UNIVERSITY OF BRITISH COLUMBIA OKANAGAN

WASTE AUDIT REPORT: OCTOBER 5, 2010

Prepared For: UBCO Sustainability Office, Facilities Management and fourth year Nursing Students

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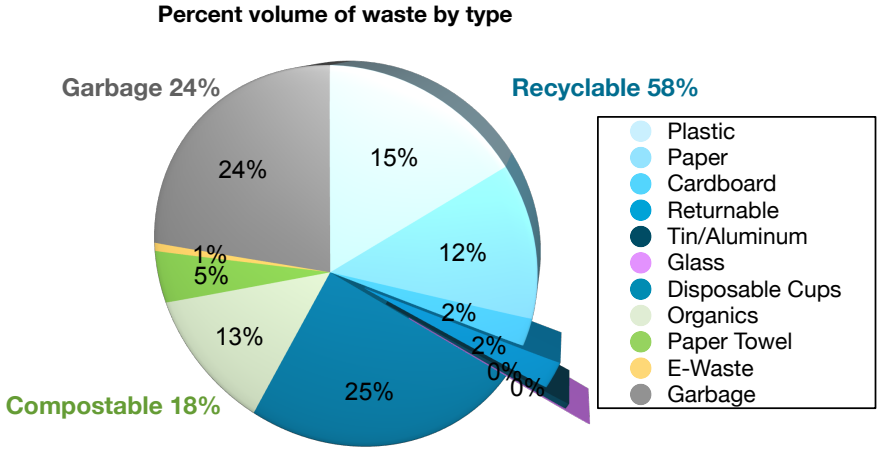
EXECUTIVE SUMMARY

In September 2010, UBC Okanagan and GreenStep Sustainability Coaching partnered to facilitate a waste audit of the campus on October 5, 2010. Waste from nine different buildings/areas on campus, including ARTS, FIPKE, FINE ARTS, OFFICES, LIBRARY, PORTABLES and GYM, SCIENCE, ARTS and SCIENCE, and the Student Services Center (SSC) was assessed.

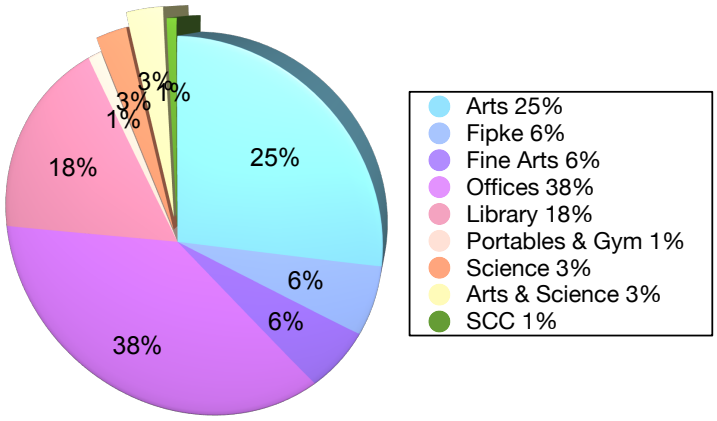
The audit was set up in the courtyard by 7:30 am by Allan King. One day's worth of waste (with the exception of the OFFICES, which included one week's worth of waste) was brought to the center of the courtyard and placed on tarps in rows headed with sandwich board signs dictating where the waste originated from. The waste was sorted by source into 4 categories (waste, recycling (including refundable beverage containers), organics and electronic waste). Items already in the recycling stream were not collected, only waste heading to the landfill was audited. The audit ran from 8:00-2:30 pm and all waste streams were taken to the appropriate place, with only 24% of the original amount going to the landfill.

A total of 92 bags were audited by volume, totaling 7139 litres of waste. The audit found that only 24% of the entire audit sample heading to the landfill is considered "garbage". Recyclable material made up 58% of the waste, higher than the 2008 audit of 42%, but is mainly due to the fact that the University's waste provider BFI now takes disposable paper cups and styrofoam in the recycling stream. 25% of the total waste was disposable cups. Only 18% of the waste collected was biodegradable, compared to 30% in 2008 and 1% of the total waste was e-waste, mainly collected from the OFFICES and included printer cartridges, cables, phones and other office electronics. Students were also asked to give their input throughout the day on how to improve recycling on campus and over 300 suggestions were collected.

The following charts summarize the results found during the audit.



Percent volume of waste by origin



Key Recommendations include:

- Have clear and consistent waste stations with at least three compartments (recycling, beverage containers and garbage, similar to the new ones in FIPKE). Place these waste stations at strategic locations in buildings, common areas and outdoor areas. Easy to understand signage indicating what can go in each bin is extremely important and should follow the signs already created for these stations.
- Ensure there is no stand alone garbage cans. A recycling container and returnable container should accompany every single garbage can on campus.
- Have more advertising material about what is and is not recyclable and about current waste reduction programs on campus.
- Start an anti-disposable coffee cup campaign to reduce the amount being consumed and disposed of on campus. Have food service establishments provide incentives to students and faculty who bring their own reusable mugs, cutlery and containers.
- Implement an indoor, year round Waste Reduction Depot where students can drop off used electronics, batteries, paint, printer cartridges, recyclables, bottles, cans and possibly food waste. This can also be a hub for learning about recycling and composting programs on campus.
- Expand the current compost program from the UNC kitchen to include pre-consumer food scraps such as coffee grounds, filters, tea bags and vegetable and fruit scraps to be collected and added to the Earth Tub on a regular basis.
- Have a champion, likely the Sustainability Office, head the implementation strategy and oversee the measurement and monitoring of the success of each recommended action.

INTRODUCTION

In September 2010, Allan King, manager of maintenance and grounds and the Sustainability Office contacted Lindsay Eason of GreenStep to assist in facilitating a waste audit at UBC Okanagan in the fall of 2010. Lindsay worked with the Regional Waste Reduction Office to complete the waste audit at UBCO in 2008. A date of October 5, 2010 was set to audit on day's worth of waste from nine different buildings on campus, including ARTS, FIPKE, FINE ARTS, OFFICES, LIBRARY, PORTABLES & GYM, SCIENCE, ARTS & SCIENCE, and the Student Services Center (SSC). It was decided that a separate audit would need to be conducted for the new UNC building and the residences at a different time.

All waste collected during the waste audit

A student organization was needed to help organize volunteers and do some of the additional tasks such as make signs, organize music and snacks and make announcements during the audit. A group of 4th year Nursing Students decided to take on the waste audit as a nursing project.

Kristi Kirik, Iris Boateng, Donna Moberg, and Kristina Pap (photo left) took the lead and set up a meeting with Lindsay Eason and Allan King to delegate all tasks necessary to make the waste audit successful.

The objectives of the waste audit were:

- To record the volume and type of waste generated at UBC Okanagan;
- To identify opportunities to improve recycling and composting on campus;
- To identify building to target first with additional education;
- To compare 2010 results with 2008 waste audit results;
- To raise awareness about waste collection on campus;
- To identify student suggestions on making improvements and find ways to get students involved.

METHODOLOGY

The 94 bags of waste were audited individually by pairs of volunteers. Volunteers with worksheets recorded the waste origin, how full the bag was (as a percentage) the size of bag, and the percentage of each type of waste within the 4 main waste categories (recycling, composting, e-waste and garage).

Using volume to estimate the waste was a better choice than using weight for several reasons: garbage is picked up and disposed of based on how full the bins are, not by weight; items like paper and plastic film weigh significantly less than food waste, so it is a better way to compare types of waste; and the results could then be more easily compared to 2008 waste audit data.

The finished piles were put into bags corresponding to the type of waste so all waste could be recycled, composted, returned for refund or sent to the landfill after the audit. All volunteers wore white hazmat suits and booties and latex gloves and the use of safety goggles and tongs were optional.

Because the volume of each bag was estimated by volunteers, the total amount of waste is slightly exaggerated from what the final count actually was. But for the purposes of comparing the materials within each category and the origin of the waste, we will use the results calculated by volunteers.

Volunteers sorting waste

UBC OKANAGAN CURRENT WASTE REDUCTION PRACTICES

UBC Okanagan has implemented several waste reduction practices that have been initiated by Allan King as well as the Sustainability Office.

- Through BFI, UBC Okanagan currently collects and recycles mixed recycling (paper, plastic #1-7 including film, cardboard, metal food containers, tin/ aluminum) and recently, BFI have added disposable paper cups to their recycling program.
- All returnable beverage containers are given to KDSCL (Kelowna and District Society for Community Living), who collect all the recycling and beverage containers from each building on campus.

- E-waste, hazardous waste, metal and wood are collected by maintenance and grounds and taken to the proper facility.
- Styrofoam and disposable paper cups are taken for recycling by BFI.
- Fats and oils are collected from each kitchen on campus and taken by McLeod's Byproducts.
- Ink printer cartridges are collected and returned to the manufacturer.
- Wooden pallets are collected and given to a builder in the North Okanagan.
- Food waste from the UNC kitchen is collected and composted in the Earth Tub, an electric/manual composter located behind UNC. Finished compost as well as yard waste collected by maintenance and grounds is composted and piled for use in campus landscaping.
- Signs dictating recycling, bottles/cans and garbage and new waste stations have been placed in some of the campus buildings.

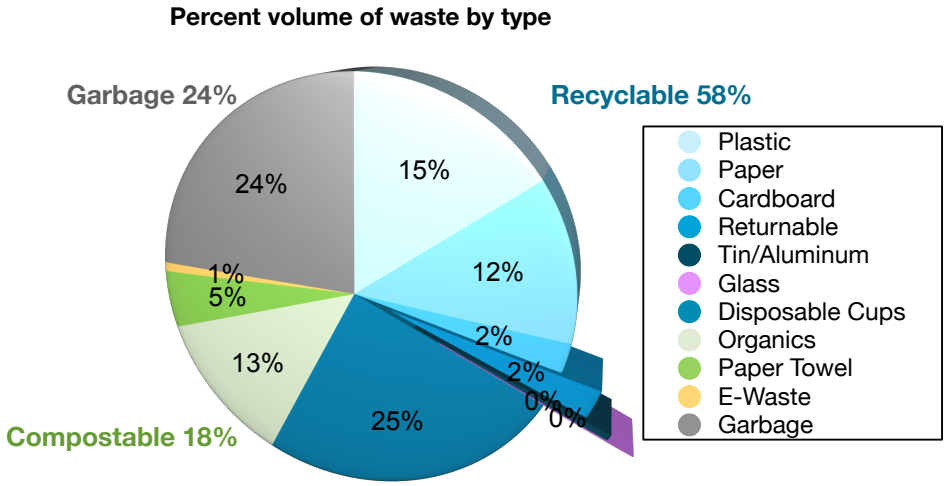
RESULTS

Despite all the great programs already in place on campus, there is still room for improvement. The results indicate that of the 7139 liters of waste collected and audited. The table below indicates the type of waste audited by location and the volume collected from each building during the waste audit.

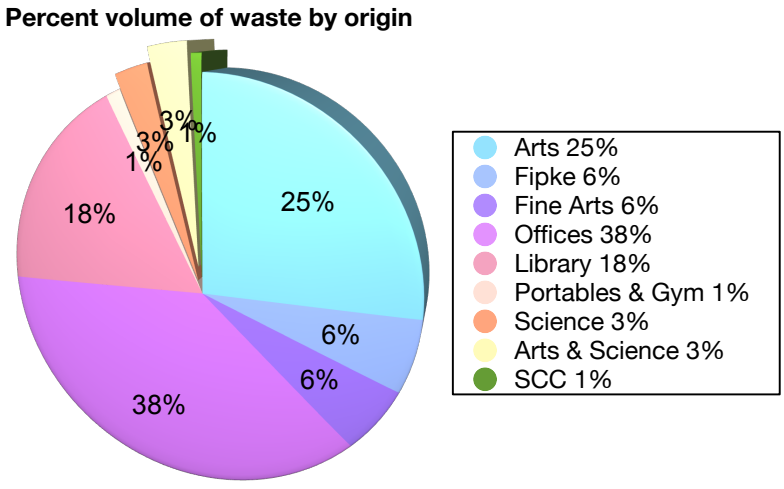
Table 1: Volume of waste measured at UBC Okanagan waste audit October 5, 2010

Type of Waste	Origin of Waste																			
	Arts		Fipke		Fine Arts		Offices		Library		Portables & Gym		Science		Arts & Science		SSC		Total	
	%	L	%	L	%	L	%	L	%	L	%	L	%	L	%	L	%	L	%	L
Plastic Containers & Film	12	211	14	57	24	100	18	492	13	165	2	1	6	12	20	41	10	6	15	1086
Paper Products	2	33	4	19	13	56	19	515	12	153	6	5	9	17	19	41	25	14	12	853
Cardboard and Boxboard	2	30	0	0	6	24	3	93	1	11	0	0	3	5	5	3	5	3	2	166
Returnable Cans & Bottles	3	51	3	11	2	8	2	51	3	36	0	0	5	9	5	3	5	3	2	168
Tin/ Aluminum	0	2	0	0	2	7	1	19	0	4	1	0	0	0	0	0	0	0	0	34
Glass	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Disposable Cups	39	703	42	178	4	15	13	352	35	440	2	2	22	41	26	55	30	17	25	1803
Total Recyclables	57	1030	63	265	51	212	57	1522	64	809	10	9	46	85	30	17	75	42	58	4112
Organics	12	217	10	40	5	19	14	381	14	184	14	12	11	21	17	36	15	8	13	918
Paper Towel	0	2	4	16	34	145	5	142	1	15	16	14	4	7	0	0	0	0	5	341
Total Compostables	12	219	13	56	39	164	14	184	16	199	30	25	15	29	15	8	15	8	18	1259
Total Electronic Waste	0	0	0	2	0	0	2	51	0	0	0	0	0	0	0	0	0	0	1	53
Styrofoam	1	14	0	0	2	10	0	0	0	0	0	0	7	13	0	0	0	0	1	44
Garbage	30	540	23	97	8	34	0	0	21	262	60	50	32	60	0	0	10	6	23	1670
Total Garbage	31	554	23	97	10	44	22	591	21	262	60	50	39	73	18	37	10	6	24	1714
Total Waste Volume	**25**	**1803**	**6**	**420**	**6**	**420**	**38**	**2686**	**18**	**1271**	**1**	**84**	**3**	**186**	**3**	**212**	**1**	**56**	**100**	**7139**

The chart below indicated the percentage of waste collected in each waste category. the largest portion of waste identified was recyclable material (58%).



The following chart shows the volume of waste collected from each building. The largest portion of waste came from the OFFICES throughout campus, considering it was a weeks worth of waste rather than one day, this isn't surprising. An anomaly was spotted by the Gymnasium coordinator, when she approached the waste audit and informed us that because of a tournament on the weekend, all the garbages from the GYM were emptied on Monday morning. This reflects the fact that in 2008 the GYM & PORTABLES waste was had highest percentage, while in 2010 it was the smallest. Also, the use of the portables has changed from 2008 and the type of waste coming from that area is more related to research labs than classroom and offices.



Observations and recommendations based on these results are given below.

OBSERVATIONS BY TYPE OF WASTE

RECYCLING

Of all the waste collected, recycling accounted for 58% of the waste. This clearly indicated that education about what is and is not recyclable is needed as well as clear and consistent waste stations and signs to begin diverting the majority of these recyclables from the landfill.

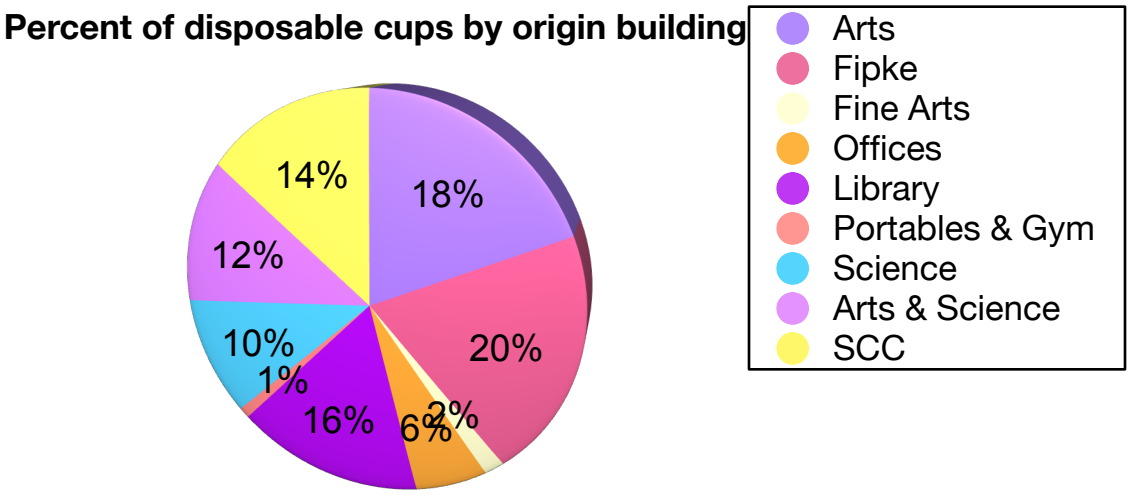
Disposable Cups (included paper coffee cups with wax lining and styrofoam Booster Juice cups)

Of the 58%, nearly half was disposable paper coffee cups. Typically, disposable cups are not recyclable, however BFI indicated that they do take disposable cups in their recycling stream as long as they are empty. This poses some confusion, however, since disposable cups are not taken in residential curbside recycling collection because recyclables are collected and sorted by a different company than UBC Okanagan. So it must be made clear that only on campus can disposable cups be recycled.

The bigger issue is the fact that 25% of all the waste audited was disposable cups. When compared to 2008, disposable cups accounted for 14% of the total waste audited. In the past two years, Starbucks, Tim Hortons and UNC have been opened, fueling the convenient "grab and go" mentality which has caused an increase in disposable cups by 11%. Booster Juice and other coffee outlets were already established on campus and were part of the 2008 report.

The assumption can be made that the number of disposable cups will rise even further with the campus wide education that disposable cups are recyclable because it then makes it okay to consume disposable products because recycling is good. But the real issue to tackle is reduction, since reducing is better than recycling.

By Building: When looking at the total 25% of disposable cups, the following chart has broken down where the majority of them are coming from.



The top sources of disposable cups are the ARTS, FIPKE, LIBRARY, and SSC, all buildings which have coffee services built into them. A focus should be paid to these buildings to reduce the amount of disposable cups given out by coffee outlets.

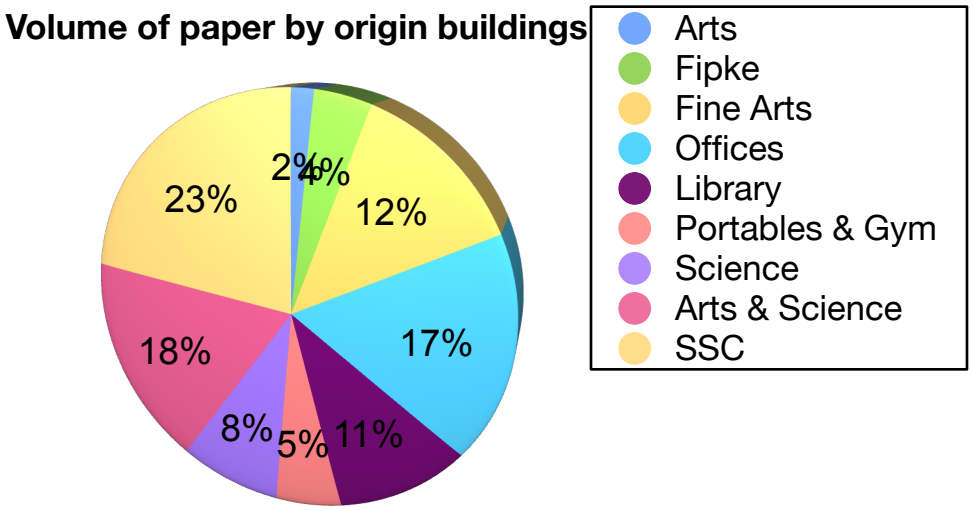
Mandatory Recycling (paper, plastic, tin, aluminium, glass, bottles and cans)

33% of the waste collected (not including disposable cups) is recyclable through all recycling programs and depots in the Central Okanagan. This means that 1/3 of the waste thrown out in one day consisted of recyclable material that students and faculty should be well aware of (residential curbside recycling has been practiced in the area for over 15 years). The answer to reducing this 33% further is education and convenience. Identified as the most common suggestion by students asked on the waste audit day, the solution is to have a recycling bin beside each garbage bin with appropriate, easy to understand signage indicating what can go in each bin. People will do the right thing as long as it is convenient. The data shows that currently, it is not convenient to recycle.

By Building: All buildings (with the exception of the PORTABLES & GYM) had 45-65% of its waste full of recyclable material. This clearly shows a need to improve recycling in all areas on campus.

Paper Products

12% of the total waste collected was paper products. The following chart shows which buildings had the most paper in their garbage stream. The volume of waste collected from the OFFICES was much higher than SSC and ARTS & SCIENCE, but they had the highest percentage of paper products in their total waste.



Programs to improve recycling should take this into consideration, that paper, a product that has been recyclable for at least 15 years, is still ending up in the landfill due to inconveniently located recycling bins, poor collection systems and lack of education.

Plastic

Plastic products, film and food containers made up 15% of the total waste. Plastics #1-7 and plastic film and bags have been allowed in the recycling stream since 2007, proving more education is needed on which plastics are recyclable and in what state they have to be in to be recycled (ie. not wet with food waste or paint).

Refundable Beverage Containers

Only 2% of the total waste was refundable bottles and cans, a reduction from the 4% found in the 2008 audit. Many students do not know that KDSCL collect the recycling and take the beverage containers in exchange for their time helping with recycling. Make it clear to all students that a local non profit organization works with janitorial staff on campus to aid recycling efforts in exchange for the refundable beverage containers.

COMPOST

18% of the total waste audited was compostable, compared to 31% in the 2008 waste audit. The major difference is in the amount of paper towel, in which bathroom waste was included in 2008 and was not in 2010. Kitchen food waste is already being collected and taken to the Earth Tub to be composted from UNC, but the program could expand to include collection areas for biodegradable items and post consumer food scraps in the common areas of UNC, as well as pre-consumer food scraps from every food service establishment on campus.

Organics

Organics collected consisted of food waste, biodegradable take out containers, cutlery and cups, mostly from UNC where all food service outlets are mandated to have biodegradable items. The increase to 13% in 2010 from 10% in 2008 is mainly due to the increase in biodegradable products available on campus. Currently there is no collection system to collect and compost these biodegradable products, they are all sent to the landfill. It is recommended that specific collection stations be set up and be monitored, to reduce contamination when it is sent to the Earth Tub to be composted.

Paper Towel

In 2008 paper towel made up a significant portion of the total waste, 21%. In 2010, it only makes up 5%, but these two figures cannot be compared since all bathroom waste was included in the 2008 audit from each building. To our knowledge, all washrooms around campus have electric dryers as well as paper towel dispensers installed. Composting paper towel would be advantageous, but a pilot program must be set up to test the process of collecting paper towel that is not contaminated with personal hygiene and/or other products that are not wanted in the Earth Tub, as well as the logistics of taking the paper towel to the Earth Tub.

GARBAGE

23% of the garbage audited consisted of a variety of materials, including disposable candy/granola bar wrappers, straws, waxy paper, plastic that is too contaminated with food waste to put in the recycling bin, art supplies, paint, metal and wooden art projects, medical waste (electrodes, rubber gloves, IV catheters, sealed needles) and other small bits and pieces. Compared to 2008, only 10% of the waste was uncategorized, compared to this year's 23%. This could also be due to the fact that contaminated recyclables were put in the garbage, since we were sending the retrieved recyclables to BFI and we did not want to send contaminated materials.

The materials in the garbage consisted of some hazardous material, such as paint, as well as medical waste were found in the trash and were categorized as garbage. These items should be collected separately and disposed of in the proper facilities.

Styrofoam

Only 1% of the total waste was styrofoam, in the form of loose styrofoam packaging. The only disposable cups made of styrofoam were put in the disposable cup category. Styrofoam is now available to be collected by BFI for recycling, therefore it should be included on the signs for recycling, but it should be made very clear that styrofoam cannot be recycled in residential curb side pick up.

ELECTRONIC WASTE (E-WASTE)

Only 1% of the total waste audited was electronic waste, but this is still significant since 0% should be making it into the landfill. Besides a small amount (2 L) from FIPKE, the rest of the e-waste was from the OFFICES (51 L). This included batteries, phones, printer ink cartridges, cords and wires and other small electronic materials. UBCO has an electronic waste collection point, but it is possible that many students and faculty do not know about it or it is not conveniently located to drop it off. Many people may also not be aware of the hazards this material poses to the landfill such as leaking toxins into the air, soil or water.

Although paint is hazardous and should be disposed of separately, it was put in the garbage category for this waste audit. There were a small amount of paint supplies found in the audit sample from the Fine Arts building.

RECOMMENDATIONS FOR IMPROVEMENT

The following recommendations are to help guide improvements in the collection and disposal of recyclable, compostable, hazardous and other waste material. Each section is aimed at creating programs, policies or pilot projects to reduce waste heading to the landfill. Education and communication are a key component to the success of every recommendation.

REDUCING AND REUSING

- Start an anti-disposable coffee cup campaign to reduce the amount being consumed and disposed of on campus, despite the fact that it can be recycled. This could include a cost savings at each coffee outlet for students who bring their own mug, or could be a campus wide reusable mug program where a deposit is paid and mugs can be dropped off and picked up at students' convenience to avoid carrying them around all day and washing it themselves. Student surveys will be needed to properly assess the readiness and feasibility of implementing such a program.
- Provide an exchange for students to pick up and drop off mugs, reusable containers, water bottles, utensils and other food containers so they don't have to use disposable items. Also include new items at a reduced cost to students. **Students identified this as a very important action.*

- Have all food service establishments on board with providing discounts or incentives for students and facility who bring their own mug, cutlery or food containers to pick up food or coffee. Ensure this is properly advertised. **Students identified this as a very important action.*

- Engage all food service outlets (starting with UNC) to start a reusable container program where students can bring their own reusable containers or start a campus wide program reusable container program. This would entail having containers that have drop off locations and each food service outlet gives them out according to who is in the program. A deposit can be paid or an initial fee can be taken off each student's fees at the beginning of the year.

- Create a campus wide policy to eliminate single serving items such as creamers, sugar packets, plastic stir sticks, ketchup, mustard, butter and any other single serving items.

- Create and implement a zero waste policy to eliminate disposable products during meetings and conferences. Only reusable items can be used such as coffee urns, water jugs, reusable coffee cups and water glasses. Research policies at other universities/organizations.

RECYCLING

- Implement an indoor, year round Waste Reduction Depot on campus where students can drop off used electronics, batteries, paint, printer cartridges, recyclables, bottles, cans and possibly food waste. Create a hub where students can go to access information about what is and isn't recyclable, how to get involved and how to reduce their use of disposable items and items that can't be recycled or composted. Have a specific group or staff member on campus in charge of this depot to ensure it is successful. **Students identified this as a very important action.*

- Have clear and consistent waste stations with at least three compartments (recycling, beverage containers and garbage, similar to the new ones in FIPKE). Place these waste stations at strategic locations such as high traffic areas in buildings, common areas and outdoor areas. Easy to understand signage indicating what can go in each bin is extremely important and should follow the signs already created for these stations with some additions. People will do the right thing as long as it is conveniently located and easy to understand. **Students identified this as a very important action.*

- UBCO's waste hauler, BFI will take disposable cups and styrofoam, therefore it should be put on the signs at each recycling station and included in campus wide education. Care should be paid to ensure students know that UBC's waste hauler takes these items, but the residential curbside recycling program does not. **Students identified this as a very important action.*

- Ensure there is no stand alone garbage cans on campus, as this encourages people to dispose of their waste because of it's convenience. A recycling container and returnable container should accompany every single garbage can on campus.
- Create a better program for collecting recycling from classrooms and offices since this recycling is not currently picked up by KDSCL as they are not allowed to enter classrooms or offices.
- Put a policy in place that the last class of each day (or specific days of the week) must put classroom recycling out in the hall to be picked up the next morning by KDSCL or janitorial staff. Put a reminder schedule and sign beside the door exiting each classroom.
- Work with BFI and the Waste Reduction Office to get the most up to date information on what is recyclable and where items should be placed. Make the recycling directory available to all students through the website and at an on campus waste reduction depot.

COMPOSTING

- Start a pilot program to collect biodegradable food containers and food waste in the common area of UNC where students will separate their waste at labelled waste stations after an extensive education program has taken place educating students about which products are compostable. Signs at each food service establishment could also help students and faculty identify what items are compostable and/or recyclable before they get to the waste station.
- Expand the current compost program from the UNC kitchen to include pre-consumer food scraps from all food service establishments on campus such as coffee grounds, filters, tea bags and vegetable and fruit scraps. Care should be taken to educate staff at each establishment about what is compostable and someone should be designated to look through the collection container to ensure no non-compostable items are present before adding it to the Earth Tub.
- Allow students from residence to collect compost in their units and dump it in common compost containers located by current waste disposal areas. **Students identified this as a very important action.*
- Set up a pilot program to test the process of collecting paper towel that is not contaminated and the logistics of taking it to the Earth Tub.
- Have community gardens on campus where compost from the Earth Tub and yard waste is made available for students to use in their gardens. **Students identified this as a very important action.*

HAZARDOUS MATERIALS

- With the expansion of medical courses on campus, more hazardous medical waste will be created and disposed of in the mainstream garbage. Talk with the hospital and other medical facilities about how to properly collect and dispose of medical waste, and how to actively reduce the amount of waste created in this field.
- Put hazardous waste buckets in classrooms and labs that produce this type of material and have weekly or monthly pick up. Examples include a bucket for paint in some FINE ARTS classrooms and for medical waste in medical labs.
- Target the OFFICES to eliminate electronic waste from being place in the garbage. Have a departmental drop of area for all waste, including e-waste. Have the janitorial staff take out and leave e-waste behind in offices with a note if and when it is detected. Set up a biweekly collection of e-waste from each office area on campus.

EDUCATION AND COMMUNICATION

- Make it clear to all students that KDSCL, a local non profit organization, works with janitorial staff on campus to aid recycling efforts in exchange for the refundable beverage containers.
- Put up clear and consistent signs around campus about what is and is not recyclable. **Students identified this as a very important action.*
- Have a recycling hub (could be part of the above recommendation to have a Waste Reduction Depot) where students and faculty can go to find out what is recyclable, what is compostable, what is garbage and what is hazardous waste and where to properly dispose of it. This could be a simple display showing signs with descriptions and sample material or a location where there is a staff person to answer questions.
- Have champion, likely the Sustainability Office, head the implementation strategy and oversee the measurement and monitoring of the success of each recommended action.
- Set up a recycling directory through the Sustainability Office Website or another UBCO webpage. Have a link to it on the main UBCO page so it is easy to find. Include photos of waste stations and signs so it is easily recognizable to staff and students.
- Visit each classroom to discuss what is and isn't recyclable and show the new signs and what the waste stations look like. Have someone there to answer questions students have. **Students identified this as a very important action.*

NEXT STEPS: EDUCATION AND IMPLEMENTATION

1. **A task force must be put together to create a strategic action plan** based on these recommendations. This should come from the direction of the Sustainability Office and include people involved in the waste audit such as Allan King and the Nursing Students. The goal of this group will be to create a timeline and budget for implementing the recommendations from this report and any other action items brainstormed and who will be in charge of ensuring the success of each action. Targets can be set to focus on reducing certain waste streams, or reducing the amount of waste from certain buildings or areas identified in the audit.

2. **One or two UBCO staff members should be designated** to overseeing the entire process of implementing the action plan as part of their job description (possibly the Sustainability Office).

3. **Decide if these staff members want or need a group of volunteers such as a green team or student organization** that will help with certain action items. Student groups change frequently therefore it is important to engage established groups or create a new group of passionate individuals. Engage them and give them clear instructions, and be sure to reward them with incentives for completing their given tasks.

4. Have the Sustainability Office create the **means to measure and monitor the success of implementing the action plan.** Will future waste audits be the way to measure success? Student surveys? Waste hauler utility bills can also be used for comparison (ie. more recycling and less garbage are picked up than before the waste audit).

5. **Create a communication strategy** to ensure the entire campus is aware of the action plan. Education is the basis of a successful strategy. Make the new plan very clear. The communication strategy will have key internal and external components, most of which were noted in the 2008 report.

    5.1. **Internal Communications can include:** holding educational seminars for key staff and faculty to convey to students and staff members; setting up a webpage through the Sustainability Office that is regularly updated with new recycling information; put up posters with the website around campus and include the website and a phone number of the waste station signs to direct people to where they can find more information; hold a kick off event to education students about successes or changes; have a group of volunteers visit all classrooms to convey the message of the new programs and policies; send out emails, memos and put up posters with the new actions; or develop

a challenge between faculties or buildings to see which can reduce their waste the most.

5.2. **External Communications can include:** issuing press releases, showcasing programs and successes in common areas for campus visitors to view; advertising through the UBCO website and ubco.tv; or having public competitions with UBC Vancouver.

6. **Launch each new initiative with the help of the communications strategy. Start with clear, consistent signs and waste stations** around the entire campus and remove all old systems and stand alone garbage cans. Let everyone know how these stations work and what is to go in each bin. If budget is an issue, make the phase in process known so staff and faculty can get used to the idea and will know when certain buildings will be getting their waste stations.

7. **Measure, monitor, review and expand programs as needed.** Continually refer back to the action plan, timeline and budget as well as the communications strategy to stay on track, or make adjustments as necessary. Talk with staff, students and those involved in collection and disposal of waste materials to see where new improvements can be made.

CONCLUSION

The data collected from the waste audit clearly shows a need to improve education on campus about recycling, composting, electronic waste and garbage. A barrier identified is that common areas and buildings have different waste stations and systems in place. Some have signs, some do not. A clear and consistent campus wide recycling program will eliminate the issue of inconvenience, while improve students and staffs understanding of waste reduction.

The main Waste Audit Team

Along with a strategic action plan based on the given recommendations, a communications strategy and the means to measure and monitor success, UBC Okanagan will soon be on it's way to being minimal waste campus.

MORE RESOURCES

GreenStep, the Regional Waste Reduction Office and BFI are available as local resources to help UBC Okanagan establish and stick to the implementation plan, solve issues that may arise and answer any questions.

GreenStep Sustainability Coaching
Ph 250-862-8941
www.green-step.ca
info@green-step.ca

Regional Waste Reduction Office
Ph 250 469-6250
recycle@cord.bc.ca
www.regionaldistrict.ca

BFI Canada
Ph 250 765-0565
kelowna@bficanada.com
http://www.iesi.com/English/CanadianServices/Locations/KelownaDistrict/default.aspx

Local Recycling Directory
http://www.regionaldistrict.com/docs/waste/2004_recycle_dir.pdf

Local Recycling Services - Online Yellow Pages
http://www.yellowpages.ca/search/si/1/Recycling+Services/Kelowna+BC

Websites to list and purchase reusable items
Okanagan Reuses http://www.okanagan.reuses.com/
Casatanet www.castanet.net
Craig's List http://kelowna.en.craigslist.ca/

Green Purchasing Guide
http://www.regionaldistrict.com/docs/waste/2009%20Green%20Purchasing%20Guide.pdf