%	0.0%	0	0.0%	0.0%	0
(as defined in the Recycling Regulation)	Electronic	2.0%	2.0%	0.2	8.1%	8.1%	2.4
Hazardous waste	Hazardous	0.0%	0.0%	0	0.0%	0.0%	0.01
Refundable beverage containers	Refundables	0.1%	0.1%	0.01	2.6%	2.6%	0.76
Coffee grounds	Organic	60.6%	0.0%	0	43.8%	0.3%	0.1
Food waste - scraps			29.3%	3		22.8%	6.8
Food waste - preventable			11.7%	1.2		8.4%	2.5
Compostable paper			19.6%	2		12.2%	3.64
Compostable plastic			0.0%	0		0.0%	0
Items deemed to be in usable condition	Reusable	1.0%	1.0%	0.1	1.3%	1.3%	0.4
Garbage bags	Landfill	10.8%	1.0%	0.1	9.3%	1.8%	0.53
Diapers			0.0%	0		0.0%	0
liquids (water, soap, other liquid)			1.0%	0.1		1.2%	0.36
Remainder / miscellaneous			8.8%	0.9		6.3%	1.87

Appendix A - Waste Audit Data Results - Overall and by Source

		Public Area			*Public Area Zero Waste*		
Secondary Category				Total weight (kg)			Total weight (kg)
Total		**100.0%**	**100.0%**	**146.445**	**100.0%**	**100.0%**	**35.68**
Office paper	Paper	15.6%	2.5%	3.64	12.7%	1.5%	0.52
Cardboard			0.4%	0.58		0.6%	0.2
Coffee cups			9.9%	14.5		8.7%	3.1
Paper towel (clean)			0.8%	1.1		1.1%	0.4
Other recyclable paper			2.1%	3.05		0.8%	0.3
Plastic packaging	Plastic	10.5%	8.3%	12.2	19.1%	17.4%	6.2
Plastic film			2.2%	3.2		1.8%	0.63
Metal food packaging	Metal	0.8%	0.6%	0.91	1.1%	0.3%	0.11
Metal products			0.2%	0.326		0.8%	0.3
Glass food containers	Glass	0.3%	0.3%	0.4	0.6%	0.6%	0.2
(as defined in the Recycling Regulation)	Electronic	0.3%	0.3%	0.509	0.0%	0.0%	0
Hazardous waste	Hazardous	0.0%	0.0%	0	0.3%	0.3%	0.1
Refundable beverage containers	Refundables	1.5%	1.5%	2.23	2.0%	2.0%	0.72
Coffee grounds	Organic	52.1%	0.3%	0.5	44.6%	0.0%	0
Food waste - scraps			15.1%	22.1		11.8%	4.2
Food waste - preventable			20.2%	29.6		13.7%	4.9
Compostable paper			16.5%	24.1		19.1%	6.8
Compostable plastic			0.0%	0		0.0%	0
Items deemed to be in usable condition	Reusable	1.8%	1.8%	2.7	0.8%	0.8%	0.3
Garbage bags	Landfill	16.9%	5.7%	8.3	18.8%	6.4%	2.3
Diapers			0.6%	0.9		0.0%	0
liquids (water, soap, other liquid)			4.9%	7.2		4.8%	1.7
Remainder / miscellaneous			5.7%	8.4		7.6%	2.7

Appendix A - Waste Audit Data Results - Overall and by Source

	Washrooms		*Science Labs*		*AHT*		*Daycare*	
Secondary Category		**Weight in sample (kg)**	**Weight in sample (kg)**		**Weight found in sample (kg)**		**Weight found in sample (kg)**	
Total	**100.00%**	**18.498**	**10.801**	**100.00%**	**43**	**100.0%**	**4**	**100.0%**
Office paper	1.70%	0.31	0.2	1.90%	0.3	0.7%	0	0.0%
Cardboard	0.00%	0	0	0.00%	0	0.0%	0	0.0%
Coffee cups	2.80%	0.51	0.5	4.60%	0.3	0.7%	0	0.0%
Paper towel (clean)	66.00%	12.2	3.8	35.20%	0	0.0%	0.3	7.5%
Other recyclable paper	2.30%	0.43	0.1	0.90%	0.6	1.4%	0	0.0%
Plastic packaging	1.50%	0.279	0.4	3.70%	0.6	1.4%	0	0.0%
Plastic film	1.40%	0.26	0.2	1.90%	0.6	1.4%	0.05	1.3%
Metal food packaging	0.00%	0	0	0.00%	0.1	0.2%	0	0.0%
Metal products	0.10%	0.02	0	0.00%	0	0.0%	0	0.0%
Glass food containers	0.00%	0	0	0.00%	0.1	0.2%	0	0.0%
Electronic waste	0.00%	0	0	0.00%	0	0.0%	0	0.0%
Hazardous waste	0.50%	0.1	0	0.00%	0	0.0%	0	0.0%
Refundable beverage containers	0.10%	0.02	0.1	0.90%	0.1	0.2%	0	0.0%
Coffee grounds	0.00%	0	0	0.00%	0.4	0.9%	0	0.0%
Food waste - scraps	2.80%	0.52	1.2	11.10%	1.2	2.8%	0	0.0%
Food waste - preventable	0.60%	0.11	0.2	1.90%	4	9.3%	0.3	7.5%
Compostable paper	3.50%	0.65	0.7	6.50%	1	2.3%	0.3	7.5%
Compostable plastic	0.00%	0	0.001	0.00%	0	0.0%	0	0.0%
Reusable items	0.20%	0.04	0.1	0.90%	22.9	53.3%	0	0.0%
Garbage bags	8.90%	1.65	0.4	3.70%	0	0.0%	0.05	1.3%
Diapers	0.50%	0.1	0	0.00%		0.0%	2.9	72.5%
liquids	1.10%	0.2	0.1	0.90%	0.7	1.6%	0	0.0%
Remainder / miscellaneous	5.90%	1.099	2.8	25.90%	10.1	23.5%	0.1	2.5%