

Saint John's University  
Collegeville, Minnesota

Comprehensive Waste/Recycling  
Assessment and Recommendations  
Program

Prepared By EcoSource

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# St. John's University Comprehensive Waste/Recycling Assessment and Recommendations Program

## Introduction

*"We see ourselves as responsible for good stewardship of the natural environment and seek to take a leadership role in exercising this responsibility, affirming our commitment to use educational activities to promote environmental awareness, global thinking and collaboration on the local level."* Taken from the preamble to the Environmental Statement of the College of Saint Benedict and Saint John's University

A college campus is a microcosm of a city; the better it is managed, the better it operates, and the more it supports its surrounding community. If the waste stream is managed in such a way that the environment wins, the bottom line is enhanced, and the participants are involved and feel good about the program. This is a win-win situation.

Once a strong plan and policy that encourages waste reduction and recycling activities is implemented and consistently reinforced, students more willingly participate. Our goal will be to foster meaningful activities that encourage effective initiatives.

St. John's University commissioned EcoSource to prepare this report with the intention of documenting and bringing together all programs and processes into one central resource. It contains an assessment for existing conditions, costs, identification of opportunities, recommendations for changes, guidelines for going forward with a plan, tasks and ideas for any volunteers and paid staff, and incentive ideas for student involvement.

See Appendix A for complete College of St. Benedict's /St. John's University Environmental Statement

## Existing Conditions

Data for this report came from the SJU staff, student/staff observations, a student waste/recycling study, and the waste and recycling vendors.

Your waste and recycling vendor is Waste Management, with whom you have no contract. Your representative is Todd Johnson, office 258-3941 cell 267-9096 (it had been Jay Bohlinger, who was transferred)

Process: All waste, recycling, and cardboard items are picked up in separate trucks, once a week per bin, and trucks come M, W, and F to collect from whole campus. Waste and recycling are delivered to the Waste Management transfer station in St. Cloud. There, the trucks dump their contents. (The truck coming from SJU picks up from other commercial accounts, so performing a waste sort at the truck dump site would not have disclosed anything about St. John's waste/ recycling).

The commingled from your truck is then mixed with commingled from other sources and placed on trucks that go to the Waste Management recycling facility (MRF- Material Recovery Facility) in north Minneapolis (see Recycling section). Materials are sorted by type, baled, and sold to other markets for processing into other products. Much of the glass is used for bedding on the landfill, and not reprocessed into new bottles. Waste Management claims 85% is able to be recycled.

Details for bin locations and costs are in Appendix B  
Details of material categories, quantities, and cost, are in Appendix C

## Waste Overview

The waste is combined with waste from other sources and it taken to either the Elk River Landfill or the Elk River Burner. The Tri County Solid Waste Managements dictates where the destination is to be, based on need that day. The cardboard is taken to LDI Fibres in Becker, for recycling.

You have a roll-off staged at the boneyard, for demolition debris, and it is on-call.

Waste is generated 12 months a year, as many visiting groups use the campus and dorms for programs during the summer. In fact, facilities department claims there is more waste in the summer. However, during summer months the dorm recycling is more difficult to manage with diverse groups unfamiliar with the program; therefore, there are no recycling bins, and no recycling.

Bins: You have about one pair of waste and recycling bins per 200 people. Waste Management has 31 collection sites on campus (2 and 8 yd. containers) that they collect from; that includes waste and recycling. There are smaller interior bins staged throughout the campus buildings.

### Costs:

Your fees vary a great deal for the 2 and 8 yd. containers. Fees for waste and recycling were determined upon set-up, and each site was assessed at that time, and based on container size, weights, and time needed at each site for pick up. The containers were swapped out last year. Costs and quantities are detailed by site in Appendix B and C.

## Existing Conditions

### Recycling Overview

#### **Single Stream – Glass bottles, plastic bottles, tin and steel cans, paper:**

The indoor recycling bins come in a variety of shapes and sizes. The Peter Engle Science Center, New Science, Library, and Sexton have similar bins, while the other buildings have all different bins. The recycling bins outside say Newspaper, Magazines, Mail, Glass, Aluminum, Cardboard, Chipboard, and Plastic. Paper is included in this. There are signs saying that they accept "Quality Paper, Newsprint, Magazine, Envelopes", and does not mention typical printer paper, which is misleading.

EcoSource visited the Waste Management MRF plant. One of our goals was to take photos of the processes, which could inspire the students. The sheer volumes that are processed on even an hourly basis are overwhelming, and make one think twice about our usage. However, the facility does not permit photos. A graphic that shows the process is in Appendix D. I do have a Waste Management CD which is presented with this report, and which can be a good learning tool for the student body.

Your respective materials are baled and go to:

Glass: gets put into a pile that is used for landfill cover (it is inert and made from sand). The reason- Clear has no value. Green and brown glass is generally recycled (goes to optical sorting plant in Chicago) for recycling into wine bottles; but since it is currently cheaper to make bottles from virgin material, there is no market right now.

Cardboard: goes to boxboard mill at Rock Tenn, and to a liner mill to make the middle (corrugated) part for new boxes.

Paper: goes with newspaper (hence, is mixed) for recycling. This is not a higher end use for your office paper. High-grade office paper is more valuable, but this process does not take the office paper out and it is mostly contaminated.

Plastic: there are many markets for use in plastic products with recycled content.

The current recycling market conditions are at a low point. There is little demand for the commodities, as manufacturing is down, hence they have little or no value. Recyclers are being forced to stockpile tons of materials. However, one should view the larger picture. Industries in the United States which use recyclable materials are an important part of our economy and provide the market foundation for the entire recycling process. Although the markets are down, the demand for major scrap materials sold in domestic and global markets will rebound and continue to grow. As with all commodities, prices fluctuate over time.

Costs: The containers were swapped out last year. Fees for waste and rec. were determined upon set-up. Each site was assessed at that time, and based on container size, weights, and time needed at each site for pick up. Waste Management is charging \$7-8 average per 96-gallon container.

Totals: In one year, SJU generated 383.28 of recycling/reuse (commingled, cardboard, food, confidential papers), and 960.85 tons of waste (that figure is based on full bins, which yours are not); the total of both being 1355.53 tons (not including fly ash, sludge, and miscellaneous demolition debris). Hence, SJU recycled 28.5% of what was generated. Since so much of your waste is recyclable material, this percentage can be much higher.

Costs and quantities are detailed by site in Appendices B and C

## Other Specific Categories- Existing Conditions

**Electronics and appliances:** Students are supposed to take home with them. They can choose to have SJU take items for recycling for a fee. The school delivers its electronics to Central Appliance, St. Cloud, who charges \$.35/lb. for recycling.

**Confidential Papers:** These are picked up and recycled by Shred It. You are charged \$3.15 per minute of shredding, and over a year spend about \$13,000 for this service.

**Newspapers:** (contact Student Senate 320-363-2739 Heath Stoll 6939) The Collegiate Readership delivers 400-500 USA Today, NY Times, Star Tribune to sites on both campuses. Readers are encouraged to put back after reading, as unused and left papers get taken back by distributor, and the schools are credited for each return. About 15-20 newspapers, of each, are left daily. There are recycling reminders by the racks. Occasionally, stacks of papers have been spotted in the recycling bins. Since you pay for recycling services with your waste hauler, the distributor should be carrying through on their commitment to take the papers. I spoke with Heath at the Senate, and he will email the distributor to reinforce.

**Food:** Food waste from food preparation and from left-overs on trays and in serving areas is disposed of in 35 gallon bins, picked up by Barthold Farms every other day, processed (recooked) at their farm and fed to pigs. (The previous vendor was Full Circle Farms in Ogilvie). Food waste is from food preparation and leftovers on trays and in serving areas. This is a program that is approved by the state and by the University and is used extensively in the Twin Cities. It has proven to be very efficient and a significant contribution to reduction in waste, smells, and costs. There is no written contract. The original fee was \$3.20/bin; now it is \$4.20/ bin. Last year you generated 117 tons, and paid \$6,130. Unless you choose to compost, this is an excellent program for food waste.

**Demcon, metals:** They are collected in outdoor containers

**Florescent Bulbs:** These are called in by students for the residence halls. They are stored in cardboard boxes that are purchased for recycling. Each campus building has an area for universal storage. When the barrel is full, they go to a hazardous waste storage building to await pickup. SJU has been using Mercury Technologies in Pine City for this service for years. Your contract has expired, and Gary Jorgenson is checking to see if it has automatically renewed. SJU has gotten bids from other vendors and hopes to change vendors going forward. Greenlights Recycling was the lowest bid. I spoke with the owner; he has provided SJU with the lowest bid available in the state. They are locally owned and provide excellent service.

**Other items that have no program at SJU; depend on individual effort, (see New Programs)**

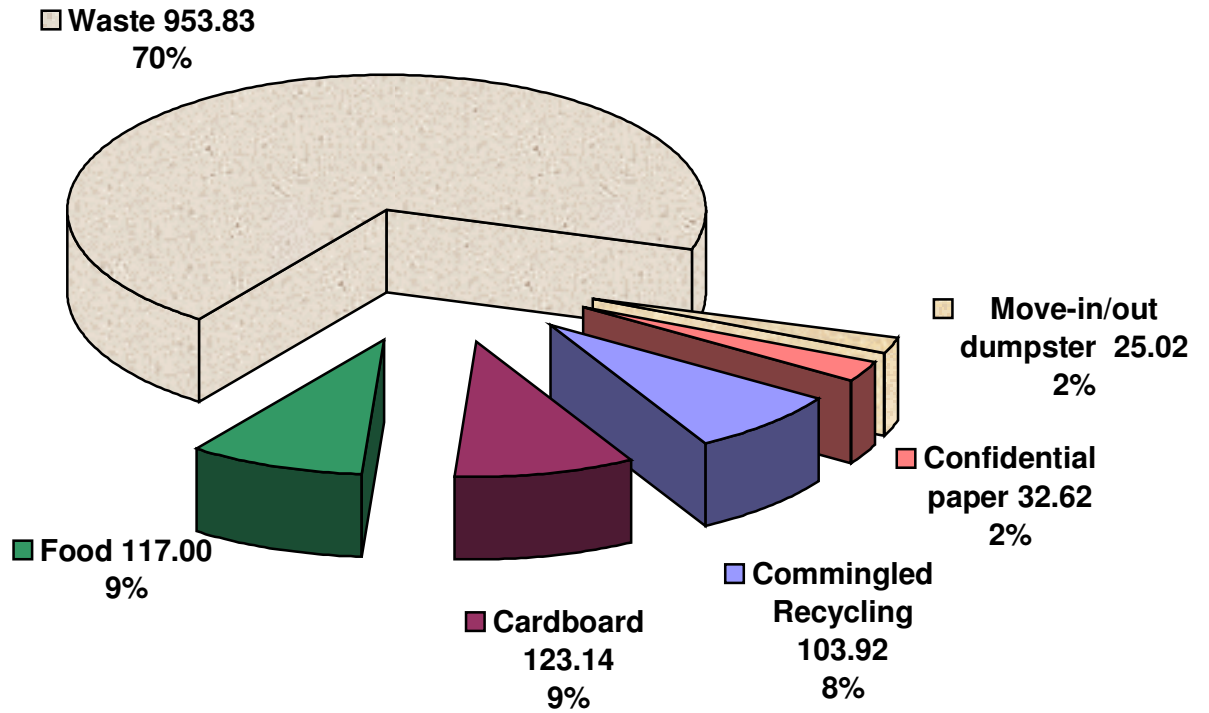
**Small Batteries:** Alkaline- can go into the waste; Rechargeable lithium- tape the ends, because they can be a fire hazard; Nickel Cadmiums- eventually expire and can't be recharged.

**Cell phones:** see: New Programs

**Ink jet printers and cartridges:** see: New Programs

## Pie Chart- Waste and Recycling by Annual Totals

The breakdown of items (large categories) –tonnage generated on an annual basis is:



## Existing Conditions by Locations

**Residence Halls:** Occupants bring out their own room recycling and waste to lower level or exterior bins. Residential halls custodians take waste out from the public spaces (laundries, offices, computer rooms, kitchenettes) in dorms. Each student occupants gets a blue recycling bin and a black waste bin for their room. The blue bin says, “we recycle”.

There is quite a large amount of plastic and glass bottles and cans generated at the dorms. Many of these are disposed of into the waste bins. One student suggested that students under 21 are drinking alcohol, and putting the bottles in plastic bags and throwing into the waste, so as not to be ‘caught’ by putting the bottles into recycling.

**Academic buildings: Classrooms:**

Every class is supposed to have blue recycling bin next to waste. Custodians or students working for custodians empty the bins.

**Academic buildings: Teachers’ Offices:**

Custodians take waste, and teachers are responsible for recycling.

**Business Office:** (Pam Kostezemacher 3372) SJU uses Shred It for pick up and destruction of confidential papers. Your 32.62 tons (for all usage) cost \$12,963 to recycle at \$3.15/minute fees. See recommendations for another option

**Sexton Dining:** (Dave Schoenburg 320-363-3490) Food waste goes to the hog feed program (see Food). There is a trash area where a recycling bin is staged. The used newspapers are put back on the racks, and collected by distributor. Most beverages are in dispensers, lessening the need for recycling. Stretch/shrink wrap, (about 3 garbage cans/week) is generated and thrown into the waste.

Because there is also Grab and Go -You do offer the students beverages in bottles, mostly plastic with a few glass (Rapacious). You can request the distributor sells beverages in plastic and cans only. I addressed this with Dave S., who will ask the Pepsi distributor about this. This lightens the weight for hauling, cutting costs. Also, the clear glass is not recycled into another usable glass item; unfortunately, it is less expensive to create new glass bottles.

**Sexton snack area:** They offer 1 main dish and lighter foods. The recycling bins are in the waste area, and the dining service staff put these items into campus recycling. Bottled soda is popular over cans because of mobility. They looked at purchasing biodegradable cups, which can make sense since your waste is sometimes landfilled. 70% of Sexton is take- away food, and food recycling here would be hard, and not practical, to implement.

**Johnny Java:** (651-497-9296 Amanda) The new coffee shop carries eco-friendly, biodegradable paper cups, and a \$.10 discount for patrons that bring their own mugs. The cold cups are made from a biodegradable plastic.

**Science Building and Registrant’s Office:** Confidential documents are shredded and picked up by Shred It.

**Garage:** It has no recycling bin, but they use Emmaus Hall’s bin, if needed.



**Power House:** (Thomas Schroer) Old computers, monitors, and printers are stored in Gaylord boxes for pick up; two full boxes about every other month. Central Appliance Recyclers, St. Cloud, picks up.

**Main Mall:** It was decided that due to pedestrian traffic mixing with truck traffic on pedestrian walkways, having bins on the mall was undesirable.

**Athletic events:** (Football games- Gary Pflueger 2050) 7,000-9,000 spectators attend. The programs and concession stands generate cardboard boxes, which do get recycled. However, there is an enormous amount of bottles generated, and they are not recycled. At one time the bins were there, but so much waste was thrown into them, the grounds decided to pull them.

Athletic events are held in: Sexton Arena/Jim Smith Court, Guild Hall arena, the athletic complex, the Football Stadium/Track area, the tennis courts, and the North outdoor fields. Recycling bins are needed.

**Palestra:** The student survey stated that 40% of the waste was actually recyclable material. Much of this was plastic bottles. There were no recycling bins staged here.

**Book Store:** (Rhonda 2494 ) The store not carry recycled content printer paper. They do carry some products with recycled content; notebooks, index cards, filler paper, binders, pens, lanyards. I discussed talking with her vendor about purchasing recycled content paper. Bottled beverages are sold here as well.

**Liturgical Press:** (Ron 2578 ) the press does get shrink/stretch wrap (about 1 big garbage bag /week), which is place in the waste stream. Otherwise, they do a good job of recycling.

**Art Center, Guild Hall, Liturgical Press, Wimmer Hall:** All show active recycling.

### **Observations (by students, teachers) and Recommendations** **(Solutions are opportunities!)**

#### **Student Waste and Recycling Sort**

On Dec. 10, 2008, as part of Environmental Science class, the students went as pairs to all the waste and recycling bin collection sites, interior and exterior. We chose a Tuesday, as the waste is picked up Mondays, Wednesdays, and Fridays. The students were given the description of the project, the goals of the sort, criteria to abide by, and a chart on which to track observations (see template, Appendix E).

Overall, they noted there were a lot of recyclables in the waste stream. One estimate was 10%, others 40-70%, mostly bottles and paper. Also, our observations showed that there was much waste in the recycling bins; i.e. it was noted at Mary, the waste was filled with recyclables.

One student performed a study just on the waste and recycling from offices, and it was noted that an average of 40% of the recyclables is paper. Another student noted that 80% of the recycling at the SJU Quad 2 was paper. With so much of the recycling being paper, SJU/CSB may want to consider a separate sort program for office paper that has a higher market value when kept as a separate stream, and collected as such.

*Problem: Although there is signage for recycling bins, there may be a lack of information going out to teachers that they are responsible for the emptying of the bins in their offices. Also, it was observed that "the classroom bins are not always emptied, and the students see this, which does not encourage participation on their part."*

Solution: Clarify the duties of the support staff, reinforce at meetings. Have a student intern visit classrooms and office to check to see if recycling bins are needed. School should purchase and deliver to classrooms. Get teachers involved, i.e. via Administrative Assembly, the Guild.

Problem: "There are no recycling bins in the normal thoroughfares during the day, but there are waste bins on every corner." Offices and classrooms need more recycling bins; labs did not have recycling bins.

Solution: Provide a well-labeled recycling bin where lacking and next to each waste bin.

Problem: Environmental student groups have not been successful in the past.

Solution: Education and guidance are needed, via a full or part time administrator, or over-seer. A website newsletter and on-going support from college staff, which will stimulate confidence in the program. Students need to see that the U. is 100% behind this. There are many suggestions for this; see Recommendations.

Problem: "We do not see recycling bins at the games"

Solution: First, install the bins, next to waste bins. (Previously, they were not, which meant people used them for waste bins, and the program failed.) Then focus on education AT and DURING the games. Options: Reminders via electronic score board, announcers that repeat, visible signage, student interns promoting program by the bins, print reminders inside of programs. \*\*Proper labeling on bins.

Problem: The high usage of the facility in summer creates a high level of recyclables that are not easily managed. The recycling bins are not provided in the dorm rooms. The guests staying at St. John's do not know about the program, and do not make the effort to separate streams.

Solution: As many hotels are doing, a note is left in each room, stating that the hotel has implemented an environmental program, and it would appreciate guests cooperating in the following ways. The simple, easy ways of being green are suggested. The key: education. Depending upon which program is chosen, the alternatives for recycling programs could require sorting of items. Although this has been tried in the past, Facilities says it was unsuccessful and education would be key to the success in the future. That would include education of students, office occupants, teachers and monks.

Problem: No waste bins at SJU Quad 2.

Solution: SJU needs overall strategy of placement of both types of bins, incorporating highly trafficked outdoor areas. Administration needs to agree on a bin design concept, which would facilitate purchasing.

Problem: Upon observation, it was noted that stereo and electronic equipment were in the waste container at Emmaus Hall.

Solution: SJU needs to clearly publicize proper contact persons to pick up electronics.

#### Problems- as per 'interviews' with students

- Bins too full, too often
- Recycling bins are not used for paper and cardboard, because it is perceived that paper is not part of the program. Better labeling
- Cups and plates end up in both streams, since it is unclear where they are supposed to go.
- Students are poor at sorting
- Students don't care and are lazy (students' opinions)
- No real education, just signs on bins.
- If bins are full, students don't bother.
- Summer- there is no recycling at the dorms

## New Program Recommendations

**Waste:** I did procure another bid for servicing waste and recycling from a local hauler, Bueckers City Sanitation. Their bid for monthly service to all your sites was \$14,389 (not including taxes). You currently pay \$8,627.58/ month. This would be for sorted recycling, not commingled. And the bid should be lower than Waste Management's fees, if you were to do that; not higher. So, your pricing for your service is reasonable.

\*\* I highly suggest using the attached charts, and recruiting students go out and monitor the bins JUST BEFORE the pickups. See how full they are. I would speculate that you bins will not be full enough...notify your hauler...let them know you want less pick ups, and smaller bins. You pay for the garbage in these bins, as if they were full. They will not come to you and recommend less frequency. Waste haulers make money from these pick-ups.

**Paper:** It is hard to tell how much of your waste and recycling is 'office', white paper. It is tossed in with both the commingled and the waste, and was not quantifiable. But any school setting generates a significant amount. Office paper has recycling value, if source separated. That value, to you, at the time of this report is (according to Python's, a paper recycler in St. Cloud) \$40/ton. Earlier in 2008, it was at \$140/ton, and markets should improve again in the future. There would be less commingled, which you pay to remove, and a potential income from the paper. The quantity is hard to define. EcoSource found that another comparably sized university generated 52 tons/ yr. At today's rate (which is expected to go up), SJU would earn \$2,080/year, plus offset costs.

If SJU wishes to implement a paper program, there are a few steps we recommend:

- Stage 90 gallon totes throughout campus, with smaller bins in classrooms and or hallways.
- Engage student volunteers or use interns to collect these bins, on a tote truck. Or use custodial staff, or anyone in a newly created recycling position.
- Store Gaylord bins at the Physical plant, or other spacious enclosed area Gaylords hold 600-700 lbs. when full, and can be stacked with a forklift if needed. The charge for a Gaylords is \$9, and if the program ends, and the Gaylord is in good shape, SJU is refunded \$8 for the bin).
- Students can dump the 90 gal. bins into the Gaylords, and the recycler can pick up after a schedule is determined based on volume generated.
- Arrange with a vendor, such as Python's (320- 253-2054) to pick up Gaylord's

**Confidential Papers- Shredding:** We recommend working with Wacosa, a local organization in Waite Park, (go to [www.wacosa.org](http://www.wacosa.org) , that provides a description of all the programs). They employ 400 individuals with disabilities. Wacosa picks up the papers from your locked containers. At this point, these containers are provided for no cost if you have pickups at least once a month. They lock the truck as soon as the papers are loaded, and it remains locked until it gets to the Wacosa facility, where it is weighed, sorted (white from color) and shredded. Last year SJU generated 32.62 tons. Our recommendations:

- Store as much information electronically as possible. Save Paper. Save on shredding costs and energy usage.
- Switch to Wacosa. They will charge \$.12/lb., so your last year's quantity would cost \$7,828, vs. \$12,963, saving you \$5,135 annually. Call Beth at 320-251-0087 ext. 207 to make arrangements.

**Plastic Shrink and or Stretch Wrap:** The liturgical press and the food service get in enough shrink and stretch wrap to promote a program. Wacosa offers a free pick up and recycling program. They require

pick up at a dock, which the press and warehouse have. I spoke with Ron (Press), and Dave (food), and both were very receptive to this. The Press can use a garbage bin to store their wrap, and Wacosa will provide a Gaylord (48" x 48") bin for the warehouse dock (if they wish), which can be staged inside the loading area. Wacosa will pick up, and change out, either once every 2 weeks, or every week, if needed. You would have some savings here; not significant, due to the low weight of plastic film, but you would be making a contribution towards chipping away at the waste stream. Call Beth at 320-251-0087 ext. 207 to make arrangements.

**Plastic and Glass Bottles and Aluminum Cans:** Request students reuse their bottles: refill and carry; use water fountains; reduce the bottles on campus!

**Option A** Aluminum is more expensive to make from virgin, so it has a recycling value. It is a big effort requiring staff or student intern time to separate cans from bottles. If you were planning to have a separation program in place, you could then discuss this with a recycler like Buecker's, who is local and compensates for commodities when the market bears this. CSB does sort their materials on site with a paid full time person (who handles mail and other tasks, as well), and uses Buecker's. CSB has a designated structure that the students from the res halls use for placing their items in designated bins. In this manner, the students take responsibility for the programs to be successful.

Last year, when the markets were better, they were earning about \$2,000/mo. for all their products, which has dwindled to almost nothing now. (Most often, the cost of sorting exceeds the value of the cans, bottles, etc.). Glass will not bring in compensation.

Buecker's provided CSB with a baler, because he compensates for baled aluminum. If you baled, you make more for the aluminum; aluminum bales can now can bring in \$.20/lb. (was \$.80/lb.). (For your info- Gaylords can hold 50 lbs. of cans, and 8 Gaylords can make one 400 lb. bale).

**Option B** (potential for the future) No baling required

The Message in a Bottle recycling program (supported by the Recycling Association of Minnesota, RAM, <http://www.recyclemoreminnesota.org/node/267>) will accept plastic, aluminum, and glass bottles. (The glass jars and steel cans coming from the kitchen would have to continue to be recycled with your hauler.) Pick up service, through WACOSA, is at no cost. I spoke to RAM on your behalf, and they most likely would supply free bins (possible both indoor and outdoor), which are recognizable recycling containers. Call Ellen 651-641-4560 at RAM to discuss this with her, and she will make bin arrangements.

SJU pays about \$8,000/year to commingle recycle. Most of this is bottles. If you start with the paper program, the plastic film program, and consider the above options, you will cut this cost. You might consider applying the savings (\$7,000?) towards one or several part time positions to oversee the sorting of products and dissemination of information to the students.

**Grants:** Through the state of Minnesota, the school can apply for a SCORE GRANT. The applications deadline March 1 (we did not attach...the application is 6 pages long) Contacts at Sterns County Environmental Services offices are Troy; [troy.freihammer@co.stearns.mn.us](mailto:troy.freihammer@co.stearns.mn.us) 320.656.3613 or 1.800.450.0852, or Ross Detert. They can send you a copy of the grant.

Purposes for which Grant Monies may be spent: (see Appendix D)

- 1) Reduce the amount of solid waste generated;
- 2) Recycle the maximum amount of solid waste technically feasible;
- 3) Create and support markets for recycled products;
- 4) Remove problem materials from the solid waste stream and develop proper disposal options for them.
- 5) Inform and educate all sectors of the public about proper solid waste management procedures;

- 6) Provide technical assistance to public and private entities to ensure proper solid waste management.
- 7) Provide educational, technical, and financial assistance for litter prevention;
- 8) Process mixed municipal solid waste generated in the county at a resource recovery facility located in the State of Minnesota.
- 9) Foster waste education programs.
- 10) Reduce, Reuse, Recycle

**Batteries:** Alkaline and carbon zinc batteries are no longer made with mercury, are not considered toxic, and are legally disposable in the garbage. However, if you wish to set up a program for them, contact Battery Solutions at <http://www.batteryrecycling.com/recycling+information>.

Rechargeable batteries, "button" batteries, and special use batteries used in cameras, calculators, and other electronic equipment contain heavy metals such as mercury, lead, lithium, silver, and cadmium. As products, they pose no threat to health because the heavy metals are contained within the battery housing. Adverse environmental effects arise when these batteries are placed in landfills (metals leach into ground water) or are incinerated in municipal waste incinerators. The metals are not destroyed by the incinerator process, but are either collected in the ash or released as fine particulate through the incinerator stack. In either case, humans and the environment are exposed to these hazardous metals. SJU/CSB should offer a recycling program on campus with drop off sites.

The Rechargeable Battery Recycling Corporation's web site can tell you the nearest drop off location (there are many in the St. Cloud area) that will take unwanted, old Ni-Cad batteries, i.e. Home Depot. There is no fee. They also provide educational materials. Your florescent bulb recycling vendor will collect for a fee per pound.

Guidelines that you can send to students:

1. Follow the charging guidelines provided by the manufacturer. There are specific battery charging times recommended for each individual product prior to using it for the first time.
2. Never return a fully charged battery to the charger for an extra boost. This will actually shorten the life of the battery.
3. Do not leave your rechargeable battery in the charger when not charging.
4. Let a discharged battery cool to room temperature before recharging.
5. Recharge batteries only when they are near to fully discharged.
6. When they no longer hold a charge and it's time to buy a replacement rechargeable battery, make sure to recycle your old one!

There are several options for the following; (SJU will earn dollars for each item recycled!):

**Cell phones:** (certain phones) look at <http://www.cellforcash.com/>

**Ink jet printers and cartridges:** (certain cartridges) ... look at <http://www.empties4cash.com/>  
800.456.4320

Or, both items: <http://www.freerecycling.com> The above are easy to set up and use programs, and the school gets paid for its items! For instance, cartridges are \$.10- \$.50 cents each, cell phones \$3 - \$15 each, and shipping is free. You need to boxes and flyers throughout buildings, with someone in charge of pick ups, and at the maintenance building, place items in a larger box. The recyclers provide the pre-paid shipping labels, just stick the label on a box, and a check comes in a month. The students will go for it, and can earn pizza parties, etc., with the income!

**Clothes, Shoes, Purses, Household items, etc.**: The move outs at the end of the year are costly. You should consider having a 'drive' to collect items in good shape. Here are some alternative ideas (there are others in your area), check:

<http://www.smartgivers.org/DonatingGoodsSearch.html?id=2cf9689f-c22f-4de9-a060-9c1dd0fa8714>

- Catholic Charities of the Diocese of St. Cloud 320-650-1550, 911 18<sup>th</sup> St. N., St. Cloud, accepts clothing and household goods
- Wipers, a for-profit company that works with many non-profits with their products. Check [http://www.wipersrecycling.com/items\\_wanted.htm](http://www.wipersrecycling.com/items_wanted.htm) They take new and used items for recycling and reuse. They are in Maplewood, and will pick up quantities for free. SJU/SBC can have end of the term/ end of the year donation drives, and Wipers provide large collection bags at no cost.
- Another fun option is to organize a 'Swap', whereby students bring their still-in-good-condition items to a gym, or outside space on a sunny spring day to exchange, donate, etc.

**Compost**: Composting also satisfies the Benedictine values, your stewardship mentality and mission. The metrics you need to evaluate for this are environmental, economic, and social. You have the land, paper, cardboard, food, and sludge. The wastewater offers an important, available on-site element to utilize.

SJU currently has an activated sludge wastewater treatment system, where 45 to 50,000,000 gallons are treated each year in tanks on campus. The biodegraded sludge is applied on the property, which is used for row crops. Your plant has 3 months storage capability for the water and solids. When, and if, you accumulate more, the excess is transported to the Hutchinson City Waste Water Plant.

Under Br. Linius in 2004, a study was done to look at feasibility of building a compost facility that would handle food, paper, and sludge. It would be considered viable if cost effective. The study was completed by McCombs/Frank/ Roos Associates (contact- Tom Behrens). The cost to put a facility in place with all necessary equipment would be \$900,000, and would cost \$40,000-\$46,000 (old numbers) to operate. There was a disadvantage of siting the wastewater plant too close to campus, and another site was not identified, nor costs determined.

You could bring in a composting specialist to evaluate your study, and discuss the options of going forward. One such local expert is Brad Matouska, Mississippi Topsoil in Cold Spring 320-685-7676, who previously discussed this with St. John's. He currently takes yard waste and combines this with poultry by-products from Gold n' Plump. He feels a program at St. John's is workable. Such a consultant can help set it up, or he can own and operate it.

There is a broad scale for composting –from using small areas with heat generating compost bins, whereby the compost is later applied to flower beds, etc., to going larger scale, which uses energy, fuel to transport, and generates exhaust. Some examples are sited in Appendix F.

Another contact with more info about composting: Stearns County- Doug Lien [delien@cloudnet.com](mailto:delien@cloudnet.com) or call (320) 255-6143, 320-255-7200. If you wish to have students see composting in action, you can schedule a field trip to the composting site in St. Cloud. They prefer at least a two-week advance notice. To schedule, call Doug at (320) 259-6549). Another resource: Harold, at the Correctional Facility, 320-240-3085, is planning to set up a composting program in the spring to combine food (now going to Barthold) w/ sawdust.

## Products, etc.

It is important to buy products made from recycled materials in order to strengthen the market of recyclables. Recycled Office Products has an online catalogue with all office products and school supplies. They carry over 5,800 recycled and remanufactured products!  
[http://spr.activepoint.com/green\\_spaa1061ega/book.html](http://spr.activepoint.com/green_spaa1061ega/book.html)

- Buy in bulk and concentrated liquids; it reduces your carbon footprint.
- Buy greener products when available (low toxicity, low VOC's)
- Encourage vendor responsibility by requesting less packaging, recycled content and end use take back recycling. Carpeting is such an example..many manufacturers are creating contracts with colleges that provide recycling of previous old carpeting, recycled content for new carpeting, and end use recycling of their worn out carpets. This saves colleges money, as well.
- SJU Rest Rooms now carry 100% recycled paper products.
- Eva observed that going greener has lessened work compensation issues, as the smaller, more concentrated bottles lead to less back injuries when lifting.

**Duplicating Center-** (Mary Gouge 2064) The center not carry recycles content paper. She tried recycled content paper years ago, but it was more costly, didn't print as well. Times have changed; the manufacturing process is far more sophisticated. I recommended to her that she speak with her vendor again to revisit that. We talked about the idea of having pads of paper made from used printed sheets, cut into sections and those sections bound at one end for use for notes, memo pads, etc., (SJU did have a printer that did this for free at one time) SJU may have to pay a small fee to do it, but they could be sold at the book store for the same price. This would make a statement about the intentions of the school, and encourage students to act sustainably.

## Bins

A recycling container should be chosen, which establishes a standard. Then it will be more recognizable by students, and offer a cohesive esthetic. The school also has esthetic standards, and should be determining what bins meet those standards. There are many companies that sell their bins on the Internet. Some examples are:

<http://www.recyclingbin.com/product.aspx?id=40>

<http://www.recyclingsupply.com/ecolad.html>

<http://fibrexgroup.com/Envirodesign-Recycled-Plastic-Lumber-Waste-Receptacles.aspx>

[http://www.rubbermaidwholesale.com/product\\_info.php?products\\_id=774](http://www.rubbermaidwholesale.com/product_info.php?products_id=774)

## Creating a Coordinator and Student Internship Positions

An option that holds much promise is student interns, who could oversee programs, monitor participation, and handle problems as they occur. This also presents a wonderful educational opportunity. Students can participate in a real world, sustainability program.

For your program to be successful, it is important to employ people who will be responsible for proper maintenance of the program. It is difficult to run a recycling program strictly with volunteer help. Your chances of success are much higher if you establish an institutionalized program with on-going paid staff with supplemental opportunities for volunteers in less critical roles (help at events, doing educational activities etc.). Students are a valuable asset to a campus recycling effort and many programs employ students to perform recycling and other administrative duties. Additionally, there are many opportunities

for students to get involved through internships and class projects. Utilize students as resources as much as possible. This is also an opportunity to provide an academic hands-on experience for students to compliment the college experience.

Programs utilizing students as recyclers (who do collection, processing and other assorted tasks including program education) have reduced costs and provide valuable student jobs with an experiential component. A full or part-time coordinator of their efforts would be a good idea.

For example, the role of the Student Recycling Interns, with 5-6 hours/week, could be as follows:

- Assist SJU in bringing recycling to the attention of individuals and groups on campus, with an emphasis on student participation.
- Work with the Student Senate, and the Housing Department to ensure that there are a sufficient number of recycling bins and that the bins are positioned where needed, and signage is consistent, clear, and present. Check on bins periodically to see if recycling is going where it should.
- Work with the Cafeteria Staff to ensure recycling is happening in dining halls.
- Take on an independent leadership role by developing a project or activity on campus or by directly building on what is already in place. (i.e.; start an environmental group or organize a recycling speaker forum.

### **Keys to a Successful Waste Minimization and Recycling Program:**

#### **Education and Promotion**

There needs to be a buy-in from the students. They need to understand what happens to their recycled products; who takes it, how it is processed, where does it go when it is recycled. Show photos, DVD's, the Record. Reinforcement. They need to have faith in the program. This one step will increase your volumes. Also, the hard facts of the enormous quantities we are talking about might encourage less consumption.

- Continually promote via these venues:
  - 1) The Record
  - 2) Signs, posters in trash rooms, residence halls, academic buildings and on outside bins;
  - 3) School Website, put a recycling page online with all facts and tips
  - 4) Video presentation, so viewers are inspired by the 'big picture'. You can post the video provided by Waste Mgmt., and EcoSource highly recommends having a showing of the DVD, "The Story of Stuff" . You can use any excuse to do so...Earth Day, first day of the term, National Recycling Day, holidays. This short film is very inspirational and made by another young adult. [www.thestoryofstuff.com](http://www.thestoryofstuff.com)
  - 5) Create student organizations to help promote recycling and environmental responsibility on the campuses.
- Get the word out, starting with freshman orientation and resident assistant trainings.
- Ask the students in an on-line survey, or news article, where did you toss your bottles?
- Inspire students with fun incentives; competition between floors, the 2 schools, other schools, make it part of the school culture and spirit to participate.
- This can be done in conjunction with education and monitoring of your energy program and spring competition.



Again, SJU needs to determine how much they want to invest, as setting aside funds for a part or full time position as an 'overseer' of environmental indicatives and efforts. Student interns and work-study programs, if done with supervision, provide needed staff.

Incorporating waste reduction practices into recycling efforts presents an opportunity for a large payoff in reducing the waste before it is produced. College campuses provide endless opportunities for waste reduction from encouraging double sided copying practices to reducing packaging and vendor waste from contracts. Purchasing and contracting plays an important role in campus waste reduction, as much of campus institutional waste is generated from the outside. When looking at your waste stream, have students remember the 3R's...and ask themselves "Can this be reduced? Reused? Recycled?"

### Prototype Education Information

The below is a recommended communication tool for the schools. It lets the students know of your commitment. It says, "We walk our talk". SJU can supply residents with a recycling bin, a reusable cup, and a compact florescent bulb (which will save in energy and labor costs).

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#### **Welcome Students!**

*Our program strives to make SJU/CSB models of sustainable and environmentally responsible institutions. It is our goal to educate students, faculty and staff about their daily impacts on the earth and to give them the tools to take positive actions to protect and sustain our living world.*

*It's a new term and time to put your best foot forward! SJU is dedicated to the goal of becoming Sustainable, and this begins with you. There are many simple things that you can do to help lead a more sustainable lifestyle. Check our website, <http://www.csbsju.edu/environment/>, for easy, yet important ideas.*

*When you moved into your residence hall this fall, you may have found a reusable cup, a CFL bulb, and a recycling bin. These items were compliments of SJU.*

*Recycling- easy as pie!*

**Q. Does someone take my recycling out for me?**

**A.** No, you and your roommate should discuss who takes it out and when.

**Q. What can I recycle?**

**A.** Paper, cardboard, plastic, metal cans, glass, newspaper, magazines

**Q. Do I have to sort my recyclables?**

**A.** No, the University has a single-sort program (**\* This changes if SJU decides to recycle paper separately**)...so you just have to put it in the recycle bins located in waste rooms and outside of the dorms. But always keep waste and recycling separate!

**Q. Why do we use a CFL (Compact Florescent Light) bulb instead of a regular light bulb?**

**A.** They use up to 50-80% less energy than an incandescent. Initially they may cost more, but in the long term they will save money by using less electricity and lasting 10 times longer. They produce 75% less heat than an incandescent.

**Q. What if I break a CFL?**

**A.** CFL's contain minute amounts of mercury, so leave your room and close the door and you can return 15 minutes later and it will be safe to enter. Then dispose of it. For more information on disposing of CFL bulbs, go to [http://www.csbsju.edu/environment/.....](http://www.csbsju.edu/environment/)(SJU needs to get this page up).

The Minnesota Pollution Control Agency has put together data, publicity, and many tips on the benefits of recycling. The following has included many of these ideas. For printed pages that SJU/CSB can customize for its own public relations campaign throughout the campuses, like the ones you see (out of focus) below, go to [http://www.recyclomoreminnesota.org/print\\_ads](http://www.recyclomoreminnesota.org/print_ads)



### **Ideas- make it fun, make it happen!**

Across the country, college campuses are creatively inspiring participation. Here are some examples of these ways to encourage action!

- Run a daily trivia contest in the school newspaper promoting waste prevention and recycling. Open the contest to the school community, and the person who calls the recycling office first with the correct answer wins the daily contest. The university receives donations from stores on campus and/or local merchants.
- Host an intra-campus volume-based recycling competition, with the winning group receiving a cookout financed by dining services.
- "Get caught green-handed"— Randomly award residents seen recycling.
- Start a contest between residence halls. Have residence hall staff register their floor or building for the contest and then perform random recycling sweeps to assess the contamination level in each bin. Points are awarded accordingly and the floor or building with the most points wins a pizza party.
- Raffle tickets to students who participate in special events like joining RecycleMania (national effort for campuses - <http://www.recyclemaniacs.org/>), and their Facebook group or watching the DVD called "The Story of Stuff". Prizes are awarded to winners of the raffle.
- Hold a recycling fair in the student union building. Activities can include a recycled newspaper toss, recycle-themed Jeopardy, an aluminum can trivia quiz, an environmental habits assessment form, and informational displays.

- Conduct a "dumpster dive" and display the results outside dining halls and well-traversed areas of campus.
- Develop public service announcements for campus media featuring the school president, campus athletes or coaches, or other students.
- Promote RecycleMania through the university news service, which might run regular news releases, and through the university Web site.
- Send letters to the editor of other school newspapers with friendly taunts.
- Update students, faculty, and staff on your standings in the competition through mass e-mails.

**Sporting Events** Since recycling at sporting events is a challenge at SJU, use volunteers to publicize recycling while picking up recyclables at college basketball games, soliciting volunteers to "Adopt-a-Game." For example, volunteers could pair up to be responsible for the collection of recyclables and trash from two to four sections of the basketball arena. The volunteers wear Recycling promotional T-shirts and collect recyclables in manner during the breaks, timeouts, and half time.

Create half-time shows at basketball or hockey games at the athletic arena or on television. Create banners for sporting events.

### Does Recycling Help Reduce Global Warming?

Yes! SJU and CSB have made a commitment to Campus Energy Challenge 2008, and this analysis report supports that effort. How? Recycling assists in reducing harmful greenhouse emissions because it takes less energy to make products from recycled materials than virgin materials. Studies show that manufacturers using recycled materials save more than 500 million dollars in energy costs per year.

Paper Recycling:

- Production of recycled paper uses 65 percent less energy than paper production (the 5<sup>th</sup> largest energy consumer) using raw materials. Reducing energy consumption reduces greenhouse gas emissions. Production of recycled paper uses 80 percent less water than paper production using raw materials, reducing methane and nitrous oxide, and therefore greenhouse gas emissions.

Recycling Plastic Bottles:

- In 2006 Minnesotans recycled more than 48,000 tons of plastic, which equates to reducing CO<sub>2</sub> emissions by 63,000 tons. Minnesotans saved nearly \$1.5 million in energy costs by recycling plastic in 2006.

Recycling Aluminum Cans:

- According to the National Recycling Coalition, recycling a single aluminum can saves enough energy to power a television for three hours. In 2006, MN recycled enough metal, glass and plastics heat more than 410,574 houses for one year. That's all the homes in Duluth, Rochester, St. Cloud, Minneapolis and St. Paul! Recycling of aluminum takes 95 percent less energy than it does to produce aluminum from virgin materials and makes a huge impact on the reduction of greenhouse gasses.

## Cost Savings

By implementing the recommendations in this report, you will realize savings and income in many little ways, much of which is not quantifiable. And the ability to move your university's culture closer to attainable environmental goals need not be represented by a dollar amount.

### Those that we can estimate:

Paper recycling w/ Python's	\$2,080.
Confidential shredding with Wacosa	5,135.
Message in a Bottle	up to 5,000.
Monitor how full the bins are prior to pick ups	unknown
Score Grant	unknown
Plastic Wrap	waste-reduction savings
Cell Phones and Ink Jet Cartridges	income from recyclers
Recycling at sports events	waste-reduction savings
Clothes donations	waste-reduction savings

***\*\*Please remember, when you minimize your waste, take the volume down, you reduce the frequency need for waste pick up, as well as reduce the weight.***

***As previously discussed (it is important enough to repeat!) When you start reducing, also have students go out and monitoring the bins JUST BEFORE the pickups. See how full they are. I would speculate that you bins will not be full enough...notify your hauler...let them know you want less pick ups. They will not come to you and recommend less frequency. Waste haulers make money from these pickups.***