

Green Progress at U of Louisville

Fall 2008

Sustainability Council
Barbara Burns

Sustainability Council Report

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Sustainability Council Report

This report documents the recent significant and meaningful progress that University of Louisville has made in sustainability. As detailed below, progress in sustainability has been made in operations and facilities, outreach, research collaborations and educational activities. External documentation of our progress includes UofL's most recent rating on the *College Sustainability Report Card*. UofL has earned the grade of "B-" in Fall, 2008. Currently, UofL is the highest ranked public university in Kentucky. When considering all institutions of higher education in Kentucky, only Berea has a higher rating. (See www.GreenReportCard.org; an interactive website provides in-depth sustainability profiles for hundreds of colleges in all 50 U.S. states and in Canada. See also <http://www.greenreportcard.org/report-card-2009/schools/university-of-louisville>.)

The current report on sustainability progress has three major sections: (1) 2008 Sustainability Initiatives, (2) 2009 Sustainability Activities, and (3) UofL Sustainability Center Proposal. We provide this document, after one semester of work by the Sustainability Council, to demonstrate the significant momentum and synergy of sustainability at UofL and to provide a snapshot of the many ongoing and planned initiatives. The movement towards a more sustainable U of L involves many people, and, as evidenced by this document, there are many ongoing exciting sustainability projects ongoing at different stages of development.

The work completed in this first semester on the Sustainability Council has depth and breath. It reaches many stakeholders and aspects of the university. We are in a unique position to make significant gains in Spring 2009 and with some staff support from the administration for these sustainability initiatives we believe we can keep the momentum and synergy increasing and achieve our ambitious goals. Again, the sustainability initiatives described in the following are timely, exciting and will be an important part of the legacy of the current administration. We respectfully request help from the upper administration at this time to further enhance and coordinate these activities and projects.

A. 2008 U of L Sustainability Initiatives

1. **Partnership for a Green City.** The Partnership for a Green City has continued to make significant progress with many highly active committees connecting U of L, Metro Louisville, and JCPC. www.partnershipforagreencity.org
 - a. Faculty at UofL serve on each of the committees, including: Climate Change, Utility Regulatory Policy, Environmental Education, Environmental Health, Energy Efficiency, and Local Impacts.
 - b. Developed an annotated list of all environmental courses at U of L. Environmental Education Center- Teddie Phillipson Mower
 - c. Energy Pledge - More than 670 faculty, staff and students at UofL, including President Ramsey and Provost Willihnganz, have

pledged to reduce their energy consumption by 10 percent through an energy reduction project launched last month by Partnership for Green City, A & S Green Team and the Sustainability Council. Dr. Ramsey and Dr. Willihnganz are the first leaders in any of the Partnership organizations to take the pledge. The promise to reduce energy use through actions such as turning off computers not being used, turning off lights when you leave a room, using compact fluorescent bulbs and/or riding TARC, a bicycle or car-pooling whenever possible has drawn more than 1,700 signatures of support from people at the three organizations in the partnership. The pledge was publicized at Sustainability Day and has been in the student newspaper for next two weeks-ads paid for by Provost. The online pledge is being coordinated by GCP, Brent Fryrear. Fall 2008

- d. **Climate Change Committee**
This committee was convened in 2007 by the Partners for a Green City and chaired by APCD to develop a climate action plan for the three partners. Over the past two years 14 faculty and students from UofL participated with this public community participatory effort to produce a well informed report on climate change as it relates to our community as a whole and the three partners specifically. The final report will include a set of recommendations to be presented to the Partnership for a Green City in early 2009. It is expected that each of the Partners will act on the recommendations by including them in their institutional plans.
 - e. **Alternative Energy at UofL**
Solar Hot water and photovoltaic system were installed in the Speed school. This was featured on WHAS. Fall 2008
 - f. **Green City Partnership Director**
Brent Fryrear, has continued providing leadership to the Partnership for a Green City through his work as GCP Director. Staff has been provided by Dr. Martinez, EVPR. The University's leadership in the GCP is recognized by both JCPS and Louisville Metro.
2. **Teaching : Greening of Honors Program-** The planning process by John Richardson for the 'greening of the honors program' began in Fall 2006 and classes were first offered in Fall 2007. Each fall semester in the University Honors program a variety of courses on sustainability topics are offered. Each spring semester the courses offered provide opportunities for students to conduct research and community outreach projects on sustainability issues. The 'greening of the honors program' has led to a significant increase in awareness and interest in sustainability issues on campus.
 3. **UofL Arts and Sciences Green Team.** Faculty and staff in A & S formed a committee to address ways to reduce energy use by social and cultural means in Jan. 2008. The A&S Green Team developed a proposal for A & S for submission to Dean Hudson in spring, 2008.
 - a. Pilot project to reduce energy use through social and cultural means was funded by Dean Blaine Hudson in August 2008. Funding supports the A & S Green Team to reduce energy use in A & S by education, awareness, modeling, and incentives.

- b. Activities proposed by the A & S Green Team were begun in summer 2008 as part of the Honors Course taught by Barnett and Wicks. Their course, in conjunction with Lincoln Foundation, piloted processes to complete an energy audit. Plans are now in place to conduct audits in additional departments. Components of the plan include education, assessment and intervention (new light bulbs; stickers on light switches, etc). We have received uniformly positive responses from faculty and staff.
 - c. A & S Green Team projects related to operations were tackled by VP Larry Owsley in conjunction with some of the honors students who worked on the Spring 2008 Community Research. Students have been hired to work with operations.
 - d. Activities proposed by the A & S Green Team have been tackled by Joy Hart and Kandi Walker's Fall 2008 honors class on Communication and Sustainability. Final projects for course are deliverables from the proposal. In addition, Drs. Hart and Walker are sponsoring several honors students to complete independent study projects related to sustainability and energy reduction by social and behavioral means.
 - e. A & S Green Team and Siemens Energy Audit. Michael Azzara will present to A & S Green Team in Dec 2008. Mr. Azzara is Business Development Manager, Siemens Building Technologies, Inc. Energy and Environmental Solutions. Dec 12, 2008.
 - f. Peterson's Guide for Sustainability in Higher Education- UofL will participate in this sustainability ranking. pending, Dec 2008.
4. **UofL Sustainability Council** – The Provost established the UofL Sustainability Council with Barbara Burns as Chair, and appointed three university committees: Operations (Larry Owsley-chair), Research and Education (Joy Hart-chair), Finance and Outreach (Mike Curtin-chair). August 2008.
- a. Green Party for Sustainability Council at Provost Willihnganz's house. Sept 2008
 - b. U of L participated in first national SUSTAINABILITY DAY—This was a major initiative with high rates of participation from community, university faculty /staff and students. U of L t-shirts with new sustainability logo were produced, green prizes were awarded, and 30 community and university tables were available for this first annual event. Oct 22, 2008.
 - c. Sustainability Council participated in EPA Sustainability at Colleges Conference Oct 2008 at Spellman College. Russ Barnett gave talk on U of L Sustainability Initiatives. Carol Norton presented on the U of L EFC and EFCN campus sustainability technical assistance efforts. Attendance by team from U of L (Wicks, Norton, Barnett, Simonsen, Burns) Oct. 22-24, 2008.

- d. Sustainability Council establishes University Green Team: On Sustainability Day, 300 people signed up to join the Sustainability Council and serve on a University Green Team. Goal of team is to increase sustainability on campus. Listserv established. Fall 2008
- e. Sustainability Council developed proposal for *UofL Center for Sustainability*. Center for Sustainability plan includes one Bucks for Brains faculty director, a program coordinator, staff, small operating budget, and an outline of an undergraduate major in sustainability. Plan submitted to Provost and President, Nov 2008.
- f. Sustainability Council participated in AASHE conference - Burns and Hart participated in sustainability officer training, conference proceedings in Raleigh NC. Nov. 8-11, 2008.
- g. A & S Green Team and Sustainability Council Green Party at Burns's house, Dec 12, 2008.

5. Research and Education Committee: Sustainability Council

- a. Research and Education Committee (Joy Hart, Chair) began meeting and reviewed and discussed short and long-term goals for 2008-2009. Focus of meetings on feasibility of sustainability major for undergraduates, interdisciplinary Master's programs connected to engineering, etc. Subcommittees identified and monthly meetings planned for Spring, 2009. Nov. 2008.
- b. Sustainability and Sustain journal. The KIESD journal, entitled *Sustain*, sponsored a special edition of the journal and featured U of L undergraduate and graduate students' environmental research. Summer 2008.
- c. Research and Education Committee (Joy Hart, Chair) identified possible office space for Sustainability Center, and location for interdisciplinary major. Support by Drs. Bourassa and Simpson, Department of Urban and Public Affairs and Dean Hudson. Ongoing discussions about steps, framework, timeline to establish interdisciplinary undergraduate major in sustainability by Fall 2010. Nov 2008.
- d. Research and Education Committee (Joy Hart, Chair) is working to identify exhaustive list of which courses related to sustainability are ongoing at U of L. Instructors of each course (or chairs if no associated instructor) that relate to sustainability are being contacted to obtain syllabi and information about how often each course is taught and when each course is expected to be offered again. Nov 2008.

6. Facilities and Long-Range Planning

- a. U of L energy performance contract with Siemens. 35 million dollars 2008.

- b. Contract with Gordon Garner to review the U of L long-range plan to increase sustainable aspects. 2007.

7. Operations Committee: Sustainability Council. The Operations Committee (Larry Owsley, Chair) has implemented a large number of operation initiatives related to sustainability. The grade increase on the University Sustainability Endowment from C+ to B- in 2009 is primarily due to the efforts and leadership shown by VP Larry Owsley.

a. PURCHASING

Green Purchasing Policy

<http://louisville.edu/purchasing/sustainability/greenpolicy.html>

- Implemented a “Green Purchasing Policy”
- Policy covers energy, water, toxins and pollutions, bio-based products, forest conservation, recycling, packaging, green building and landscaping

Environmentally Conscience Purchasing Contracts with Discounts for Employees

- Lighting
- Paint

b. ENERGY

LG&E Green Energy Program

- Currently reviewing to determine if it is in the University's best interest to participate

Performance Contracting

- Initiated contract negotiations and authorized Siemens to proceed with an energy audit
- Energy audit complete
- Draft Energy Policy to be vetted university-wide

Energy Conservation

- Physical plant purchased “turn out lights” stickers to be placed as reminder on light switches
- Working with A&S Green Team on a pilot energy savings plan
- Performance contract will address energy usage and conservation
- Housing initiated "switch and swap" program to replace light bulbs with more efficient ones

c. PARTNERSHIPS, COMMITTEES, & ASSOCIATIONS

Association for the Advancement of Sustainability in Higher Education (AASHE) Membership

- VPBA funded university membership
- Anyone on UL campus can take advantage of membership benefits such as discounts to conferences and events, online directories, the AASHE online resource center, networking opportunities and much more

Reviewed AASHE STARS system

- Recommended to be used in reporting for President's report card
- Operations committee to use to set 2009 goals and future priorities

Partnership for Green Cities

- Participated in various committees
- Provided greenhouse gas emissions data to Partnership's consultant who, as part of a larger project, is measuring UofL's carbon footprint

Student Projects

- Working with Honors Student group on storm water projects
- Reviewing the use of the MSD "drainage fee" to fund storm water projects
- Completed soil survey
- Storm water issues will be included in Belknap Master Plan
- Students mapping trees on Belknap to estimate carbon sequestration
- Students measuring energy usage on computers to determine energy efficiency

d. CONSTRUCTION

LEED (Leadership in Energy and Environmental Design)

- University recently became a corporate member
- Policy established to target LEED silver standard with new construction and major renovation projects
- LEED categories include: sustainable sites, water efficiency, energy and atmosphere, material and resources, indoor environmental quality and innovation in design

Current Construction Projects

- HSC parking construction - recycling asphalt
- Center for Predictive Medicine
 - Working toward LEED silver certification
<http://louisville.edu/updc/projects/inprogress/cpmsustainability.html>
 - Recycling construction waste
- Center for Translational Research
 - Working toward LEED silver certification
<http://louisville.edu/updc/projects/inprogress/biomed sustainability.html>
 - Condensation and storm water collection for irrigation
 - High efficiency fixtures were used to reduce potable water use
 - No Freon based refrigerants used in facility
 - Air Accuity System in Center saves energy by monitoring oxygen levels and motion in individual laboratories. When no human presence and oxygen is at proper levels, air conditioning or heater fans are reduced in speed reducing energy

e. FOOD

Local Food Initiative

- Working with the Metro Government to identify potential opportunities for retail, restaurant, wholesale, food processing/manufacturing, food service and emergency feeding sectors
- Chartwells' 2008 initiatives (attached) – included items such as:
 - working with local produce provider and food provider to identify locally grown produce and other local products available for purchase
 - conducting a “Taste Kentucky” event featuring Kentucky Proud products during Earth Day celebration
 - beginning to purchase bread and milk products from local companies
- City Café' purchases local bread and produce
- Sodexo contract language included (attached) related to commitments to locally grown and produced products

f. RECYCLING

Recycling Initiatives

- Recycling report submitted to Provost (attached)
- Working with SGA and Housing Office to engage students
- Enhanced recycling program in university and university affiliated housing
- Initiated computer recycling program
- Enhanced carpet recycling program
- Initiated cell phone and accessory recycling program
- Habitat for Humanity Deconstruction Program
 - Reviewing for use at Shelby campus and Carmichael building
- Habitat for Humanity
 - Executed a MOU for surplus goods reuse
- Conducting condensation study on research buildings to determine if it is feasible to use condensate for toilets and irrigation

Review of Other Current Initiatives

- Chartwells
 - Recycle glass, plastic and cooking oil
 - Use molded fiber tableware
- City Café
 - Recycle glass, paper and cardboard
 - Use stainless flatware and china
- Barnes & Noble
 - Recycle cardboard, paper, aluminum cans and ink & toner cartridges
- Purchasing Department
 - Finalized contracts to provide recycled and green products
 - Finalized contracts to recycle products

g. COMMUNICATIONS

Websites Updated for Sustainability Issues

- Purchasing <http://louisville.edu/purchasing/sustainability>
- UPDC <http://louisville.edu/updc/sustainability>

Participated in Earth Day spring 2008

- Purchasing, Physical Plant, Public Safety, TARC, Food Services, Bookstore, Postal and VPBA participated

Participated in Sustainability Day fall 2008

- KIESD, Physical Plant, TARC, Sodexo, Housing, Postal, and DEHS participated

Hosted Webinar

- Charting the Path to Campus Sustainability

8. Outreach initiatives: Sustainability Council

- a. Sustainability outreach to JCPS.
Sustainability Bus tours led by Russ Barnett for Honors classes, and for JCPS Principals. Key Note Address by Barbara Burns to JCPS principals and staff on sustainability and child outcomes. Sept 2007.
- b. Environmental Youth Summit: over 300 JCPS middle and high school students met on campus to conduct environmental youth.
- c. Incorporation of Sustainability into Lincoln Foundation Math and Science Summer institute held at U of L - June 2008 David Wicks, Teddie Phillipson Mower.
- d. Participation by new student RSO G.R.A.S.S. and Green team initiatives. Working with Sustainability Council to increase energy reduction pledges Nov 2008.
- e. Developed an environmental middle school reader - U of L Honors students wrote about Louisville's environmental issues, and then published them on a website and hard copy version for use as a reading text for JCPS middle school students. Mar 2008
<http://www.jefferson.k12.ky.us/Departments/EnvironmentalEd/EnvironmentalReader/Intro.htm>
- f. Ideas to Action (I2A) and Sustainability. Burns met with Dr. Eileen Ifall, new director of culminating projects for I2A. Focus of discussion is how to support sustainability at U of L through the I2A initiative
- g. Sustainable Cities Series, organized by the Urban Design Studio, Urban and Public Affairs, Center for Environmental Policy and Management, and the Environmental Finance Center. Initiated in November of 2007, this series of free public lectures and workshops regularly has 200+ in attendance. Subjects have included home energy efficiency, sustainable landscaping/gardening, climate change, water, land use and re-use,

solar energy, and local food and agriculture. See
http://uds.louisville.edu/index.php?option=com_frontpage&Itemid=1

- h. Center for Environmental Policy and Management and the Environmental Finance Center continue to build on efforts to increase community participation in brownfields redevelopment in the Park Hill Corridor (area just west of UofL's campus). Initially funded by a grant from the Brownfields Program in EPA, this project has succeeded in linking community members to Metro Louisville's master planning process for the corridor and has helped bring attention to the need to reuse contaminated land in a sustainable manner. This project is exemplary of community action research and community engagement that brings faculty, students, community members, government officials, and businesses together to engage in environmental decision making and community visioning . Led by faculty member, Lauren Heberle see www.redefiningbrownfields.org.

9. Sustainability and Grass Roots Connections

- a. Athletics. Jason Dierking, Asst Director of Sports Performance, Athletics Dept initiates connection to sustainability team and begins working with U of L Operations to bring a world class recycling program to U of L Athletics. Nov 2008
- b. U of L Medical School. Senate president for the medical school, Heather Lee, announces that an agenda item for this year is to try to make the HSC campus greener. "I'd like to spend my efforts focusing on ways to reduce the cost/increase the efficiency of the top energy consumers on the HSC campus." Ms. Lee and Med School Senate begin to work with Jeff Dean, Russ Barnett. Nov 2008

10. The Center for Land Use and Environmental Responsibility (Tony Arnold) Sustainability Developments

- a. Creation of a website for the Center for Land Use and Environmental Responsibility, <http://louisville.edu/landuse>, containing information on U of L activities at the intersection of land use and the environment, the top websites nationwide on land use and the environment, and other resources.
- b. Creation of a blog, Mapping the Landscape: Resources on Land Use and the Environment, <http://www.law.louisville.edu/blog/61>, (written by Arnold).
- c. Continuation and growth of the Boehl Distinguished Lecture Series in Land Use Policy (Law School & School of Urban & Public Affairs), and the Sustainable City Forum

Series (Urban Design Studio), both of which bring expert speakers on sustainability to the public and university.

- d. The interdisciplinary Land Use & Planning Law Class engaged in 3 major service learning projects on sustainability issues for local government agencies, nonprofit groups, and community task forces in Spring 2008. The following 3 projects resulted in major reports identifying planning and legal tools to promote sustainability policy goals: 1) Darby Creek watershed planning project in Oldham County (Kentucky Waterways Alliance, Oldham County); 2) land use and climate change (Green City Partnership Climate Change Task Force; Louisville Metro government); and 3) regional food security, food equity, and agricultural land conservation (Louisville Metro government; regional food economy task force; Community Farm Alliance). Goal: Spring 2009 Land Use & Planning Law Class will engage in 3 new major service learning projects on sustainability issues, likely to be on: a) land use tools to promote healthy, sustainable environments for children and youth (Children, Youth and Environment Research & Design Center); b) land use tools to promote healthy food options and prevent unhealthy food options in West Louisville (Louisville Metro Center for Health Equity); and c) land use tools to adapt to the impacts of climate change (Center for Progressive Reform).
- e. Faculty and staff serving on boards, commissions, and task forces addressing sustainability issues in our metro area and state, such as the Climate Change Task Force, the River Fields Board of Trustees, TARC, West Jefferson County Community Task Force, Center for Neighborhoods, and many others.
- f. Tom FitzGerald, long-time adjunct professor in environmental law and energy law, won the prestigious 2008 Heinz Award in the Environment for his courageous work in advocating for a healthy environment for those whose health is most at risk (major national honor).
- g. The Louisville Green Guide lists four U of L centers (with web links) on its website for “Environment”, <http://louisvillegreenguide.org/directory/environment.html>, which are: the Kentucky Pollution Prevention Center, the Center for Environmental Education, the Center for Environmental Policy and Management, and the Center for Land Use and Environmental Responsibility.
- h. The U of L Center for Land Use and Environmental Responsibility, in coordination with the U of L Department of Geography, Kentucky Division of Water, and Southeast Watershed Forum, co-led and completed a set of Kentucky Growth Readiness Workshops with government officials and community stakeholders from Anderson, Boyle, Mercer, and Washington Counties to identify land use goals and tools to protect water quality. This is part of the Commonwealth Water Education Project (CWEP), funded with a 5-year EPA Section 319 (Clean Water Act) grant. Goal for 2009: The final project of CWEP will be the writing and publishing of a handbook for all communities in Kentucky, entitled *Kentucky Wet Growth Tools for Sustainable Development*. This handbook will be a project of the U of L Center for Land Use and Environmental Responsibility, in coordination with the Center for Environmental Policy and

Management, the EPA Region 4 Environmental Finance Center, the City Solutions Center, and the School of Urban & Public Affairs.

- i. The University is one of 3 major partners in an ongoing (3-year), grant-funded, community-based project for the revitalization of brownfields (contaminated sites) in the Park Hill corridor of West Louisville, along with Louisville Metro Economic Development Department and the Center for Neighborhoods. For more information, contact Professor Lauren Heberle, Associate Director of the Center for Environmental Policy and Management.
- j. The Center for Land Use and Environmental Responsibility completed a 1-year (2007-2008) grant to teach Central High students about land use, environmental, and other community conditions, including environmental justice and civic engagement, and to engage the students in a major project, which produced a report for Habitat for Humanity on community conditions in the Parkland neighborhood in West Louisville. The report will be used to engage neighborhood residents in a major community revitalization and housing rehab program. This project was funded with a grant from the Louisville Metro Center for Health Equity.

12. Center for Environmental Education (Teddie Phillipson Mower) TBA

B. 2009 Proposed activities

1. Sustainability Plan for U of L. The initial Sustainability plan U of L has been focused on is establishing a Sustainability Center. A detailed Sustainability plan and the vision for a more sustainable University of Louisville will be further developed in Spring 2009. We have requested approval to hire the Project Coordinator in January 2009. If a Project Coordinator is hired in January they can train with Barbara Burns and support the continuation of the Sustainability Council. The document detailing a sustainability plan for U of L will, when completed, provide a comprehensive overview of the current research, education and service provided by the University. In Spring 2009 we will continue to identify gaps and opportunities for future initiatives.

2. Research and Sustainability

- a. The Research and Education Committee (Joy Hart, Chair) is working to identify the research projects related to sustainability that are ongoing at U of L. Goal: to collect information about projects, research papers and posters presented and published, grants, etc.
- b. The Research and Education Committee will develop a comprehensive annotated listing of all research at U of L that focuses on the environment and or sustainability.
- c. Each researcher working on sustainability issues at UofL will be asked if they are interested in participating in the 1st Annual Sustainability Research at UofL Forum in spring 2009.
- d. 1st Annual Sustainability Research at UofL Forum. Focus will be on researchers at U of L but we hope to have time for several invited speakers. This event will coincide with Undergraduate Posters Day and will be close to Earth Day. April 2009
- e. In collaboration with Allan Deittmer and KIESD, he will publish the second edition of U of L student environmental research in Sustain, the environmental journal sponsored by KIESD. An announcement will be sent to all faculty on sustainability, John Richardson and honors faculty, and faculty involved in KIESD work to encourage them to recruit their students to submit research reports. Date due TBA

3. Teaching and Sustainability

- a. Presentations to A & S Department Chairs: A & S Green Team will review the energy conservation effort, solicit their ideas, and encourage them to promote energy conservation. Solicit invitation with each Department chair to be willing to go and present the same things to faculty in each Department. Jan 2009

- b. Sustainability across the Curriculum Workshops. Sponsored by AASHE, Jan 2009. Hart and Burns will participate in a train the trainer workshop at Emory University AASHE Teaching Conference to learn how to best support sustainability across curriculum. Jan.8-10, 2009.
- c. A Spring Workshop at UofL will be designed for faculty who wish to infuse sustainability issues into the curriculum. This two-day workshop will be led by Hart and Burns with participation by faculty teaching honors classes on environment and speakers from UofL research community planned for 10-12 faculty. For example, Russ Prough, Vice Dean for Research at the Medical School, has agreed to work with us to get faculty from Pharmacology/Toxicology and Biochemistry to work on the sustainability major--- and help us teach about the health aspects of sustainability. Our expectation is that the Spring Workshop to infuse sustainability across the curriculum will be an annual workshop to include more faculty each year. March 2009.
- d. National Teach-In Feb 5, 2009 UofL will participate in national program to support education about global warming. Speakers, webcast and connection to classes. Senators and Rep. involved . <http://www.nationalteachin.org/> This project will be led by student groups, the Sociology Club, and graduate students in Communication.
- e. Honors projects directed by Joy Hart and Kandi Walker on Communication and Sustainability. Internship opportunities led by Burns and Barnett on behavioral change and energy reduction. Each of these projects in A & S Plan are deliverables from A & S Green Team proposal.
- f. Education program for faculty. We will sponsor a new initiative to connect global warming to curriculum and educate faculty, staff and students. Information and short tutorial on global warming will be sent to faculty to educate students. This 4 minute educational piece on sustainability describes the problem, lists current solutions, and then provides an interactive site to explore solutions. They include a pretty good description of the problem of equity too. See how they bring in behavior and efficiency to the solutions. <http://www.no21.org/solutions>
- g. JCPS/UofL Sustainability Education. JCPS is developing three new magnet high schools on “Sustaining yourself and the planet”. The proposed U of L Sustainability major could play a role in shaping the school districts work, while creating a pipeline for future students. It could be the first - Grades 9 - 16 series of courses/study on sustainability in the country. The Sustainability Council will participate on a committee to focus on this initiative.
- h. U of L will participate in the “Earth Day Perspectives” a focus on the future of Kentucky’s energy. April 2009
- i. Visiting Scholar Spring 2009. Dr. Jamie Horwitz, from Iowa State University will be a visiting scholar in residence for Spring 2009 in Architecture and Fine Arts. She will be

teaching onecourse and giving lectures on sustainability in architecture. Met with Wicks, Owsley, and Burns in Fall semester to make connections to community, college, and university programs in sustainability.

- j. A&S Green Team Initiative. Graduate Class ‘Integrative Marketing and Communication’ Instructor: Lindsay Della Russ Barnett and Barbara Burns will meet with class in January, Tuesday 5:30-8 pm. This class is taking the A & S Green Team Plan for Social and Cultural reduction in energy use as their client and developing class projects around meeting goals of plan.
- k. U of L Honors will offer three sustainability courses in the spring of 2009; Local Food - Prof. Lisa Markowitz; Connecting With the Community - Prof. David Wicks; Body & Health II: The Community - Prof. Paul Salmon. The instructors from each of these courses will be in close contact with Sustainability Council such that undergraduate projects can be connected to current initiatives.

4. Campus Activities and Sustainability

- a. A&S Student Council. Rachel Noble, President of Arts and Sciences Student Council has announced that one goal for A & S council is to create a greener, more environmentally friendly campus. She will try to interest more organizations within student life in sustainability efforts and we will work with her on this goal.
- b. Student Contest sponsored by Sustainability Council and A&S Green Team. A UofL student contest will be held in order to develop Sustainability videos for modules (analogous to STOMP modules). KY Greenteam Online Film Festival <http://thevillevoice.com/2008/11/14/green-film-contest/> for information about a Kentucky-based filmmaking contest. Dec 2008
- c. UofL ‘Book in Common’. Sustainability Council has submitted two sustainability books to Committee that decides on ‘Book in Common’. Interdisciplinary selection committee will meet to narrow the field to three or four titles soon, decision made after winter break. (Pending, Jan 2009)

5. Outreach and Sustainability: Festivals, Conferences, Workshops

- a. Energizing Kentucky. Sustainability Council continues to explore possible participation in Spring Conference on Energizing Kentucky. We contacted Dr. Reigleman to ask him about his goals are for the spring conference on Energizing KY. He was asked how he sees the role of all of the conferences in terms of the state Energy Policy developed by the state (e.g., Is the purpose to influence this state policy, or to develop a guide on the roles for the Universities in the Commonwealth to play internally and in support of the state's policies? We want to discuss possible programs that U of L could present (based on replies), including - U of L’s proposed sustainability major; Research at UofL on

renewable energy: nanotechnology, solar, biofuels; UofL's approach to energy conservation through behavioral change (pending Dec. 2008) PENDING

- b. Energizing KY Conference in Lexington, KY. U of L Sustainability councils - administration, professors and students to the Energizing Kentucky Conference <http://www.energizingkentucky.org/> on April 16, 2009. The opening keynote is Jared Diamond http://www.edge.org/3rd_culture/bios/diamond.html
- c. Boehl Distinguished Lecture in Land Use Policy, by Professor Timothy Beatley, Heinz Professor of Sustainable Communities, at the University of Virginia. The lecture will be at 6 pm in the Law School, with a reception immediately following (both free and open to the public). Feb 12, 2009.
- d. The Environmental Finance Center at UofL has proposed to the Operations Committee of the Sustainability Council that UofL host through the EFC, an online Farmer's Market and Agricultural Exchange. As a member of the EPA's Environmental Finance Center Network (EFCN), our EFC at UofL has been asked to consider sponsoring and launching two websites that promote sustainable agricultural practices. These websites are to be modeled after two successful programs, www.agtrader.org and www.FoodTrader.org launched earlier this year by the EFC3 at the University of Maryland. The EFC has purchased the domain names to begin the process of developing the websites for our region and has proposed to the Operations Committee that UofL assist by locating funding to develop the website and for a GRA to help launch the project as part of UofL's efforts to promote sustainable local food economy. (Carol Norton and Lauren Heberle).
- e. Environmental Justice workshop sponsored by Braden Institute. This will include Dr Chad Montrie--a UofL grad (Dr. John Cumber's former student and protégée) who is now a historian at UMass-Lowell, whose work is on the history of the environmental movement, esp at grassroots level, along w someone from Mountain Road show (see www.mountainroadshow.com), possibly a film from Appleshop, and the tremendous new graphic art project by the Beehive Collective, which tours campuses nationally in spring (see www.beehivecollective.org). Purpose of event is to raise awareness of connections btw mountaintop removal in e. KY with urban environmental problems faced here in Louisville. Connected to CCHHS, History dept, KFTC, the Center for Health equity, and Ali Institute (environmental violence plank of their new campaign, www.seerednow.org) U of L Sustainability Council is a participating sponsor.
- f. Spring Art Exhibit and Sustainability. A proposal was submitted by R. Noble for the Spring Art Exhibit sponsored by Arts and Sciences Council on "sustainability" and student drives for a greener more environmentally friendly campus. The name of the event will be: "Featuring a Greener Campus: Arts and Sciences Student Council Art Exhibit." The event will be hosted on Earth Day or close to it. It will be an on-campus event, with free food and music. The pieces of artwork can be entered into various categories, such as: recycled mediums, photography, acrylic, etc. (PENDING, Dec 2008)

- g. Environmental Education Committee. 300 JCPS students will come to UofL campus to investigate sustainability service and research. Spring 2009
- h. Earth Day: Talks, posters, presentations, events-connection to Sustainability on U of L campus and community.

5. Future Grants

- a. Brown Foundation current areas of interest match well with sustainability and environment.
<http://www.jgbf.org/Home/GrantSeekingTips/FundingAreas/tabid/82/Default.aspx>
- b. Congress Votes to Fund the Sustainability Movement in Higher Education (HESA)
<http://ncseonline.org/Updates/cms.cfm?id=2459> HESA amends the Higher Education Act to authorize a new \$50 million grant program at the Department of Education that will annually support between 25 and 200 projects at higher education institutions and consortia/associations. The RFP's will be coming out soon. Here is an overview of the act written by Dr. James Elder
http://www.fundee.org/campaigns/hesa/HESA_Briefing_20070923.pdf
- c. NSF Environmental Sustainability: This program supports engineering research that seeks to balance society's need to provide ecological protection and maintain stable economic conditions. There are four general research areas which are supported: Industrial Ecology; Green Engineering; Ecological Engineering; Earth Systems Engineering
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501027&org=NSF&sel_org=NSF&from=fund
- d. NSF Energy for Sustainability: The Energy for Sustainability program supports fundamental research and education in energy production, conversion, and storage and is focused on energy sources that are environmentally friendly and renewable.
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501026&org=NSF&sel_org=NSF&from=fund
Here is a PowerPoint overview
www.nsf.gov/eng/cbet/aiche/31_7644_energy_for_sustainability.ppt
- e. 2009/2010 International Commission on Education for Sustainable Development Practice: Master's in Development Practice Programs funded by the John D. and Catherine T. MacArthur Foundation Earth Institute, Columbia University:
(http://mdp.ei.columbia.edu/sitefiles/file/RFP_10-30.pdf Needed: build the divisional/departmental links, designing a well developed program, establish Sustainability Center, etc.

- f. EPA I. EPA grants are awarded yearly under the National Environmental Education Act, which was passed in 1990 to stimulate environmental education through design, demonstration and communications projects conceived by local organizations.

More information on EPA's environmental education grants is at <http://www.epa.gov/enviroed/grants.html> .

- g. EPA: EPA*s P3 Award program:
<http://es.epa.gov/ncer/p3/index.html>.

The beauty of the People, Prosperity and the Planet program is that it harnesses one of our most abundant natural resources: student brain power, said Dr. George Gray, assistant administrator for EPA*s Office of Research and Development. *Through innovation and creativity, these student teams turn environmental challenges into opportunities that protect the environment, build new businesses, and create new careers.*

As part of the 43 P3 Phase I grants and six Phase II grants awarded nationally to winning teams from last year, a team from Appalachian State University is designing a coffee wastewater treatment system that produces ethanol and bio-gas for possible use as car fuels. A team from the University of Florida has designed a low-tech, low-cost system that improves upon a standard reservoir design to filter and purify stored rainfall year round for the village of Sissene, Burkina Faso in Western Africa. The seven universities in the Southeast receiving P3 grants are:

- Appalachian State University (2)
- AustinPeay State University
- KentuckyState University
- University of Alabama-Tuscaloosa
- Universityof Florida(2)
- University of SouthFlorida
- University of Tennessee-Knoxville (2)

An American Association for the Advancement of Science panel will evaluate the projects and make recommendations to EPA, who will choose the winners. The P3 Award includes the possibility of additional funding up to \$75,000 that gives students an opportunity to further develop their sustainable designs and move them to the marketplace. The next P3 Award Competition will be held on the National Mall in Washington, D.C., as part of the National Sustainable Design Expo, April 18-20, 2009.

Information about the P3 winners and their projects:
<http://es.epa.gov/ncer/p3/current/index.html>

Proposal for U of L Sustainability Center

Submitted by Sustainability Council
Chair: Barbara Burns

1. Purpose

The U of L Sustainability Center will:

- Institutionalize a commitment to cost effective, environmental impact reduction in association with campus operations.
- Utilize the campus as a living laboratory for teaching, research, and implementation of initiatives related to environmental sustainability.
- Establish organizational support for academic research, education and partnerships to address sustainability challenges facing Louisville and other metropolitan regions, and generate innovative solutions that enhance the natural environment, economic vitality, and social equity of cities worldwide.
- Engage students, faculty, and staff in gaining an understanding of our current patterns of environmental impact and the consequences of these behaviors. Educate citizens, professionals and students to advance sustainability in their civic and professional lives.
- Help make the University, as a microcosm of the broader Louisville community, an exemplary model of viable sustainability.

2. Structure: The Center, administratively affiliated with the office of the Provost, will have five areas of concentration: Operations, Education, Research, Outreach, and Finances (Fundraising/Grant writing).

The Center shall sponsor all University-related sustainability initiatives, including those emanating from:

- The Sustainability Council and its three committees:
 - Outreach and Finance – Chair: Mike Curtin
 - Research and Education – Chair: Joy Hart
 - Operations – Chair: Larry Owsley
- The Kentucky Institute for the Environment and Sustainable Development (Russ Barnett, Director)
- The Partnership for a Green City (Brent Fryrear, Director)

- The Student Government Association (SGA) and other student organizations with environmental agendas.

The Sustainability Center will be headed by a full-time director with the rank of Full Professor and Graduate faculty standing. The director would ideally be funded on a named *Bucks for Brains Chair for Sustainability* that would be matched with corporate funding. The expectation is that sustainability will be a hiring priority and as vacant lines are filled in various departments there is a priority placed on connecting to the Sustainability Center.

The director will have four primary responsibilities:

- Administrative oversight of the Sustainability Center
- Teaching and organizing a new academic major in sustainability studies
- Stimulating research via:
 - Helping to secure grant funding
 - Serving on thesis and dissertation committees with an environmental emphasis
 - Encouraging interdisciplinary research among academic and institutional units within the University
 - Assisting with the development of University- and Community-based programs to foster environmental awareness
- Serving as an administrative conduit linking faculty, staff, and students to the Office of the Provost and upper University administration

Project Manager—The Project Manager will plan and facilitate campus activities for students, faculty and staff in support of sustainability projects. The Manager will also coordinate outreach to the campus community to educate the campus on environmental sustainability programs and goals.

The Center will also include an administrative secretary and 4-6 undergraduate student positions. The students would be actively involved in all committees, education, outreach initiatives, and research.

The Sustainability Center will administer the undergraduate sustainability major in coordination with the Office for Interdisciplinary Undergraduate Programs. (See overview of undergraduate major in sustainability below on page 5.) The Center will ensure that there is staffing for four core courses and will work with Departments to utilize existing courses, and to develop new courses, that will serve as electives in the sustainability major. The Center will include between 6 and 10 teaching lines which will have joint appointments between their home departments and the Sustainability Center. The Center will reimburse the home departments for faculty release salary to cover these courses.

1) Operations:

1. Provide support to the UofL Operations by providing scholarly studies and research on new technologies and programs to make UofL environmentally sustainable. Provide a bridge between faculty and operations staff for consulting and pilot research projects.
2. Develop benchmarks/sustainability indices; document progress on an annual basis and publish an annual report.
3. Review all policy and procedural manuals to increase sustainability best management practices.
4. Participate in formulating the campus master plan on an ongoing basis.
5. Be a clearinghouse for all ideas related to environmentalism and sustainability from the University and community.

2) Education

1. Provide support and implementation for a new major in Sustainability. The goal for the 2009/10 academic year is an enrollment of 20 students; for 2010/11 academic year the goal will be to increase enrollment by 100%, a total of 40 students; for the 2011/12 academic year, an additional 20 students will be enrolled in the program; and by the 2012/13 academic there will be a full complement of 80 students majoring in Sustainability Studies by 2013/2014. This will be the second university with a Sustainability major in the Southeast United States (see Appalachian State University, for a description of the only other program. <http://susdev.appstate.edu/pagesmith/4>).
2. Work to incorporate into general education classes, an introduction to sustainability concepts and the importance of providing for the social and economic needs of our current and future community members without compromising the health of our biosphere.
3. A long-term vision cannot be achieved without the continued engagement and support of the UofL community. The Center will work to have a campus-wide education program through such initiatives as new student orientation, capstone projects, speakers forum, and other educational outreach efforts.
4. Work with all faculty members to increase awareness of sustainability, and then develop strategies to increase a sustainable focus in appropriate courses. Provide all departments and schools with funds for faculty to redesign selected courses to focus on sustainability. A total of \$10,000 per year will be made available as grants to faculty incorporating sustainability into their curricula. Sponsor workshop to incorporate sustainability into undergraduate courses.
5. Establish a *Sustainability Learning Center* within the U of L library system that features journals, books, websites and distance learning opportunities.

3) Research

1. Provide coordination and support for research on sustainability. Develop a research agenda for sustainability that will be disseminated to undergraduate, graduate, and doctoral students for consideration. A research fund will be established to provide \$2,000 for undergraduate research projects and \$5,000 for graduate research projects.
2. Support the development of research proposals for external funding in collaboration with the Office of Sponsored Programs.
3. Encourage faculty initiatives in developing research projects funded both internally and externally, that are thematically related to the environment and sustainability.

4) Outreach

1. Provide campus-wide education and awareness programs on sustainability issues.
2. Work with all Resident Assistants to provide an annual day-long sustainability workshop.
3. Support SGA and student groups and assist them in determining their objectives to achieve their sustainability goals.
4. Work with faculty and staff senate to identify sustainability-related projects.
5. Sustainability Leaders: Develop an environmental sustainable leadership program for the upper administration at U of L.
6. A video of sustainability on campus will be produced and distributed by U of L media/video productions. (See example set by Berea College, "Living Upstream: Being and Becoming a Sustainable Campus")
7. Host a series of campus and community forums on sustainability, bringing national and international leaders, researchers and authors to campus.
8. Actively participate in regional, national and international campus sustainability conferences, workshops, and forums to increase the profile of U of L sustainability initiatives. U of L will be recognized as a national leader in sustainability.

5) Finance

1. The University will underwrite the cost of the Center's director, program coordinator, administrative secretary, three graduate research assistants, and 10 undergraduate employees. A budget is proposed to fund the office, campus lecture programs and travel funds to attend regional, national and international programs.
2. The tuition (80%) for students enrolling in core and/or elective courses would be transferred to the Sustainability office.
3. Work with the advancement office to identify sustainable funding.
4. Identify and obtain alternative sustainable funding streams in coordination with all stakeholders, including:
 - a. Campus contributions: Similar to a program at the University of Colorado, U of L will conduct an annual energy and sustainability pledge. For every student and or faculty to sign the pledge, \$5 will be donated to the Sustainability Center.
 - b. The 'U of L Cares' program, amended to include an option of supporting the Sustainability Center,
 - c. Carbon offsets: When university employees purchase out-of-state or out-of-country airline tickets, the carbon offset would be determined. The sponsoring department would pay the amount of carbon offset to the Sustainability office thus financing projects on campus to reduce greenhouse gas emissions.
 - d. State and/or Federal Funding: The Sustainability Center has the authority to apply for federal or state funding, earmarks, foundation, corporate support, community partnerships and/or donations.
 - e. Student Fees: An optional student fee could be used to pay for sustainability projects on campus. The university would match all student donations.
 - f. Alumni donations: Have an annual alumni appeal to support the Sustainability Center.
 - g. Recycling sales: Proceeds from selling recycled materials and the sale of carbon offsets would go to the Sustainability Center.
 - h. Local funding: Establish a partnership with Louisville Metro Government, including the Louisville Department of Health, and local area grant agencies to secure funding for projects impacting the local community.

An Undergraduate Major in Urban Sustainability at University of Louisville: What could it look like?

Major in Urban Sustainability

The Urban Sustainability major is designed to study and improve understanding of *urban sustainability systems technologies and philosophies*. The interdisciplinary program prepares students to work to better utilize natural resources, energy, and human capital to improve our quality of life and the environment.

Course Work: 36 credits for major --- 21 hours of required courses: Four to five 3-hour courses taken in sequence followed by a 9-credit year-long Capstone course. An additional 12-15 credits (4-5 elective courses) would be required.

Sustaining Urban Life: An introductory course that examines historical, current, and future trends of urban sustainability using four sustainability focal points – Environment, Economy, Health, and Justice.

Green Economy: Economic benefits of sustainability. From food production, electronics, automobiles, how we heat and cool our houses, where we buy our food.

Environmental Psychology: Behavior patterns related to environmental use and sensitivity. Systems-based models involving health behavior patterns with environmental implications.

Justice and Health: Covering Environmental Justice, Environmental Health, Life style choices, and Influences on health.

International global urban environmental issues

Senior year requirements:

Fall semester: **Community Campus Environmental Research**, 3 hour

Spring semester: **Practicum/Apprenticeship**, 6 hours

Budget for Sustainability Center at University of Louisville

To begin January 1, 2009

100% FTE Project Manager (mid point Grade EF) includes salary and fringes: \$68,033

To begin July 1, 2009

100% FTE for Faculty Director (assuming full professor) includes salary and fringes: \$150,000 for salary, start up negotiable. (*Bucks for Brains Chair for Sustainability* matched with corporate funding)

100% Adm Asst includes salary and fringes \$33,000

4-6 Undergraduate Assistants (10 hours per week during semesters, 30-40 hours per week in summer) (assuming S-26 classifications) \$14,000 to 21,000

Office Equipment: \$9,400

Center Operating Expenses: \$10,000

Grants to faculty for curricula development: \$10,000

Annual Costs: (not including Bucks for Brains faculty salary and start up): \$151,433

Note: We anticipate additional opportunities for funding activities at the U of L Sustainability Center. It is expected that the Center Director will have a grant portfolio and a history of successful extramural funding. The Center Director is expected to be a catalyst to identify additional funding on collaborative grants with faculty across the university. Examples include:

NSF Science Teaching Grants

Foundation Grants

Federal Grants EPA, AASHE, DOE

KECK Foundation