



Report of the Johnson County Community College Sustainability Committee

Submitted to Dr. Terry Calaway

May 2010

Purpose:

This document is JCCC's third campus-wide, fully participatory sustainability assessment and contains recommendations for further action as compiled by members of the college's Sustainability Committee. Subcommittees of this larger group created this report and its recommendations. This report should not be seen as the final word on these issues, but rather should be compared to previous reports as an assessment of progress.

Why Sustainability? Why JCCC?

At its heart, sustainability as a concept is a politically-neutral way of describing a more ecologically sensitive way of thinking and acting as individuals and as a campus community. Whether we are talking about increasing recycling of waste materials, offering new courses in water conservation, creating new certificate programs in green technology, or planting native grasses on campus, we are indeed now in the realm of sustainability. Sustainability (philosophically and in practice) offers a rare opportunity for economics and ecology to unite rather than clash. The benefits to the environment are many; the economic benefits to the campus are substantial. President Terry Calaway's March 2008 signing of the College and University Presidents Climate Commitment demonstrates JCCC's belief in these ideas.

Community colleges like JCCC are particularly well-suited to lead this effort. Not only can community colleges green their facilities, but their traditional foci on vocational and community-based education make them ideal for green workforce training and teaching homeowners how to save energy during a one-day workshop. JCCC can and should indeed become a leader in promoting sustainability, not only among our peer institutions but in our local community. Whether one credits Al Gore or high gas prices, some sort of tipping point about environmental/energy issues has clearly been reached in the United States over the last two years. JCCC is responding to this new calling, and time is of the essence. The public is interested in green issues, as are businesses. This attempt to shift campus culture cannot be implemented top-down. While administrative leadership will be needed to remove obstacles, this effort needs to be holistic, organic, and bottom-up. Different aspects of this initiative (cost-savings, catering to business constituencies, ethics, stewardship) will appeal to different members of the JCCC community, including students, and that is all to the good. JCCC should model sustainability in the curriculum, in the institutional mission, and in the daily operations on campus.

Summary:

While this report contains a variety of conclusions and recommendations, several broad categories of conclusions and recommendations can be noted. These remain unchanged from the 2009 report.



1. Efforts to green the campus need systematic support and planning. Whether the issue is recycling, pursuing potential renewable energy installations, or planting more of the campus to native grasses, resources must be allocated to ensure that the signing of the Presidents Climate Commitment does not become another example of greenwashing. In particular, recycling (substantial progress is being made) at JCCC needs sustained attention and allocation of additional resources.
2. A variety of new technologies/design elements can be used to reduce JCCC's environmental impact. Many of these will pay for themselves over time through increased efficiency. LEED certification for new/retrofit buildings, energy management systems, and water control systems are a few examples with quantifiable cost savings over time.
3. Curriculum initiatives must be aggressively supported. New environmental science programs, a sustainability certificate, and various green workforce training programs should be at the core of any community college in the 21st century.

Administrative

While many of the recommendations in this report are administrative, there are several that deserve special attention with substantial progress made.

Accomplished:

- Created a sustainability coordinator position in January 2009. (*Jay Antle assumed the office of Executive Director, Center for Sustainability, in January, 2009.*)
- An annual sustainability budget has been created and a \$712,000 federal earmark secured through Senator Sam Brownback's support. A student green fee went into effect in spring 2010 and will provide potentially \$400,000 a year for students to use to support greening JCCC.
- JCCC's mission statement was amended to include sustainability as a key value. Sustainability is now part of JCCC's Strategic Goal #2.

Community Outreach

As a community college, JCCC has an obligation not only to serve students, but the larger community in which it resides. JCCC should develop a variety of programs dealing with sustainability for that community.

Accomplished:

- Assess community interest in continuing education programs in this area and offer programs accordingly. *CE has launched a Sustainability Committee.*
- Cooperate with local/regional entities (Mid-America Regional Council, the City of Overland Park, Burns and McDonnell, Climate and Energy Project, Greater Kansas City Chamber's Energy and Environment Committee, KCADC – Advanced Energy Task Force, Sierra Club) that have made sustainability important to their organizations. *These strategic partnerships are well underway.*

Ongoing:

- Continue to offer public forums dealing with environmental/energy issues that not only inform but also offer chances for dialogue. *JCCC has offered several small-scale events, but this is an area ready for substantial expansion.*
- Find ways to include service-learning options for JCCC students in community sustainability activities. Civic engagement is a JCCC goal, and here is an important realm for that engagement to happen.

**Not Met:**

- Be a host institution for a regional gathering of higher education institutions focusing on sustainability and green job training.
- Create and fill a position in the JCCC Center for Sustainability that will serve as a community resource for data on sustainability-related industries as well as related policy analysis.

Dining Services

The mission of JCCC Dining Services is to provide our students, the entire campus community and guests with progressive, diverse food services of high quality and exceptional value in a friendly and supportive environment with upholding the educational mission of the college.

Dining Services Vision Statement

- Measurably enhance customer satisfaction and the department's image by providing excellent services and communicating effectively.
- Maintain an unwavering commitment to high-quality food by offering a variety of food and beverage choices that take care of the customer's needs.
- Explore opportunities (branding, etc.) that will help expand retail, vending and catering sales.
- Upgrade the appearance, accessibility and functionality of the facilities.
- Ensure a safe work area for employees and promote food safety.
- As part of the JCCC sustainability effort, make decisions that preserve the values of environmental, economic and social responsibility.

Dining Services includes:

- The Food Court which includes Pizza Hut, Chick-fil-A, Boulevard Burger, Quivira's, AFC Sushi, Salad Bar and Hot Bar. The Food Court averages between 1,500 and 2,500 transactions daily.
- Espresso Bars which includes Encore!Espresso and JavaJazz. The Espresso Bars average between 800 and 1,200 transactions daily.
- Down Under which includes The Carvery, BLVD. Deli Bar and The Greens salad bar. Down Under averages between 400 and 800 transactions daily.
- JCCC Catering caters refreshment orders, receptions, breakfast, lunch and dinner at different venues on campus. Catering does over 3,000 events a year.
- Vending includes 65 soft drink, coffee and snack machines throughout campus.
- Café Tempo is a sit-down restaurant located in the Nerman Museum of Contemporary Art. Café Tempo averages between 150 and 200 transactions daily.

Sustainability efforts are ongoing in dining services at JCCC under the direction of Jay Glatz and Tim Johnson with input from the Sustainability Committee. Such efforts include:

Accomplished:

- Initiated a refillable mug program in April 2008.
- Hosted a series of Sustainability Dinners stressing locally produced food. The first was held in the fall of 2008, and continued in 2009 and 2010.
- Held several on-campus exhibition cooking sessions involving locally produced food (like grass-fed beef).
- Established and supports CSA (Community Sponsored Agriculture) programs on campus. A JCCC Dining Services CSA joined the Rolling Prairie CSA on campus in late spring 2009.
- Created a Farmers Market to go along with the CSA program.
- Moved "Greens" concept to the Food Court during the summer months using locally grown produce.

**Ongoing:**

- Reduce styrofoam where possible, replacing it with hard plastic products and/or biodegradable paper products. Have reduced styrofoam purchases by 50% since 2007.
- Replace disposable plates/bowls with rewashable hard plastic plates/bowls during summer 2008 with some replacement of plastic dining ware with rewashable silverware in spring 2009.
- Reusable clam shell containers and soup cup program began in summer 2009.
- A commitment to integrate locally produced food into all aspects of operations where possible and allowed under the current Sysco contract was begun in May 2008. Integration of locally-produced food will be paired with education about the importance of considering food miles when making dining choices. *Local sourcing of ingredients/products has increased from 3% to 15% in the last three years. Local sourcing goal is 20% for 2010 – 2011. Dining Services is bringing more locally produced food in from sources like the Kansas State University Farm in DeSoto.*
- Ensure proper staffing in order to bus the Food Court and shuttle bowls/plates to/from the downstairs dishwasher.
- Revisit existing contracts to ensure that vendors supply more locally produced products and ecofriendly packaging.
- *Dining Services is planning an Iron Chef competition involving local foods for departments, using the college TV station to promote competition and the educational value of the event. Planning for this show is currently underway.*
- Support the Edible Schoolyard Project at the Hiersteiner Child Development Center.
- Utilize data from the recent energy audit of the campus to better utilize energy in Dining Services.
- Dining Services began composting with the JCCC Student Farm in April 2010. *Preliminary estimates suggest that 1,000 pounds of waste per week will be diverted to composting out of the college's main production kitchen. This effort will be a preview of a possible campus-wide composting system to be implemented over the 2010-2011 academic year.*
- Schedule educational meetings with Dining Services staff to promote sustainability efforts.
- Promote recycling for catered functions and suggest local sourcing menus for food.
- Install a re-bottle water station to reduce plastic water bottle usage.

Energy/Buildings

The JCCC campus occupies 234 acres and includes twenty buildings with 1.7 million square feet of conditioned space. The cooling needs are provided by two separate chiller plants. In 2009 the main campus energy bills totaled \$2.0 million for electricity and \$111,000 for 30 million gallons of water.

The main campus buildings possess many of the design characteristics that result in good overall energy performance. However, there are significant opportunities to further increase the energy and water efficiency of campus operations which, if implemented, will result in lower operating costs, and provide a hedge against future energy rate increases. Reducing the environmental footprint of JCCC operations will involve cutting consumption and greenhouse gas emissions, increasing energy efficiency and energy conservation, and adding on-site alternative power generation.

Johnson County Community College is building a new 50,000 square feet health education building at the Olathe Medical Center. The medical center donated 5.8 acres of land to JCCC on which to build an allied health education center. Construction has begun, and the center will open for classes in fall 2011. The cost for the new center is \$15 million. The Olathe Health Education Center (OHEC) is designed to achieve LEED (Leadership in Energy and Environmental Design) silver status and will feature a geothermal heat pump system.



Accomplished:

- Established a policy that all new campus construction be LEED Silver or equivalent certified.
- Developed an energy program in accordance with the Energy Assessment Report done by Burns & McDonnell Engineering for the college.
- Completed an upgrade of building controls and the installation of building power meters.

Ongoing:

- Establish a campus awareness campaign to encourage conservation of energy. Encourage personal responsibility for saving energy at work.
- Currently working with departments to switch from using space heaters to using heated floor mats instead.
- Install auto cutoff switches for lights around campus.
- Ongoing installations of motion sensors in classrooms, stairwells, CSB break room and restrooms, COM basement hallways, and GYM stairwell, to name a few.
- Reduce light levels as appropriate during non-business hours, in cooperation with JCCC Police (to ensure safety/security of all on campus) in RC garage, PGGG stairwells, Carlsen Center garage, RC lobbies and hallways, and Nerman/RC atrium, to name a few.
- Establish better coordination with Scheduling to more efficiently meet air handling, heating and cooling needs in rooms and other scheduled areas. Establish better coordination regarding events in the Gym to provide more efficient HVAC facility usage. (The GYM staff has provided us with access to a major event calendar.)
- Target all new buildings to be LEED certified. The architectural/engineering services agreement for the Olathe Health Education Center at the Olathe Medical Center campus includes fund allocation for design of the building to LEED silver standards.
- Continue to take advantage of the energy savings and rebates provided by moving to more efficient fluorescent bulbs. Change out from F-12 to T8 type fluorescent bulbs is 85% complete. Areas done in 2009 include north ATB outside ceramics area—(HID to fluorescent conversion), and the GYM fieldhouse (HID to fluorescent conversion). Areas in ITC and Carlsen Center are also being addressed. Rebates received in 2009 were \$33,146, and we have captured \$8,500 so far in 2010.
- Upgrade mechanical systems with energy efficient models. Use Energy Star compliant machinery. HVAC systems in HCDC, CSB, and ITC have been upgraded to newer, higher EER rating systems.
- Add room occupancy sensors whenever an area is remodeled. Lights are turned on/off automatically in GEB, OCB, and SCI remodeled areas.
- Obtain software that enables curtailment of electricity demand during campus peak usage times.
- Establish a long-term goal to make building-by-building real-time data available.
- Continue working with IS to share ideas about computer power consumption, including energy-saving shut-downs on computers, centralized data closets, upgraded CLB closet, and upcoming work on the Hudson Auditorium.
- Identify and implement ways to reallocate energy savings back into energy management funding. In this way, this effort can be partially self-funding. Ask administration to allow us to reintroduce savings back into energy projects instead of crediting utility bills.
- Include sustainability policies/procedures in new staff orientation and in-service forums.
- Aggressively deploy OCC and use InfoList to disseminate energy efficient tips and ask for feedback on areas suitable for sensors.
- JCCC will host a K-State energy efficiency intern in the summer of 2010 to help identify cost savings.

**Not Met:**

- Purchase a new building automation system for approximately \$2 million.
- Partner with an energy provider to install a small wind turbine, a photovoltaic and other renewable energy sources that could be used as teaching aids in certificate programs.
- Research feasibility of installing green roofs on existing/new campus buildings. In addition to energy savings, they could be linked to curriculum and students/faculty could assist with maintenance.
- Integrate sustainability in campus landscaping such as climate-appropriate plantings that require less water, more efficient/reduced irrigation, and less dependence on chemicals (for weed/insect control). Grounds has implemented some landscape designs that are environmentally friendly. Storm retention project is in progress.
- Practice better capacity planning. Analyze classroom usage, especially during the summer, and incorporate scheduling practices that would consolidate classes into as few buildings as reasonably possible.
- Create a dashboard that allows people to see campus energy use in real time. This information could be incorporated into existing campus information sharing systems.
- Participate in the KCPL MPower program. MPower provides an annual payment for agreeing to be "on call" to reduce our usage by a fixed amount if requested during peak summer demand. It also provides an additional payment every time we successfully reduce our usage when asked to do so. (The KCPL program is on hold.)
- Consider performance contracting as a way to fund aggressive energy savings on campus.

Grounds and Water Report**Ongoing:**

- Concentrations of nitrates and salts, and eventually other pollutants, will be measured in the creeks draining from campus. This will be done repeatedly through student lab exercises and honors projects in geoscience and bioscience classes to establish and maintain a chemical profile of our runoff. The first measurements for the creek on the south side of campus took place during spring 2008. Preliminary results obtained in an environmental science lab indicate that our phosphate measurements taken from pipes draining into the creek equals 2.52 mg/L, drainage from the parking garage and faculty lot equals 0.84 mg/L, and the downstream portion of the creek equals 0.22 mg/L. These values are above EPA recommendations for drainage from parking lots. Phosphate was chosen because of the implications to eutrophication of water sources such as creeks and ponds downstream.
- Nitrate and other measurements will also be included. Long-term measurement sites need to be determined using GPS so that monitoring can take place at the same sites throughout the year. Lynne Beatty has selected three sites for sampling, and she and Paul Decelles will be monitoring nutrient levels every two weeks over the summer at these sites. The goal is to assess the degree to which nutrient runoff from fertilizer is an issue at JCCC. The expectation is that the new green stormwater project will also be monitored by JCCC students as several testing locations are part of the project plans.
- In landscaping for all new buildings, emphasize native plants and drought tolerant plants (xeriscaping) that do not need irrigation systems. A recent landscaping project around one of our buildings has a drip irrigation system irrigating ornamental grasses. Grasses are commonly used in xeriscaping and need not be irrigated. We suggest that the coordinators of future landscaping projects (Campus Services?) consult the sustainability office.
- New planting practices are being implemented include use of hyacinth, daffodils and other naturalizing bulbs to save labor from annual replacement of tulips. Grounds used 16,000 bulbs in 2009, and in 2010 placed 5,000 naturalizing bulbs that will stay in place.
- Grounds crew is currently testing the use of pine needle mulch in place of the currently used wood chip mulch. The goal is to see if this product lasts longer than traditional mulch, reduces labor cost and improves the look of campus.
- Installation will occur of automatic irrigation systems with a central control and access through a computer system that can be turned off remotely to avoid unnecessary watering when a rainfall occurs.
- A contact point was added for sprinkler control on the new OHEC building automation system to allow for remote access. This will enable computerized irrigation system shutoff. A long term goal is to install more contact points for sprinkler control on campus.



- Reduce fertilizer, herbicide, and pesticide use. Replace with more person hours. This goal was not met and is ongoing. Because herbicides are used to control weeds in the buffalo grass areas, herbicide usage most likely increased. The quantity and type of pesticides used on a yearly basis should be determined to allow year-to-year comparisons. We request the involvement of the Grounds foreman or other individuals who actually track the purchasing and application of pesticides.
- Acelepryn has been introduced for grub control on the athletic fields this year. Grub control is difficult since the insects develop resistance to the pesticides. Acelepryn has a lower toxicity to birds and fish than previous choices and is practically nontoxic to bees.
- In addition, herbicide treatments are being more selectively targeted to high maintenance areas of the inner campus.
- The Tree Trail will be re-established with species identification and maps. Lynne Beatty and Lekha Sreedhar have located and identified about 160 species and cultivars. Mark LaBarge will also assist with the Tree Trail. The benefit will be in knowing what species we have and providing a nature trail guide that could be used by classes and the community. Purchase malaise traps to determine insect biodiversity and include planting choices that are appropriate to encourage wanted insects. Paul Decelles and other bioscience professors would use these in classes. Malaise traps are 24-hour collectors of insects that fly. These would be installed on campus at various locations. Traps cost \$260 each; six traps would cover the various habitats on campus. In addition to determining biodiversity for sustainability planning purposes, these projects could also be used as lab exercises for students in environmental science and other biology courses. These projects would benefit from release time or summer stipends to complete the GPS location, identification, mapping, and installation of traps. This goal is partially met and is ongoing. Continued work on the tree trail and insect census will occur throughout summer 2010. We should purchase at least one malaise trap for testing this summer (2010).
- Construction on the JCCC southeast quadrant stormwater management project (using ARRA funds for green infrastructure installation) is underway and should be completed by July 2010. This project will use a variety of green best management practices to treat water flowing off of parking lots on the SE quarter of campus.

Not Met:

- Eliminate use of sodium chloride as a deicer and reduce use of calcium chloride as a deicer. Switch to environmentally acceptable snow and ice removal products to reduce contamination of local surface water and groundwater. MDOT and many cities had good results with beet juice additive on roads this winter. It costs \$2.60 per gallon, which is more expensive than salt brine but is less harmful to the environment, pavement, and vehicles and does not stain. It does require a tanker truck with a cost of about \$180,000, but as more cities start to use it, perhaps we could contract the application of the beet juice mixture. Use alternatives for sidewalk deicers such as calcium magnesium acetate. This is made from a dolomite-rich limestone and acetic acid. It is less harmful to vegetation, does not damage concrete and brick as much, and does not stain carpeting as sodium chloride or calcium chloride do. Two alternatives to investigate for sidewalk deicers are products called Bare Ground and Storm Team. Testing on the use of sugar/corn carbohydrates for sidewalk deicers is also being done by the departments of transportation of various states. One concern for this method on sidewalks is that it is most effective at temperatures below 35° F. The calcium chloride is stored in plastic bags. The current pile of sodium chloride and sand is uncovered and out in the open. The sodium chloride must have impermeable ground cloth and tarp covering as the concrete pad it is stored on is right next to a creek. *This goal was not met and is ongoing. Salts such as sodium chloride are still used as the primary deicer. We request the use of more environmentally friendly alternatives. Again, this will require support from Campus Services.*
- Reduce use of fescue for the lawn and replace it with buffalo grass and/or other native prairie grasses in appropriate areas. Cost will include drilling the seed in during June at the latest so that it can get rooted before fall dormancy. The addition of buffalo grass will reduce mowing costs and fuel usage for the mowers. *This goal is not met. No new fescue replacement with buffalo grass has occurred in recent months. Broadleaf weed problems in existing stands of buffalo grass have required periodic herbicide control measures. Although the mowing has been reduced, herbicide application has increased. As an alternative to a "short grass" prairie, some have suggested that certain fescue lawn areas be replaced with species of native grasses that are found in a "mixed grass" prairie ecosystem. Such species include little bluestem, blue grama, sideoats grama, and hairy grama. Native wildflowers could also be added to increase species diversity. JCCC should investigate the funding of such conversion through grants obtained from organizations concerned with protecting the watershed.*
- Spot spray rather than blanket spray the "JCCC prairie" to decrease invasive lespedeza. This goes against our use of herbicides goal, but the lespedeza has to be knocked back to allow native prairie plants to have a chance at competition.



- Seek permission once again from Overland Park to burn the prairie as this will also cut back on invasive species. *This goal is not yet met and is ongoing. Pre- and post-emergent herbicides have been used to help control the invasive and non-native serecia lespedeza, but this practice is not sustainable. The committee wishes to reiterate that we believe that high-level JCCC administrators should contact Overland Park city officials to once again seek permission to burn. This spring-time burning can take place in the form of an educational demonstration to both students and the general public.*
- Re-sign the "JCCC marsh" area as it is not a marsh. Paul Decelles will investigate the renaming of this as a "Riparian Habitat".
- Reforest the border along the boundary with the neighborhood to the south. This could be a student project with approximately a two-year payback from the costs of the planting to reduced mowing. *This goal has not been met. Future funding will dictate the planting of more trees.*
- Investigate and pursue grant money through the WaterLink organization. WaterLink is a source of funding that is related to Service Learning and would be applicable to any horticulture, environmental science, geoscience, or ecology type of course. The funding awarded can be used to plant trees and native grasses, install monitoring wells, and implement a variety of other projects mentioned above. The main criteria are that the students must somehow be involved in the project. Faculty interested will need to write a grant proposal for such funding.
- Purchase a 6-8" chipper to reduce the need for dumpsters on campus and to provide extra mulch for the outer campus and tree trails. A rough estimate of trash reduction is that roughly 50% of our brush and tree limbs could be kept out of the land fill. Dean Spauding has received several quotes for an appropriate chipper. Vermeer in Olathe quoted \$13,500 for a 6" chipper with a 27 HP engine. A larger 12" chipper was \$27,000. He believes the 6" inch chipper would probably be sufficient for our purposes.
- Add more sprinkler systems to the building automation system to reduce wasted water.

Presidents Climate Commitment

The College and University Presidents Climate Commitment requires JCCC to take a variety of specific actions as enumerated below:

Accomplished:

- Within one year of signing this document, complete a comprehensive inventory of all greenhouse gas emissions (including emissions from electricity, heating, commuting, and air travel) and update the inventory every other year thereafter. *JCCC's first inventory was completed by the end of May 2009 with the second by May 2010.*
- Continue participating in the RecycleMania competition.

Ongoing:

- The ACUPCC requires that JCCC measure its annual carbon footprint. For calendar year 2008, JCCC (including purchased electricity, travel and student/faculty commuting) generated 55,275 metric tons of CO₂e. For calendar year 2009, that amount dropped to 53,862 metric tons of CO₂e. Decreases in electricity usage were partially offset by increased commuting due to enrollment increases.
- Within two years of signing this document, develop an institutional action plan for becoming climate neutral. *This plan will be drafted over the course of summer 2010.*
- As part of this process JCCC should use the new Sustainability Tracking, Assessment, and Rating System (STARS) developed by the Association for the Advancement of Sustainability in Higher Education (AASHE). Students could pursue Service Learning credits while helping JCCC introduce this system. *No action has been taken on this issue; however, student interns may be helpful in this regard with the student green fee.*
- The commitment requires us to take at least short-term steps while the long-term plan is being implemented. JCCC has chosen to pursue three steps:
 - Purchase only Energy-Star certified appliances/computers.
 - Ensure that all new construction is LEED (Leadership in Energy and Environmental Design) certified. *Current plans have the Olathe Health Education Center and the possible Culinary Center to be at least LEED silver.*



- Make the rhetoric of the commitment and the actions in the institutional action plan reality. *A new Campus Master Planning Committee is being formed as of May 2010 with sustainability as a core guiding value.*

Purchasing

Accomplished:

- Finalize a green purchasing code and revisit it frequently as technologies change. *This policy has been adopted and is in place.*

Ongoing:

- A new contract with Dell specifies that discarded computers are to be refurbished or recycled rather than sent to landfills.
- Ensure that vendors are aware of the importance of sustainability to JCCC so that they can offer appropriate products to the institution. *Vendors are beginning to reference the sustainability committee report in proposals along with the President's Climate Commitment.*

Recycling and Waste Minimization

Recycling, reuse and waste minimization are key elements in any organizational sustainability effort.

Recycling at JCCC

Waste removal at JCCC continues to be contracted through Deffenbaugh Industries (no recycling services are included in this contract). For waste removal, the college has compactors at the Carlsen Center (30 cu yd), the Commons (30 cu yd), the Office and Classroom Building (30 cu yd), a compound on the south side of the campus (30 cu yd), and the Nerman Museum (6 cu yd). Front pickup solid waste containers are at the Hiersteiner Child Development Center (6 cu yd), the Industrial Training Center (2-2 cu yd), West Park Center (8 cu yd) and Olathe Center (2 cu yd). Open-top roll-off containers are at the Campus Service Building (40 cu yd), the Warehouse (40 cu yd), the Student Center (40 cu yd) and the south compound (2-20 cu yd).

Batliner Paper Co. continues contracts with JCCC to collect recyclable paper, cardboard, plastic bottles and aluminum cans. The recyclables are purchased from the college at current rates; in November 2008, however, rates dropped drastically and they have stayed low throughout 2009. Proceeds from all forms of recycling go to the Foundation to support scholarships at JCCC. Since 1992, \$48,355.79 has been raised for scholarships from all of the college's recycling efforts, with \$2,793.48 contributed in 2009. In 2008, 84 tons of material was recycled, and in 2009 we recycled 113 tons. Custodial staff is responsible for taking the collected recycled materials to the Batliner containers at the Warehouse.

Domed containers remain in hallways for the collection of plastic bottles and aluminum cans. Custodians continue to empty these as needed and take the contents to a large container at the Warehouse. Plastic bottles are not sorted from aluminum cans because of the labor costs; however, the college earns less money because the two are combined. New containers for recycling paper and drink containers have been



placed in the Regnier Center and other areas around campus. Beginning in fall 2008, the college also recycles plastic milk jugs from the two campus coffee bars.

For paper recycling, pairs of gray containers remain in the hallways; one is for white computer and copier paper; the other is for colored paper, encompassing printed material such as fliers and postcards, magazines, mail, phone books, newsprint, NCR forms, manila folders and binder covers. Each container is labeled as to the type of paper to be deposited there. Faculty, staff and students are responsible for recycling the paper they collect in their offices; custodial staff does not remove paper from the offices and place it in the bins. If anything other than recyclable paper is placed in the bins (such as trash or food waste), the contents will not be recycled. If colored paper is placed in with white paper, all of it is recycled as colored paper, for which the college earns less. Shredded paper (in plastic bags) can also be placed in the appropriate gray recycling bins. Shredded paper collected in Document Services (which provides shredding services for the campus) is also recycled.

Cardboard is recycled across campus. Cardboard that is not broken down and set out near the paper recycling bins will be thrown in the trash. Cardboard can be picked up for recycling by submitting service requests to Campus Services.

The Bookstore initiated a program to collect and recycle plastic bags from retail and grocery stores, newspaper delivery and dry cleaning. By April 2010, approximately 4,000 plastic shopping bags had been recycled. The Bookstore also reduced the number of plastic shopping bags used in its retail operations by 5,000, replaced by reusable tote bags. The shopping bags contain at least 25% post-consumer recycled materials (PCR), as do the retail products the store stocks. The Bookstore is stocking a growing number of eco-friendly products (both the products and packaging contain up to 100% of PCR), and has coordinated with the college HAZMAT department to provide a consumer battery recycle drop-off point.

The Bookstore has partnered with MBS Textbook Exchange and their One Planet Books service to recycle used books that have no current market value. One Planet Books works with various partners to recycle these books, maximizing reuse and minimizing reliance on landfills and other solutions that are not eco-friendly. The Bookstore's first donation efforts during the 2009 fall term resulted in 55 boxes totaling 3,575 pounds of books recycled. Any book may be donated. The big green collection box is located in front of the JCCC Bookstore, first floor Student Center. Assistance can be provided to collect book boxes from offices throughout campus. JCCC will receive \$10 per box of books recycled – all proceeds go to the Foundation book scholarship.

Dining services has implemented the following recycling and waste minimization items: Cardboard recycling, purchase of reusable hard plastic plates, decreased purchases of styrofoam by 25% last year, reusable to-go containers for entrees and soups, biodegradable catering units for box lunches, and recycling deep fryer oil for fuel as needed.

The computers the college purchases from Dell are up to Energy Star standards. The college markets or recycles its surplus IT equipment through Dell; for any equipment resold by Dell Marketing, the college receives 90% of the sale price. Equipment that cannot be resold is recycled, and Dell provides the college with a certificate of destruction.

Printer toner cartridges are sent to the warehouse for recycling through our remanufactured toner cartridge contract with LaserEquipment; the contract was implemented in July 2009 (plastic – 1,521.85 pounds, cardboard - 1,317.6 pounds, aluminum - 268.4 pounds). The toner cartridges for the Kyocera copiers are also sent to the warehouse, where Unisource, the college's vendor for our Multi Function Device Contract, picks them up for recycling.

The college recycles these college-owned hazardous materials: light bulbs, solvents, recovered silver, tires, used motor and lubricant oils, used vegetable oils, lead and mercury. Spent lead, nickel and lithium-based



batteries that are purchased with college funds are also recycled. Regulatory requirements preclude the college from taking spent batteries from students or that were otherwise used outside the college. The Bookstore, since it is a battery vendor, is now taking old cellular telephones and spent rechargeable batteries only through the RBRC program. Primary (one time use type or wet cell) batteries are not included.

In our second year participating in RecycleMania, we increased our tracking of trash from three compactors last year to include all non-construction waste on the main campus, had an information booth on the first week of the competition, and held two “Clean Out Your Office” days that recycled 12 tons of paper and 4,400 pounds of books. We also hosted a Reusable Office Supply Exchange event that facilitated the reuse of a roomful of office supplies, over 75% of which was claimed. (The remainder was taken by the warehouse for their annual auction.) Savings to the college is conservatively estimated at \$5,400. This event was widely acclaimed, and participants are looking forward to a second annual event

Waste Minimization at JCCC

- The college asks for proof of environmental certifications as a requirement on almost all paper product bids. The college also asks for a 30% recycled content option on our copy paper bids, but at this point purchasing has not been able to justify the increased expense to purchase 30% PC content paper. All copy paper the college buys has at least one environmental certification (SFI, FSC, PEFC, ISO, and others). The college also buys specialty paper used on our presses; this paper has varying degrees of positive environmental qualities. The college buys 21 types of digital paper used on the I-Gen digital printer, 16 of which have 15% post-consumer waste content with no certifications, two of which have 10% post-consumer waste content and carry SFI, FSC, and Green-e certifications, and three of which have no environmental attributes. The college buys three types of 50# offset paper used on the presses, two of which have no recycled content but hold SFI certifications and one of which contains 30% post-consumer waste content and holds SFI and FSC certifications. The college also buys different paper stocks for specialized uses such as transcript paper, check stock and envelopes for which we do not ask for environmental attributes. The college will continue to review options for more sustainable paper as the opportunities arise.
- Office Max, the college’s supplier, is using reusable tote bins for delivery in the future.
- Off-campus guests are now being charged for printing in the library at 15 cents per page through PaperCut (Pay for Print) implementation. In the data gathering phase, it was discovered that a single off-campus guest printed over 18,000 copies from October 2009 to March 2010. This system will be extended to students in the summer of 2010 who will be given an allowance of 100 hundred pages in the summer and 200 pages in the fall and spring, after which they will be charged 10 cents per page. This system will be expanded to campus labs over the 2010-2011 academic year.
- The fall noncredit class schedule booklet will be reduced by about 70,000 copies. The college will not be sending to every household in the county. Instead, we’ll send to those who have an existing relationship with the college – Continuing Ed students from the last five years, credit students from the last two years, and ticket buyers from the box office.

Accomplished:

- Instituted a student green fee to cover the costs of sustainability efforts on campus.
- Participated in RecycleMania in the competition segment, had an information booth on the first week of the competition, held two Clean Out Your Office days that recycled 12 tons of paper and 4,400 lbs. of books.
- Hosted a Reusable Office Supply Exchange that facilitated the reuse of a roomful of office supplies, over 75% of which was claimed. (The remainder was taken by the warehouse for their annual auction.) Savings to the college is conservatively estimated at over \$5,400.
- Bookstore became a collection point for recycling plastic shopping bags.
- Bookstore became a collection point for recycling consumer cell phone & other rechargeable batteries.
- Bookstore became a collection point for recycling unwanted books.



- Bookstore staff reuses shipping boxes and packing materials for vendor returns, online student textbook reservations and e-commerce shipping. In 2009 we recycled 39,230 pounds compared to 15,180 pounds in 2008.
- Bookstore Textbook inventory is comprised of at least 45% used books, which keeps approximately 45,000 textbooks in circulation.
- Copiers on campus are set to default to double-sided printing.
- Because of new printing technology, Document Services does not use chemistry to produce printing plates. The aluminum plates used in printing are recycled about once per year. In January, 2010 we recycled 1,797 lbs. of aluminum and received \$1280.25 that goes back into the general fund.
- Provided recycling bins in the BNSF portion of ITC.
- Implemented campus-wide recycling of cardboard.
- The Library now charges students for making copies.
- Update with departments the number of college publications needed for college distribution so fewer copies are printed and wasted. Cut the quantity of publications printed and distributed on campus by more than 1,000. People are instead directed to online PDF's.

Ongoing:

- Provide waste minimization/recycling education for faculty, staff and students, encouraging them to dispose of recyclables appropriately. This can be done through "eco-tips" on infolist.
- Participate in RecycleMania (<http://www.recyclemaniacs.org/Index.htm>) annually.
- In the Bookstore, explore consumer technology recycling opportunities with technology vendors (such as cell phones and computers).
- Explore new promotional avenues for college programming other than mass mailing of paper documents.
- Provide all forms online in such a way that they can be completed and submitted electronically.
- Document Services compiles and prints packets of class handouts to be sold through the Bookstore instead of having students download files in computer labs. This allows double-sided printing, saves toner, and is half as expensive to produce.
- Increase recycling bins on campus
- The Warehouse recycles wooden pallets they use. When too many accumulate, the Warehouse staff contact companies that will collect the pallets for re-use.
- New multifunctional devices are being phased on to campus. These will allow direct scanning to e-mail or computer along with duplex printing and copying.
- Purchasing uses some digital imaging to reduce the number of paper records and advertises bids on the web to reduce paper and printing costs. Plans for becoming completely paperless include offering bids online and using imaging.
- Continue holding student art contests to help make the recycling containers more attractive and noticeable.

Not met:

- Hire additional staff to coordinate the college's recycling efforts including a recycling coordinator. As an alternative, volunteers could sort plastic bottles and aluminum cans and perform other recycling tasks.
- Require all paper to have post-consumer content and/or come from FSC or comparable certified sources.
- Provide consistent, clearly marked recycling containers throughout the campus near all trash bins.
- Investigate the do-not-mail list for catalogs coming into the college (remembering that some people may still want these catalogs).
- Purchase a cardboard recycling compactor or binder to handle cardboard recycling on campus. Possibly get one free on loan from a recycling vendor. Bailed recyclables pay more.
- When remodeling, recycle items that are removed, such as carpet, ceiling tiles, etc, and track their disposal.
- The bookstore will explore a print cartridge refilling system for personal consumer print ink cartridges.
- Provide recycling bins for other forms of recyclables.
- Continue discussions among the chemistry and automotive technology programs, Dining Services and the motor pool regarding JCCC students turning waste vegetable oil into biodiesel fuel for college vehicles.



- Consider the issues in becoming a community recycling center for compact fluorescent light bulbs in cooperation with the city and/or county.
- Create a centralized recycling location where the campus community can take packing materials, cardboard, boxes, batteries, etc. (The college can't offer this to the community as a whole because of liability issues.) Such a location might be combined with the warehouse/surplus property.
- Create easy-to-understand labels for recycling containers regarding what to recycle and how recycling contributes to student scholarships.

New:

- Develop a survey to gauge interest/willingness to recycle and the effects that can have on the college's budget, such as emptying office trash once a week.
- Place outdoor recycling containers next to most trash cans.
- Consider 3-part recycling containers in all offices.
- Create a suggestion box for sustainability using an online form.
- Install a water dispenser in the C-Store to provide an alternative option to bottled water.
- Form a partnership between the Bookstore and Dining Services to collect and contribute used coffee grounds from the C-Store that will be added to the composting project.
- Form a partnership between the Bookstore and the Faculty Association to increase the number of textbook adoption commitments to reduce the number of unnecessary new texts put into circulation and provide JCCC students more affordable course material options.
- Develop Eco Reps across campus to help out with sustainability issues in buildings.
- Purchase compostable cups and containers instead of styrofoam.
- Measure all trash leaving campus. Include data collection to the disposal contracts.
- Add an additional compactor for trash to reduce emissions.
- Place professional signage on all Deffenbaugh containers saying "Stop: No Cardboard, Paper, Bottles or Cans".
- Register with AASHE – STARS program or Wastewise.
- Reevaluate white vs. mixed paper recycling. Should we use a single stream for paper?
- Reevaluate recycling vendors. Consider opening up for bid again.
- Work on grants, including KAB, state, and corporate sponsors.
- Create a policy for 30% postconsumer paper, 100% recycled paper for business cards and letter head.
- Include recycling in the Campus Master Plan.
- Include information in the student handbook regarding recycling on campus.
- Use repackable totes where applicable.
- Reduce use of bottled water on campus by installation of hydration stations.
- Recycle steel and tin cans in Dining Services.
- Increase special collections of recyclable materials like packing peanuts, Tyvek, cassettes and CDs, e-waste, etc.
- Set up a permanent office supply exchange store.
- When materials are printed, minimize costs by reducing the number of pages, the number of printed copies, etc.
- Create educational opportunities by partnering with OPL and other organizations on campus through brownbags, InfoList, new hire orientations and all staff meetings.
- Insist that the college's copiers or multifunction devices (MFDs) are set to print and copy on front and back (duplex).
- Continue to use electronic means in lieu of printed materials to communicate internally and, whenever possible, externally.
- Produce better cardboard recycling notices.
- Promote the use of web conferencing, SharePoint documents, etc.
- Prevent campus fax machines from printing a paper completion record when a fax is sent.
- Give consideration to minimizing costs for printing and finishing (for example, printing course materials in black and white as opposed to color, binding with staples rather than coils, avoiding laminating whenever possible, etc.).
- Seek presentations on how departments are being sustainable.



- Build an interactive map of the campus with details of sustainability on campus.
- Join forces with the athletics department to partner with a sporting event.
- Consider charge-backs to departments for printing as a way of tracking and then reducing the amount of unnecessary printing.

Student Sustainability Committee

The spring 2010 semester saw the organization of JCCC's Student Sustainability Committee whose main task is the administration and appropriation of the college's Green Fee which was requested by members of the JCCC student body and approved by the JCCC Board of Trustees.

Accomplished:

- Committed to the annual funding of a full-time Sustainability Student Affairs position.
- Purchased \$800 of fruit trees for Hiersteiner's Child Development Center's edible schoolyard.
- Appropriated \$20,000 for a cardboard compactor.
- Appropriated \$12,000 for three Big Belly Solar Trash-Compacting units.
- Voted to fund \$25,000 of KCPT's "Catching the Wind" documentary. JCCC honors students will participate in the project.
- Voted to fund a campus energy feasibility study for \$20,000, contingent upon whether or not JCCC decides to go with performance contracting.
- Helped fund the campus urban stormwater project with a \$100,000 donation.
- Appropriated \$10,000 for two hydration stations to facilitate refilling reusable water bottles and reducing the amount of plastic bottles.

Sustainability Curriculum Committee

Center for Teaching and Learning Associate:

- The Center for Teaching and Learning associate role continued with three hours release time this academic year instead of six hours. Primary responsibilities were to develop new courses, lead sustainability article and book discussions, chair the Sustainability Curriculum Committee and assist faculty in the development of new courses.
- The following green book discussions were led:
 - September: "The Land Ethic," Aldo Leopold
 - October: Cradle to Cradle: Remaking the Way We Make Things, William McDonough, Michael Braungart
 - November: The Great Turning: From Empire to Earth Community, David Korten
 - March: "The Pollution Within," David Ewing Duncan
 - April: Slow Death by Rubber Duck: the Secret Danger of Everyday Things, Rick Smith and Bruce Lourie

Recommendations for CTL Curriculum Associate:

- Secure six hours permanent release time for CTL associate.
- Continue to chair the Sustainability Curriculum Committee.
- Continue to lead monthly green article and book discussions.
- Continue to develop, assist and advise faculty with new course development.
- Resume sustainability tour series.
- Resume sustainability lecture series.
- Coordinate Staff Development Professional Development Days and monthly workshops.
- Assist with and promote development of multidisciplinary sustainability modules that can be incorporated into existing classes.



- Develop and coordinate a Center for Sustainability Curriculum Committee newsletter.
- Explore making JCCC a bioneers satellite site and coordinate bioneers conference planning effort.
- Propose, develop and chair an Ed Affairs subcommittee on sustainability curriculum. (The Center for Teaching and Learning associate is a voting member for the science department and will be attending EA meetings).

Accomplished:

- Included a sustainability clause in the JCCC mission statement.
- Completed Institutional Research (IR) needs assessment and student interest survey.
- Secured a CTL sustainability associate position (three hours release time).
- Partnered with Continuing Education to ensure sustainability educational opportunities are available to non-certificate or non-degree seekers (i.e., promote weekend workshops in greening the home, sustainable gardening, and designing rain barrels).
- Promoted awareness and marketing of courses via website updates, brochures and other mechanisms.
- Participated in MCC service learning panel (Judy Follo, panelist) on sustainability service learning opportunities.
- Submitted a grant proposal to AACC for a “No Child Left Inside” service-learning project partnering students in children’s literature, the early childhood education program, the Olathe head start program, and the JCCC Hiersteiner Child Development Center.
- Planned a Professional Development Days panel on infusing sustainability into the curriculum and creating monthly workshops beginning fall 2010.
- Developed and implemented new certificate programs:
 - Sustainable Agriculture Certificate
 - Energy Auditor Certificate
 - Building Operators Certificate
- Developed new credit and noncredit courses including the following:

Credit Courses:

- **Environmental Psychology**, Andy Ward (offered spring 2009)
- **Environmental Policy and Law**, Deborah Williams and Anita Tebbe (to be offered fall 2010)
- **Principles of Sustainability**, Deborah Williams (in Ed Affairs process)
- **Principles of Sustainability for Educators**, Judy Follo, Asiya Foster, Deborah Williams (in development)
- **Environmental Business Practices**, Steve Fawcett (in development)
- **Environmental Ethics**, Deborah Williams and Dennis Arjo (in development)
- **Environmental Sociology**, Stu Shafer (in development)
- **Introduction to Safety, Health and Environmental Sciences**, Bethany Graves (in development)

Noncredit Courses

- Early Childhood Education CEU Courses in:
 - **Sustainable Gardening** (Designing, building, and maintaining a garden at your center)
 - **Sustainable Menus** (Using food grown on site for meals)
- Real Estate CEU Course in:
 - **Green Buying and Selling** (Overview course--no certification--on identifying easy ways to make homes more energy efficient)
- Technical Trades Courses in:



- **Energy Auditor Certification** (Partnered with Metropolitan Energy Center to offer their 40-hour fast track certification)
- **Building Operators Certification** (Partnered with Midwest Energy Efficiency Alliance to offer their 64-hour certification that focuses on energy efficiency in HVAC systems, air quality, lighting, etc.)
- LEED (Leadership in Energy and Environmental Design)
 - LEED Green Associate (GA) and LEED Accredited Professional (AP) are Test Prep classes regarding green building design and are offered through Continuing Education. LEED GA has been offered since fall 2009; the first class for LEED AP was offered spring 2010.
- Sustainable Leadership Certificate
 - First offered in spring 2010, this certificate encompasses four individual courses regarding sustainable business practices. The course titles include:
 - Corporate Social Responsibility and Sustainable Business
 - Risk Management and Corporate Sustainability
 - Sustainability Planning and Strategies
 - Sustainable Business Planning: A Facilitated Workshop
- Rain Barrel Training
 - Create your own rain barrel and learn to conserve rainwater. This course will be offered for the first time in the summer 2010 term.

Ongoing:

- Continue to periodically monitor course development interests, needs and trends at JCCC through IR surveys.
- Continue to promote an AS degree program in environmental science and an interdisciplinary sustainability certificate.
- Continue to prioritize course development in response to student interest, faculty, and employer surveys.
- Promote a sustainability course requirement for graduation from JCCC.
- Host a national sustainability educator for college-wide professional development training, perhaps during fall break.
- Seek corporate sponsors to fund speakers addressing the subject of sustainability.
- Secure funding to hire new part-time and full-time faculty to develop and teach sustainability courses.
- Secure grant funding for faculty development opportunities including workshop and conference attendance.
- Secure funding to inspire faculty to engage in new course development via stipends, release time, etc.
- Further develop and expand sustainability service learning opportunities.
- Strengthen collaborative relationships between credit faculty and Continuing Education to ensure sustainability educational opportunities are available to noncredit students, which might include the following projects:
 - Offering weekend workshops in topics such as greening the home, sustainable gardening, weatherization, entrepreneurship, LEED exam preparation, permaculture, backyard gardening, recycling, and rainwater collection and use, as well as continuing education credit opportunities for K-12 educators (Project Wild, Project Wet, Project Learning Tree).
- Continue developing marketing approaches. (For example, develop an icon in the Banner system to help students identify sustainability courses.)
- Develop and offer monthly professional development workshops throughout the academic year guided by faculty in various disciplines.
- Develop an electronic sustainability curriculum newsletter featuring existing courses, course development updates and share ideas for effective pedagogy. CTL curriculum associate will manage and edit.



- Develop opportunities for community outreach, including presentations at local businesses and community events.
- Explore ways to continue to use outreach sites for credit or noncredit courses.
- Develop a “college on your site” program that would take credit or noncredit course into businesses to expand awareness and promote exposure to JCCC sustainability efforts.
- Participate on panels to promote sustainability curriculum development.
- Develop a grant funded Solar/PV installer program.
- Explore the development of a sustainability advisory board.
- Recognize faculty and staff for sustainability-related activities.
- Recognize and enhance collaborative involvement between faculty, students and student groups for sustainability awareness efforts:
 - Student Environmental Alliance - Earth Day, Blue River Clean Up, Recyclemania
 - Interior Design Student Association: eco-bags, techno-trash, regular sustainability display in GEB 350, field trips to eco-friendly businesses, movie talkbacks with faculty and member panelists

Transportation

Given that JCCC is a commuter campus, a substantial part of JCCC’s environmental impact comes from vehicle emissions. While JCCC can make substantial efforts to reduce vehicle traffic to campus, regional transportation solutions will have to be part of the equation here, and JCCC should encourage/participate in these solutions. A full subcommittee to investigate these issues was formed in spring 2009. Limited activity has taken place on this difficult issue over the last year.

Ongoing:

- Find ways to make the campus more bike-friendly. Cooperation with Overland Park should be sought to connect JCCC to area bike paths. A campus survey should be conducted to see how many faculty/staff/students would ride bikes to campus if bike racks/bike boxes were available. *Conversations have taken place with Overland Park as well as Johnson County to include JCCC in future planning of bike paths. Follow-up is needed on this issue. A campus transportation survey was offered in spring 2009. This survey will allow JCCC to gauge the impact of transportation on the carbon footprint of the campus as well as plan for bike racks. Preliminary conversations are also ongoing regarding possible use of JCCC funds to link bike paths to the campus from Stoll Park to the south.*
- JCCC should encourage/facilitate carpooling of faculty/staff. Preliminary discussions are underway to this effect with the eventual hope of creating a map interface program where prospective carpooling partners can find each other in a JCCC-only online environment. Student inclusion may be problematic due to liability issues, but these should be investigated. *MARC’s Rideshare program went live in January 2010 but publicity about this program on campus has been limited. Publicity will be enhanced in 2010-2011.*
- Preferential parking spaces should be reserved by permit for carpoolers and those who drive hybrid vehicles. *No action has yet been taken here partially due to divisions about whether or not hybrid drivers should be rewarded as well as enforcement concerns. This will be revisited in 2010-2011.*
- JCCC should encourage work-from-home and flex-time where appropriate to reduce the need for all faculty/staff to come to campus every day. *Analysis of a possible four-day workweek was conducted by a subcommittee led by Janelle Vogler. Energy savings alone could not be used to justify a movement in that direction. Transportation was not a major consideration in that study. More conversations about campus policies on flex-time are needed.*
- Encourage and support mass transit including the K-10 Connector. *The JO has doubled the number of K-10 runs. Future student participation in JO planning should be encouraged and may be facilitated by the student green fee. Data about JCCC student/faculty/staff participation on the JO has been requested and should arrive before final completion of this report. Conversations are also beginning about possible intra-county express runs although there has been no indication that these are forthcoming in the near future.*



Not Met:

- Purchase hybrid/electric vehicles for the college fleet. *No such vehicles have been purchased by the college despite opportunities to do so.*