

# University of Kansas Sustainability Task Force

## 2004-2005 Report

Submitted to Provost David Shulenburger  
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## EXECUTIVE SUMMARY

### Introduction

Environmental sustainability has emerged as a major concern facing large institutions such as the University of Kansas. Sustainability – understood as meeting the needs of the present without compromising the ability of future generations to meet their own needs— is now a critical filter with which to evaluate the function of operations ranging from energy use to waste management, including both the built and natural environment. As an institution of higher education, the University of Kansas is poised to make a significant contribution to a sustainable future. The university's pursuit of sustainability provides a mechanism to recognize numerous benefits, including: cost savings; learning opportunities; research opportunities; positive interactions between faculty, staff and students; positive alumni relations; and expansion of the university's leadership role in Kansas, the region, and beyond. For these reasons, the Sustainability Task Force has developed a brief plan supported by more detailed explanations and appendices. We believe that the goal, objective, and recommendations outlined below will allow the University of Kansas to play a key role in advancing sustainability on many levels.

### Goal

Position the University of Kansas as a leader in sustainable practices and sustainability education and research.

### Objective

Within the next 18 months, create a Center for Sustainability that will serve students, faculty, and staff as a centralized hub for coordination of sustainability activities and research.

### Recommendations

- 1) Create a Center for Sustainability with staff that includes one full-time staff member, one part-time faculty member, and one or more part-time students.
  - a. Drawing on the model of the KU Center for Teaching Excellence (CTE), form groups of “ambassadors” from across all units of campus to generate new ideas and broaden environmental awareness.
- 2) After a process of review and revision, implement the existing Campus Environmental Policy.
  - a. Appoint a new Committee on the Environment (COE) charged with duties that include establishing goals and timelines for implementing the existing environmental policy and providing annual recommendations to the Provost, along with current charges as defined by the EHS Council in the University of Kansas Lawrence Campus Safety Program (KUSP).

## INVESTIGATION AND PROPOSAL

### **Background:**

The initial charge of this Task Force was “to examine the feasibility and efficacy of organizing an expanded hub at KU for research, data collection and implementation of various actions that will make existing campus operations more friendly to the environment and to guide future campus growth in environmentally responsible directions.”<sup>1</sup>

One of the Task Force’s first efforts in this regard was to assess the various resources currently available on the KU campus with respect to environmental sustainability. Using the KU Environmental Policy (see Appendix A) as a starting point, we investigated the extent to which successful implementation of this policy was occurring on the campus (see Appendix B). Additionally, we gathered information about current actions being taken on campus to address environmental concerns. We concluded that while there are many critical pieces in place, KU lacks an overarching administrative structure that will allow it best to achieve its environmental aims and to coordinate environmental awareness and research opportunities. We feel strongly that the best means to achieve this coordinated future is the establishment of a Center for Sustainability that will work closely with academic and administrative units as well as the student body.

### **Proposal:**

Institutions of higher education have a vital role to play in the advancement of sustainability. The KU Mission Statement declares, “the university is dedicated to preparing its students for lives of learning and for the challenges educated citizens will encounter in an increasingly complex and diverse global community.” The Sustainability Task Force believes this idea affirms not only the importance of international experiences but also the need to prepare students for careers that will increasingly emphasize the careful treatment of our natural, economic, and cultural abundance. As reflected in our proposed goal, KU has the opportunity to step out in front of this trend.

#### *Goal:*

Position the University of Kansas as a leader in sustainable practices and sustainability education and research.

In striving for this goal, KU will be able to recognize cost savings while simultaneously engaging students, faculty, and staff in these essential endeavors. To accomplish this goal, the Task Force believes the following objective and recommendations are necessary.

#### *Objective:*

Within the next 18 months, create a Center for Sustainability that will serve students, faculty, and staff as a centralized hub for coordination of sustainability activities and research.

#### *Recommendation 1:*

Create a Center staff that includes one full-time staff member, one part-time faculty member, and one or more part-time students.

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<sup>1</sup> September 23, 2004 email correspondence from Provost David Shulenburg.

*Recommendation 1a:*

Drawing on the model of the KU Center for Teaching Excellence (CTE), staff shall form groups of “ambassadors” from across all units of campus to generate new ideas and broaden environmental awareness.

*Recommendation 2:*

After a process of review and revision, implement the existing Campus Environmental Policy.

*Recommendation 2a:*

Appoint a new Committee on the Environment (COE) charged with duties that include establishing goals and timelines for implementing the existing environmental policy and providing annual recommendations to the Provost, along with current charges as defined by the EHS Council in the University of Kansas Lawrence Campus Safety Program (KUSP).

The sections that follow explain the details of each recommendation and the process the Sustainability Task Force used to arrive at those recommendations.

**Recommendation 1**

Create a Center staff that includes one full-time staff member, one part-time faculty member, and one or more part-time students.

**Recommendation 1a**

Drawing on the model of the KU Center for Teaching Excellence (CTE), staff shall form groups of “ambassadors” from across all units of campus to generate new ideas and broaden environmental awareness.

**Detail for Recommendations 1 and 1a:**

The Center for Sustainability would serve as a resource to administrative and academic departments and student organizations, creating a centralized network for sustainability research, education, and practice. Responsibilities would include connecting students to research opportunities and funding sources, providing informational materials and guidance for all campus units with respect to environmental issues, and coordinating implementation of the campus Environmental Policy. This would be made possible through office staff and a network of ambassadors, similar to the KU Center for Teaching Excellence. Each academic and administrative department on campus would have an ambassador connecting that unit with the Center for Sustainability through their respective liaison.

A full-time staff member would be responsible for maintaining the general operations of the Center. This individual would be responsible to the Office of the Provost, acting on recommendations provided by the Committee on the Environment (see recommendation 2). He or she would work closely with other office employees, administrative units, and the Committee on the Environment to coordinate implementation of the existing Campus Environmental Policy, and would serve as a liaison to campus staff connected to the center as ambassadors.

The Center would also employ a part-time faculty member. This individual would serve as a resource to students regarding research questions, gather information from academic departments regarding research opportunities on campus, connect students into these research opportunities, and establish a system for arranging course credit (e.g. through independent study) for student research related to

the campus environment and Environmental Policy. The faculty member would also serve as a liaison to other faculty connected to the center as ambassadors.

Finally, the Center would include student staff. A part-time student staff member would serve as a liaison to other student groups and work on projects being carried out by the Center. The Center may need to employ more than one student based on the projects being developed and implemented. Departmental funds could be made available to hire students for specific projects.

### **Discussion of Alternatives for Recommendations 1 and 1a:**

After identifying the objective of establishing a Center for Sustainability, we discussed the advantages and disadvantages of three additional issues: 1) staffing the Center through faculty leadership or staff leadership; 2) recruiting an existing KU employee or a new hire for this leadership; and 3) forming the Center as part of an existing campus unit or as a new unit.

*Issue 1:* With respect to the *staffing possibilities*, both faculty and staff had several advantages and disadvantages. A faculty member would bring his or her research expertise, teaching connections, KU connections, national connections, and links to faculty governance. As well, the KU Center for Teaching Excellence provides a proven model of a faculty-led center. Potential disadvantages include higher salary costs, less knowledge of/interaction with staff resources, and the likely need to detract from the faculty member's research agenda. A staff member, on the other hand, would have more knowledge of university operations, a 12-month presence on campus, more professional expertise, and likely less cultural friction when working with other staff. Potential disadvantages, however, include less connection to faculty, little or no classroom connections, and more limited research practice.

It quickly became clear to the Task Force that *the best solution was a hybrid staffing* for the proposed Center that optimizes the strengths of faculty and staff expertise while minimizing the weaknesses. Because this proposal has a strong connection to student activities, including student research, and because students are by far the largest single campus constituency, we also decided that having student staff would be another important component of a successful Center. Student staff would provide a direct link between students and the Center's activities. Student enthusiasm and interests will be a key aspect of the successful structure and function of the Center.

Our specific staffing recommendation is for one full-time staff member, one part-time faculty member, and one or more part-time students. In discussing these appointment levels, the Task Force decided that the alternative of a full-time staff member was preferable, because it would free that person from juggling the responsibilities of two offices. Whereas faculty members are more accustomed to this sort of split appointment (e.g. the Environmental Studies faculty all hold joint appointments), we felt this would be more difficult for staff members whose work weeks are more highly structured and whose responsibilities tend to have a more regular pattern. Part-time student staff, of course, would be taking courses as well as working at the Center.

Overall, the catalytic effects of having staff representation from each of the three main groups of people on campus are a critical aspect of our vision. Each of these groups is best poised to reach out to its logical constituency while building connections among the other groups.

*Issue 2:* With respect to the question of having *existing or new persons* staffing the Center, we concluded that at least in the short-term, *existing members of the KU campus are preferable in these roles*. The primary advantages of these persons are their familiarity with the campus and its operations and the numerous working relationships they already have. Such persons will have less of a learning curve than would new hires. Once the Center becomes well established, new hires might

be brought in, but at least initially, current faculty, staff, and students will provide the best potential for success.

*Issue 3:* With respect to the question of whether this new Center should be attached to some *existing campus unit or established as a new unit*, we decided that *a new unit was the preferable strategy*. As noted above, our review of existing campus resources uncovered a wealth of relevant offices, individuals, and organizations. We nevertheless felt that there was no logical place among these resources to establish the Center. Specifically, we discussed the advantages and disadvantages associated with housing the Center in the Department of Environment, Health, and Safety, the Environmental Stewardship Program, or the Environmental Studies Program. While each of these units has the advantage of considerable expertise with environmental issues, no one unit is currently responsible for overseeing all aspects related to sustainability. For example, the Department of Environment, Health, and Safety focuses mainly on occupational health and safety, laboratory safety, and hazardous materials. And while the Environmental Stewardship Program is available to assist campus groups with broader environmental issues, it focuses mainly on recycling and waste reduction. A new unit would be free from any “baggage” or prior expectations or perceptions that an existing unit might have. More importantly, a new unit would best facilitate the bridging effort that must take place between the academic and administrative aspects of campus in order to pursue sustainability education, research, and practice most comprehensively.

Finally, in the course of our discussions, we recognized that one of the key success factors for our proposed Center would be the ability to draw on faculty, staff, and students from across different parts of campus. We realized that *the KU Center for Teaching Excellence, through its “ambassadors” program, provides an excellent model for this proposed Center for Sustainability*. Each academic department and program on campus appoints a CTE faculty “ambassador” who serves as the link between CTE activities and their faculty colleagues. These ambassadors not only build awareness of and familiarity with CTE, they also help in generating new ideas and activities. The Center for Sustainability would strive for similar ambassador roles, but would extend these to staff and students as well. While the details remain to be determined, we anticipate that following the CTE model will allow this new Center to reach out to the whole campus in a manageable way that has proven successful.

## **Recommendation 2**

After a process of review and revision, implement the existing Campus Environmental Policy.

### **Recommendation 2a**

Appoint a new Committee on the Environment (COE) charged with duties that include establishing goals and timelines for implementing the existing environmental policy and providing annual recommendations to the Provost, along with current charges as defined by the EHS Council in the University of Kansas Lawrence Campus Safety Program (KUSP).

### **Detail of Recommendation 2 and 2a**

The task force recognizes that the Environmental Policy approved by the Office of the Provost on March 26, 1997 (Appendix A) still reflects the needs of our campus and is an important basis for working towards the goal of positioning KU as a leader in sustainable practices and sustainability research. However, we recommend that the implementation section of the campus Environmental Policy be revised to incorporate the role of the Center for Sustainability, and to reflect changes within organizations that are currently charged with implementing objectives of the policy. Following these revisions, we recommend that implementation of the policy be coordinated through the Center for Sustainability, involving all academic, administrative, and student organizations. *For this policy to be effective, the policy must have administrative recognition and support (i.e. the policy must have*

*support from the Chancellor and the Office of the Provost), and be integrated into all aspects of University operations.*

With Center for Sustainability staff in place, the University of Kansas will be better equipped to address the objectives of the Environmental Policy. However, *reactivating the Committee on the Environment (COE) will be essential to the Center's success.* A composition similar to that listed in Appendix 4 of KUSP would continue to be effective, but some changes will be necessary. This task force recommends replacing the now defunct Resource Conservation/Recycling Program Manager with the Environmental Stewardship Program Manager, as the latter has a similar role to the former position. Additionally, *we believe that the number of students on the COE should be increased from 2 to 3 in order to garner more student involvement.*

Because this committee will be working campus-wide with broad environmental issues, great care should be taken in selecting members to ensure a dedicated, environmentally minded body with a demonstrated ability to work effectively with a variety of University departments. These individuals will be expected to not only provide recommendations regarding campus environmental issues, but to assist staff with the coordination of actions leading to policy implementation.

We also recommend that the charges of the committee itself be refined to include: 1) establishing specific goals and timelines for implementing the Environmental Policy, 2) providing annual recommendations to the Provost, 3) collaborating with the student research unit, and 4) assisting staff with the coordination of implementation actions. These charges further define the roles of the committee as noted in Appendix 4 of KUSP.

Under this new administrative structure, the reporting structure of the COE itself will need to be adjusted. Previously, the COE reported to the Environment, Health, and Safety Council. While this task force understands the value of gaining approval from a council with such broad demographic, the creation of a new Center for Sustainability with its network of ambassadors would fill this role. The COE could then provide recommendations directly to the Office of the Provost, which would in turn direct Center for Sustainability staff on addressing these recommendations. Center staff would act on recommendations as explained under Recommendations 1 and 1a.

Finally, we recommend that the COE work more closely with students involved with the Center for Sustainability. The goal established by this task force includes positioning KU as a leader in sustainability research, with a focus on creating research opportunity for students. We envision students working with the COE not only as representatives on the committee, but also by providing the COE with position papers and other research reports to aid in policy development and implementation. *To achieve the underlying goals of the Center for Sustainability, students should be involved throughout the committee process by presenting new initiatives to the COE and carrying out background research on issues that are being considered for recommendation.*

### **Discussion of Alternatives for Recommendation 2 and 2a**

In reviewing the campus Environmental Policy, we agreed that it is a valuable document that needs to be implemented with guidance from a University committee. The Office of the Provost or an appointed committee should make needed revisions, but it is a solid base from which efforts toward sustainability can be developed. We found no other acceptable alternatives to this recommendation.

With respect to the actual implementation of this policy, we discovered that a system was already in place for addressing environmental concerns on campus through the Committee on the Environment. This system, however, has not been utilized as outlined in the policy. Although we did find many examples of successful implementation, we also discovered objectives that are not being met to their fullest potential and/or do not have specific implementation plans. In some cases, there are additional

policies or documents (e.g. the Campus Energy Policy, Campus Master Plan, and Landscape Master Plan) that relate to objectives in the Environmental Policy, but actions taken on campus do not necessarily reflect the language in those documents (See Appendix B). Outside of the lack of staff support resolved through Recommendation 1, the task force discusses some deficiencies that may have kept this policy from being implemented more effectively, including 1) changes within the organizations responsible for implementation and 2) the lack of a functioning Committee on the Environment.

*Issue 1:* Since the policy was approved, the Resource Conservation/Recycling Program has been removed from EHS and has since been transferred to Facilities Operations as the Environmental Stewardship Program. While the Department of Environment, Health, and Safety continues to address concerns as described in their mission statement, this change has left the department without staff to address environmental issues outside of their focus of occupational health and safety, laboratory safety, and hazardous materials. Currently the Environmental Stewardship Program is available to assist campus groups with broader environmental issues but focuses mainly on recycling and waste reduction.

*Issue 2:* Perhaps the most significant factor is that the Committee on the Environment has not met for several years, so there has been no organized unit to provide recommendations on implementing all aspects of the Environmental Policy. We agreed that the COE needs to be reactivated and should not only make recommendations, but also support Center staff and others in coordinating implementation.

We also discussed possible changes to make the committee more effective. Although we did consider the option of leaving the COE within its current committee structure (reporting through the Environment, Health, and Safety Council), we feel that it would be more effective as a separate unit. With recommendations coordinated through the Center for Sustainability, there would be no need to keep the COE within the EHS reporting structure. As mentioned above, a network of ambassadors would replace the approval from a broad-based committee, and recommendations would be supported and coordinated through this network. If the COE were to stay within the EHS committee structure, we recommend that this occur on a trial basis, with review after one year. At that time, if the reporting structure is proven ineffective, we recommend that the committee structure should be adjusted to report directly to the Office of the Provost.

## CONCLUSION

The University of Kansas is in a unique position to become a leader in advancing sustainability research, education, and practice. The proposed Center for Sustainability provides an opportunity for KU to develop a hub for coordinating innovative work in emerging areas such as alternative energy, resource use and recycling, and pollution prevention and remediation.

Across the university, academic units strive to prepare students for the professional workforce, with communication and research skills, creative minds, and developed technical competence. The Center for Sustainability will provide direct contributions to these efforts. First, the Center will help to prepare students for a workforce that is presently shifting from industry that takes, makes, and wastes to one that celebrates natural, economic, and cultural abundance. Second, the Center will add a unique dimension to existing research opportunities because it will allow students to work on projects that directly affect their place – the campus. Third, the Center will connect students, faculty, and staff from across campus and encourage catalytic interactions of the kind essential to a sustainable future.

The Sustainability Task Force applauds the efforts KU has made to date with respect to the pursuit of environmental sustainability. We now urge the University to seize this opportunity to make further critical contributions toward a sustainable future and enhance our image as an outstanding institution of higher education.

## APPENDIX A: UNIVERSITY OF KANSAS ENVIRONMENTAL POLICY

### Environmental Policy

#### University of Kansas - Lawrence Campus

(Approved by Office of Provost in 1997)

The University of Kansas, Lawrence Campus is committed to being a positive and creative force in the protection and enhancement of the local and global environment through its teaching, research, public service and administrative/support operations. Recognizing that some of its activities, because of their scale and scope, have significant impacts on the environment, the University as an institution, and all members of the University community, have a responsibility to society to act in ways consistent with the following principles and objectives:

#### Fundamental Principles

- Minimize negative impacts on the environment
- Conserve and wisely use natural resources
- Respect biodiversity and natural systems

#### Specific Objectives

In adopting these fundamental principles the University will be guided by ethical attitudes towards natural spaces and will take all reasonable steps to meet the following objectives:

- Minimize energy use through efficient management and practice.
- Minimize water use through efficient management and practice.
- Minimize waste generation through reduction in use, reuse, recycling and prudent purchasing of materials.
- Minimize polluting effluents and emissions.
- Minimize noise, odor, and visual pollution.
- Minimize the use of hazardous chemicals.
- Improve purchasing specifications for all goods and services in order to optimize the level of reusable, recycled, and/or recyclable content of all goods.
- Be attentive to biodiversity and environmental concerns in planning and landscape decisions.

#### Implementation

Three entities have primary responsibility for implementing this Environmental Policy: the Lawrence Campus Environment, Health, and Safety Council; the Lawrence Campus Committee on the Environment; and the Department of Environment, Health & Safety.

The role and responsibilities of the Environment, Health, & Safety Council are described in "Environment, Health and Safety Council, Composition and Roles." (See also Appendix 3 of the Kansas University Safety Plan.)

The role and responsibilities of the Committee on the Environment are described in "Standing Committees of the Environment, Health and Safety Council, Composition and Roles." (See also Appendix 4 of the Kansas University Safety Plan.)

The role and responsibilities of the Department of Environment, Health & Safety (EHS) are described in the mission statement for that Department.

The Environment, Health and Safety Council recommended the "University of Kansas-Lawrence Campus Environmental Policy," subject to editorial clarifications and corrections, for approval by the Provost on 03/20/1997.

## APPENDIX B: EXAMINATION OF THE ENVIRONMENTAL POLICY

The Sustainability Task Force investigated the efficacy of establishing a “hub” for environmental research and project implementation at the University of Kansas. The group started by examining the campus Environmental Policy, which was recommended by the Environment, Health and Safety Council for approval by the Provost in 1997. Specifically, the group investigated each of the 8 objectives listed by the policy to gain a general view of how this policy is being implemented and what actions are being taken to address these objectives.

We want to emphasize that time and resource constraints limited the thoroughness of our research in these areas. There is undoubtedly more current and complete data and other information available. Gathering this more detailed information is an important future task. Nevertheless, in our general examination of the policy objectives, the Task Force found that while many of these issues are being addressed in some way, there are definite implementation gaps, including a lack of centralized coordination.

1. *Minimize energy use through efficient management and practice:* The University developed an Energy Policy in 2002 and has completed an \$18 million project with Chevron to upgrade lighting, cooling towers, and other equipment to improve efficiency. Efforts to conserve energy have also been reported by the Department of Student Housing and the Memorial Unions. However, energy considerations with new construction are generally limited, according to Facilities Operations Energy Manager, Cindy Strecker. There is a lack of staff education regarding basic energy saving techniques as well, which could impact overall energy savings on campus.
2. *Minimize water use through efficient management and practice:* Water use is mentioned in the Energy Policy as well. The policy suggests that the “use of irrigation water should be minimized through rainfall monitoring. The University should also investigate collecting stormwater for non-potable uses on campus,” but no current examples of this application could be found. Design and Construction Management is following this policy by eliminating single-pass cooling water in mechanical equipment in new construction. Additionally, the University of Kansas Landscape Master Plan mentions the use of native plants to reduce maintenance needs, which addresses minimal water use. However, the use of native turf grasses has not been applied on campus.
3. *Minimize waste generation through reduction in use, reuse, recycling and prudent purchasing of materials:* While campaigns to encourage “reduction in use” and “prudent purchasing” have not been a priority for the Environmental Stewardship Program (ESP) in recent years, the program and its predecessors have worked to minimize waste through recycling since the 1970’s. Other project aimed at reducing waste on campus include a composting pilot in 1997, and ongoing surplus collection, e-waste recycling, and Residence Hall Move-Out collections.
4. *Minimize polluting effluents and emissions:* Data from 2003 emission reports, which is based on the amount of natural gas and diesel fuel combusted in campus boilers suggests that the University is well below the permit standards. However, there are numerous concerns with vehicle emissions from the campus bus system, an issue that the Transportation Board continues to work on. The University often exceeds any state regulations regulating stormwater management with new construction, but most efforts are aimed at moving water off campus with minimal damage to surrounding areas as opposed to retaining it for use or reducing runoff to start with. There was a recent stormwater study conducted on the KU campus, but the funding is not available to accomplish much of what was suggested by this report. There have also been several recent construction projects done in hopes of minimizing effluence discharge, especially with the construction of new laboratory structures. Although many of these areas are being addressed, additional support and resources are needed to establish new guidelines and policies for managing campus effluents and emissions.
5. *Minimize noise, odor, and visual pollution:* It is likely that this objective was included to address specific issues on campus such as noise from cooling towers and other equipment, odors from personal products in confined offices, and the visual pollution of sidewalk chalk and other aesthetic concerns. Due to the nature of these items, this objective was not researched further.
6. *Minimize the use of hazardous chemicals:* The Department of Environment, Health, & Safety works with campus departments to provide guidance on the purchase and use of chemicals and provides collection services for hazardous wastes. Additionally, Landscaping has started using more sand and less harmful

chlorides to deal with snow and ice on sidewalks and roadways, and Housekeeping continues to evaluate the use of harmful chemicals, including an investigation into the possible application of Green Cleaning practices. However, as the policy is stated, there are no specific guidelines or definitions for reducing hazardous chemicals.

*7. Improve purchasing specifications for all goods and services in order to optimize the level of reusable, recycled, and/or recyclable content of all goods:* In reviewing current University purchasing policies, we were unable to find any specific wording addressing this issue. State statutes and purchasing procedures must be followed in most instances, and language relating to purchasing reusable or recycled goods is limited in these documents as well. The Department of Administration, Division of Purchases Policy and Procedures Manual specifically addresses recycled content and makes mention of environmental concerns as related to *Requests for Proposals and Bidding Provisions*. Informal polling of campus departments, however, indicated that most purchasing decisions are made based on availability of funds and purchasing the least expensive product, without consideration of environmental impacts. There are instances of purchasing recycled or remanufactured materials such as printer cartridges and remanufactured parts for repair of automobiles and other machinery.

*8. Be attentive to biodiversity and environmental concerns in planning and landscape decisions:* In reviewing the Campus Master Plan, we found no mention of biodiversity, but it does address environmental concerns with respect to planning and landscape decisions. The Campus Landscape Plan is much more extensive and suggests the use of native grasses and plant, noting the need for a “shift in expectations”. There is no mention of biodiversity outside of the realm of plants, however. Both plans heavily emphasize the importance of aesthetics, while examples of applying these suggestions of using native plants are limited mainly to tree species.

Individual committee members compiled the following reports for 4 of the 8 objectives. Additional information about the objectives not included here can be found in meeting minutes in Appendix D.

**Campus Sustainability Task Force**  
**Report on Campus Environmental Policy Objective #3**  
Jeff Severin

*Minimize waste generation through reduction in use, reuse, recycling and prudent purchasing of materials.*

While campaigns to encourage “reduction in use” and “prudent purchasing” have not been a priority for the Environmental Stewardship Program (ESP) in recent years, the program and its predecessors have worked to minimize waste through reuse and recycling since the 1970’s, with a major consolidation of recycling in the mid-1990’s. ESP currently collects office paper, newspaper, aluminum cans, steel cans, #1 PETE plastic bottles, #2 plastic bottles, and cardboard from more than 300 bins in over 80 educational and administrative buildings, residence halls, and apartment complexes. An average of nearly 397 tons of material have been kept out of the waste stream in each of the past 5 years, with an increase of 95.37 tons over that same period. Because the campus solid waste is not measured by weight, percentages of total waste are not available.

Recent improvements to this program include expanding cardboard collection from facilities with dining services and implementing a cardboard collection process during residence hall move-in starting in 2003. A desk-side-recycling pilot was started at Joseph R. Pearson in summer 2004 and has had a noticeable impact on recycling on participating floors (data is currently being collected on this project). Outdoor containers for newspaper and plastic bottles were placed at 4 locations on campus in fall 2004, and a system for off-campus drop-off of recyclables is in development.

Another project aimed at reducing waste on campus was a composting pilot developed by Resource Conservation and Recycling (an ESP predecessor). Facilities Operations provided a remote site on Campus West for a windrow, and students in Douthart and Grace Pearson Scholarship Halls began collecting food waste in March 1997. The halls continued to divert their food waste through 1998 until the site was lost to construction. The finished product of approximately 3 cubic yards of compost was used in a xeriscape project located at Burt Hall.

The Environmental Stewardship program also addresses waste reduction and reuse through its Surplus Program, E-Waste Recycling, and Residence Hall Move-Out collections. No data is available on the amount of waste eliminated through these programs, but a system is being developed to track this information.

*Surplus Program:* KU Recycling provides removal of reusable furniture on campus as a free service. By working with campus departments and local non-profits they are able to redistribute furniture that would otherwise be discarded

*E-Waste Recycling:* KU Recycling has been collecting computer equipment and other electronics in cooperation with Kansas Computer Recycling Center (KCRC). The company has a no landfill policy for recycling obsolete electronic equipment, and has committed to recycling electronic waste in a responsible way.

*Spring Residence Hall Student Move Out:* During the residence hall student move out in May, KU Recycling collects students’ used clothing and other miscellaneous materials including canned and dry goods for redistribution between several local non-profit organizations.

## **Campus Sustainability Task Force Report on Campus Environmental Policy Objective #4**

Anton Bengtson

*Minimize polluting effluents and emissions.*

In order to determine current policies and practices that relate to this objective, I reviewed the KU Campus Master Plan and spoke with representatives from the KU Department of Environment, Health, and Safety, KU Facilities Operations, the Kansas Department of Health and Environment, and the Kansas Bureau of Air and Radiation. I discuss each below.

### **Campus Master Plan**

Much of the following information was taken directly from what the 1997 Campus Master Plan describes as the "environmental issues" considered during the campus planning process. These issues, from transportation to utilities, are taken from the "Task Force Review of Issues" section of the Plan. (KU Campus Master Plan – <http://www.ku.edu/~fmkuhtml/cmpuspln/ptask.html>). (*Information below that was taken directly from the Plan is either indented or noted as such.*) The following section also includes updated information from involved campus departments, all of which centers on implementation of the Campus Master Plan.

The Plan explains the importance of considering "environmental issues":

The definition of "environmental issues" varies from person to person. For one, the preservation of beauty is important; for another, health and safety; for still another, both. The work of this subcommittee focused on the idea that physical development planning should steer the campus away from potentially negative environmental or health and safety impacts.

#### *General Conditions of Campus Planning*

KU needs to make environmental impact an important consideration in campus planning and decision-making. Proactive measures to reduce negative impacts are the most cost-effective means of lessening environmental degradation and potential liability. A KU environmental policy statement giving assurance that impacts are considered would be a good first step.

#### *Building Environment, Health, and Safety*

All university planning for buildings and building sites must take into account the use of energy for heating, cooling, and lighting; **effects on the air, water, and soil**; and the opportunity to reduce or reuse wastes. In general, such planning should promote the well-being of the environment and the health and safety of people on the campus and in the community.

#### *Transportation*

KU will provide a transportation system that includes bicycles, buses, shuttles, and single-occupancy vehicles. A non-automotive transit system will lower construction and maintenance costs, reduce negative environmental impacts, increase pedestrian safety, and improve air quality.

#### *Streets*

The street system, little improved in two decades, will be the major provider of campus access. Near-term and long-term improvements that assure a safe, efficient street network are necessary. Major corridors of automobile access should be coordinated with major parking facilities. Where possible, investment in streets should accommodate alternate forms of transportation, such as bus or bike lanes. This may require funding and coordinated efforts by various state, university, and municipal bodies.

#### *Pedestrians on Campus*

A growing campus population makes the achievement of a safe mix of auto, bus, bike, and

pedestrian traffic more difficult. Pedestrian access to and use of campus should be promoted by providing safe and efficient routes to and from facilities.

#### *Alternate Transportation*

Where alternatives to the use of private automobiles have been implemented--KU on Wheels, the student bus service, for example--success has been limited largely by the investment that has been made. Providing alternatives to the use of cars or the necessity of inconvenient walks will protect the campus environment; these alternatives deserve to be promoted. There is also a need to provide incentives that promote ride-sharing.

#### *Bicycles*

Bicycles are most often used by people under 35; thus, the bicycle commute with the heaviest volume in Lawrence is to and from the KU campus. Encouraging the use of bicycles on campus may be as simple as providing adequate bicycle lanes, routes, lockers, and so on.

#### *Conveyances of Convenience*

Elevators, escalators, moving sidewalks, and other "people movers" ease travel over long distances or up steep slopes. Providing such conveyances at strategic locations is a necessity.

With regard to utilities (which in many ways relates to emissions), the plan explains: "KU needs to pursue technologies and management methods that minimize use of energy and water resources. The state budgeting process should provide KU the flexibility to return a portion of energy savings to individual units that conserve. This would reward reduced utility use."

As far as overall environmental health and safety, the plan explains: "All KU-related facilities, activities, and programs should be designed, conducted, and operated in a manner that promotes and protects human health and safety." Further: "Funds should be set aside each year for upgrades of campus utility systems. The amounts set aside should be based on estimated depreciation and future capital costs. These projects should extend out several decades."

Under the section entitled "Image and the Environment," plan organizers explain that they hope to address "environmental concerns to preserve campus beauty and to assure health and safety." Further the section "Images and Environment" explains: "The fulfillment of these objectives would lead to a strong and positive sense of place. The enhancement of the basic KU experience, beyond the obvious teaching and research components, derives from a well-composed campus." The following are some more examples taken directly from the "Images and Environment" section of the 1997 Campus Master Plan.

In relation to planting (many of which play an important role in limiting the negative effects of harmful emissions), the plan explains:

Plantings should be thoughtfully designed. They should have definite objectives and specific functional and/or aesthetic purposes. They also should be native to this area, in order to avoid the need for excessive maintenance. The removal of diseased and damaged plantings and trees should be followed by replanting in accord with a long-range plan.

Above and beyond the aesthetic quality of buildings, spaces, and landscapes, campus planners are increasingly subject to regulation of the physical environment by governmental agencies. These regulations can affect function and services. Energy use, waste management, paving and storm water management, air quality inside buildings, and clean air outside are significant issues for the coming decades. Addressing these concerns will assure the overall quality of the campus, its buildings and spaces, and the health and welfare of students, faculty, and staff.

The guidelines set forth above should be supplemented with more detailed requirements for future design, and these should be enforced as criteria for individual projects.

Under the section of the 1997 Plan entitled "Infrastructure" there is much emphasized regarding emissions as they relate to the primary heat boiler located on the Lawrence main campus. I contacted KDHE to get a copy of the 2003 emission report which breaks down components of emissions are related to boilers on campus. Mike Russell (EHS) noted that these numbers come from the amount of natural gas and diesel fuel combusted in this machinery, and that the University is well below the permit standards. The section labeled "infrastructure" includes a plethora of information pertaining to certain emitters of vapor and potential contributors of effluence on campus. These specific references are included in the following:

#### *Central Heating Plant*

The central heating plant produces steam for about 58 buildings on the main campus area. Since the KU Campus Master Plan was completed in 1997, KU Facilities Operations has made considerable progress in overhauling and updating central heating plant facilities to meet current and future needs of the KU campus.

The central heating plant houses two 48,000 pounds/hour boilers and two 60,000 pounds/hour, one of which is new and was just recently installed. With the two pre-existing 48,000 pounds/hour boilers, along with addition of two fully functional, 60,000 pounds/hour boilers, the total steam capacity at the central heating plant is now 216,000 pounds/hour; peak demand is about 110,000 pounds/hour.

#### *Utility Tunnels and Steam Distribution Systems*

Utility tunnels are located throughout main campus but not on west campus. They house steam and condensate lines, communication and electrical power lines. To a lesser extent they serve as passageways for domestic water lines, chilled water lines, and sanitary sewer lines. (*Addressing tunnel deficiencies is a key campus priority.*)

High pressure steam is distributed throughout the main campus from the central heating plant by a piping system that runs primarily through the utility tunnels. The steam is distributed at a pressure of 90 pounds per square inch gauge (psig). The condensate is returned to the central heating plant by a series of pumps. The system that handles the condensate also is located primarily in the tunnels.

Although sections of the distribution and condensate collection systems are buried and subject to deterioration, the capacity of the piping system for distribution of steam should be adequate to accommodate present and anticipated loads of facilities projected for construction on the main campus. West campus, on the other hand, has no steam or condensate piping outside of individual buildings.

#### *Air Conditioning and Chilled Water Capabilities*

Over the next several years the mandated replacement of systems that employ CFCs will force KU to consider alternative cooling systems. Areas of campus that might be served instead by large chilled water units should be reviewed.

The advantage of centralized cooling facilities is the lower long-term maintenance cost of a single unit versus multiple systems. The challenge is to zone the campus for service from several cooling-distribution points and to choose sites where the accompanying noise can be managed. Similar schemes have been discussed in the past but little has been implemented.

Service to West Campus should be studied carefully, as should installation of a central cooling facility when the residence halls on Daisy Hill are renovated.

#### *Natural Gas*

Natural gas is supplied to the main and west campuses by high-pressure lines owned and operated by Kansas Public Service. The main supply to the power plant is metered and

pressure is reduced just west of the power plant to make it usable by the campus. Additional points of supply are sited throughout the two campuses, and all are metered.

KPS upgraded a significant portion of the supply and distribution lines in the early 1990s. The overall natural gas distribution system on campus is in relatively good condition. Its capacity appears adequate for the predictable future. Where deficiencies in capacity exist, the service can be readily upgraded by the gas supplier.

The “Steps Towards Implementation” section discusses possible planning options and potential approaches to be taken with regard to the KU campus. This section again includes information on the future of parking on the KU campus. Parking would seem to have much relevance when discussing limiting future on-campus emissions or emissions in the surrounding Lawrence area from independent vehicles. While the Plan does not specifically mention emissions as a rationale, it will be important for this task force to think in these terms and recognize that this is one of the shortfalls of the Plan itself.

The Campus Master Plan includes the following regarding parking in the “Steps Toward Implementation” section:

#### *Parking*

The following are strategies and management objectives related to multi-modal solutions to providing for the use of personal vehicles and the need for transit on campus:

- Review the parking needs of campus constituencies and continue to develop a tiered parking fee system that supports the patterns of users and individual need for access to places on campus.
- Increase the revenue necessary to cover the cost of building parking structures. These structures will need to be designed to optimize the use of the limited commodity of land in and around the academic core of campus. The site for an additional structure is north of the Kansas Union.
- Identify additional surface spaces in existing parking lots.
- Integrate planning and the generation of revenue for parking and transit systems to develop the funding mechanism for a campus- based transit system.

#### *Steam Distribution and Condensate Collection*

Undertake a comprehensive study of the steam distribution system. This study will determine current condition, the system sustainability, and future capacity to support additional development. This review should include an assessment of the condition and possible expansion of the tunnel system

#### *Building Cooling*

Mandated changes in conversion of building systems using chlorofluorocarbons, or CFC's, and the potential savings in capital and operating costs for economies of size and long term maintenance of equipment point to the need to consider a strategy which may focus analysis and proposed projects and investment in the following ways:

- Review the existing central chiller plant capabilities and potential for expansion to serve additional facilities.
- Study the potential for additional chilled water facilities on campus as part of a zone development to serve existing facilities and provide cooling capacity for the expansion of conditioned space on campus.

## *Water Distribution*

- Identify additional work for the campus distribution system with a focus on the replacement of lines projected to be beyond their useful life. Recently completed improvements on campus have added to the capacity available. But ongoing work is required to replace many decades old and deteriorated sections of water distribution lines across the campus.

Overall, the 1997 Campus Plan does include some information regarding effluence and emissions. Discussion regarding steam producing boilers on the Main Campus would appear to have much relevance. Also, it is important to take into consideration plans for West Campus expansion and the process by which campus officials determine the best power system for that area.

Much of what is mentioned regarding sanitary/stormwater management relates more to planning for future campus growth and expansion. These studies were to make sure adequate piping existed and that future projects took into account the entire system. The stormwater/sanitary systems will be discussed in further detail below.

Many of the things cited as concerns in the Campus Plan would appear to indirectly effect emissions (e.g. a enhanced public transit system) but the reasoning in the plan does not include concerns regarding emissions. For example, the plan mentions alternatives like walking or bike-riding but there is no mention of the impact that hazardous bus emissions (or other mass transit) have on people's desire to attempt these outside alternatives. Also, there was nothing mentioned in the area of stormwater/sanitary sewer recycling (holding and reusing stormwater for landscape watering). This could be one area of minimizing campus effluence and emissions. In the area of the campus natural environment, emissions, health, and safety, the plan appears quite vague and up for individual interpretation. There are a limited number of specifics on how the emissions will be reduced over time by future planning and construction practices.

### **Department of Environment, Health, and Safety**

The Department of Environment, Health, and Safety (DEHS) does regular reports on power plant boilers and their emissions throughout the KU campus. With a new federal Clean Air Act taking affect in 1990, the State of Kansas was forced to increase their monitoring of the air in Kansas. Based on information provided by DEHS, the Kansas Department of Health and Environment (KDHE) along with the help of the Kansas Bureau of Air and Radiation (KBAR) stepped up their monitoring by implementing a new class distinction and a new annual inventory program laws. In accordance with the new laws, KU hired a third party consultant to review the status of emissions on the KU campus. The results of this study were submitted to the KDHE and KBAR and these two state entities determined that the only pollution sources on campus worth annually monitoring to be the power plant boilers and the vapor emissions resulting from the large amounts of natural gas being used at the Main Campus power plant facility. They determined that the plant qualified for a Class II emissions permit. This qualification was and is based on qualifiers contained in the Kansas Air Quality Act. According to the 2003-2004 Kansas Air Quality Report (pp. 21-22): "Point Sources are large, stationary sources of emissions." The 2003-2004 Kansas Air Quality Report explains:

Every year the Bureau of Air and Radiation prepares an emissions inventory of SO<sub>2</sub> (Sulfur Dioxide), CO (Carbon Monoxide), NO<sub>x</sub> (Nitrogen Oxides), VOC (Volatile Organic Compounds), and PM<sub>10</sub> (Particulate Matter with an aerodynamic diameter of less than or equal to 10 microns and hazardous air pollutants from point sources in Kansas. The Bureau mails inventory forms to facilities with Class I and Class II permits requesting information regarding operating rates and the quantities and types of pollutants emitted during the preceding calendar year (p. 22).

According to the KU Department of Environment, Health and Safety, these inventory forms have been done yearly since the Class II distinction was made and the yearly emissions inventory became a requirement for KU point source emission machinery. It should also be noted that DEHS voluntarily tracks generator fuel types and emissions with opacity meters, primarily for particulate emissions. Much of this information is voluntarily submitted to the KBAR. They also explained that the KBAR internally plugs the values they receive from each

emissions inventory statement into a formula which derives the total amount of yearly emissions of the point source machinery in tons. Currently, KU is well under the maximum tonnage allowed for by the permit as the yearly tonnage of pollutants has been nearly 45 tons and the Class II permit issued allows for up to 100 tons/year. The KBAR explains that to qualify for a Class II, no site can have the potential to emit over 100 tons/year.

For KU and many other point source sites requiring permits, the potential values and total tonnage emitted per year are based on amount and type of fuel used. At KU, the only potentially hazardous substance monitored with the annual inventories is NO<sub>x</sub> (Nitrogen Oxide) because Natural gas is the predominant fuel used. The level of output of this chemical at KU has always been quite low. However, the NO<sub>x</sub> levels are high enough that KBAR has required that KU monitor NO<sub>x</sub> levels. Other harmful substances that the Bureau of Air and Radiation sometimes monitors (e.g. Volatile Organic Compounds, Carbon Monoxide, Nitrogen Dioxide, and Particulate Matter) are only emitted in trace amounts on the KU campus. For this reason, KBAR does not require the university to track these values.

With emissions on the point sources at KU (primarily the Main Campus power plant) being such a small portion of the allowed tonnage, it appears as though little if any emphasis has been put on directly reducing emissions leaving the machinery. Most reductions in boiler emissions come by default when old equipment on the point source emitters must be replaced because they become faulty in operation. The Campus Master Plan explains the possibility of power supply source expansion on the West Campus. This will become an important factor in the state permitting and monitoring process. There is the possibility that West Campus power expansion could significantly increase total campus emissions and subsequently require a Class I permit rather than the current Class II permit.

Based on the Kansas air quality report and other acquired information, neither the state nor federal government has issued permits for any other point or non-point emissions sources on the KU campus outside of the Class II permits issued for the power plant boilers on the KU Main Campus. Also, it appears as though there has been little or no official emissions testing or research done on the campus, point or non-point, outside of the Class II permitting process. Other emission sources include: mobile emission sources, biogenic and geogenic emission sources, or natural emissions sources (other sources outside of point sources highlighted in the 2003-2004 Kansas Air Quality Report (pp. 21-23)). If measured, especially mobile emission sources like the KU on Wheels buses, data on sources outside of simply point sources could prove valuable in efforts toward cleaning the air on the KU campus and minimizing pollution. Because there is such a limited amount of data and research, or at least a limited amount of data readily available on these other sources, it is difficult to determine if there is currently a need to make a concerted effort to reduce emissions on the KU campus.

Certain other KU departments, namely the Department of Facilities Operations, have started individually attempting to reduce emissions, especially mobile-source emissions on the KU campus. The KU Department of Facilities Operations has begun testing the use of biodiesel fuel in its heavy equipment and this would represent an effort committed to reducing emissions and would be concurrent with the KU Environmental Policy language regarding objectives toward reducing emissions. Also, the Student Senate Transportation Board (Student Board that oversees operation of KU on Wheels, Liftvan, and Saferide) is looking into emissions testing for the KU on Wheels buses. These two examples, while separate, both represent efforts toward determining and reducing mobile source emission levels on the KU campus.

The Department of Environment, Health, and Safety does do laboratory testing for hazardous emissions when necessary. This is strictly for potentially toxic substances within the confines of a laboratory environment that would have the potential to adversely affect those directly in the confines of the affected lab.

## **Design and Construction Management (DCM)**

### *Stormwater Management*

State permit must be applied for any new construction projects. These construction projects usually involve some aspect of stormwater management. Design and construction management usually exceeds any state regulations regulating stormwater management, rather voluntarily following suggestions made by the City of Lawrence with regard to stormwater and the desired approach to its containment and dispersal. (According to Design and Construction management, the city wants stormwater systems based on a certain year-event (usually 10 years)).

There are several stormwater holding tanks throughout the KU campus. Recent projects, such as the new engineering facilities, Allen Fieldhouse parking garage, and KU Alumni Center have included the addition of underground storage stormwater holding tanks that have a certain number of years worth of holding capacity. In another example, the Wagnon Student Center has an underground holding tank with a 100 year retention chamber.

These holding chambers help the university control the amount of stormwater being tunneled to through the City of Lawrence drainage system at any particular time.

Evidently, along with the various holding tanks currently in use throughout campus, there is one that was previously but no longer in use (and according to DCM is evidently physically still a part of the overall campus system). This is a 250,000 gallon concrete tank that, with a little cleaning, could potentially serve as a stormwater holding and re-use tank. While this possibility has been discussed in meetings, there has not yet been a cost/benefit analysis conducted on this structure to determine if this re-use idea would be feasible—definitely something to ponder.

#### *Sanitary System*

According to DCM, there have been several recent construction projects done in hopes of minimizing effluence discharge. This is especially the case with the construction of new laboratory structures. DCM is currently working on installing monitoring manholes on lab facilities so that harmful wastes, primarily chemical waste, can be collected into a monitoring manhole that would be separate from the public sewer lines. These manholes would be monitored and checked periodically for contaminants and levels of contaminants. The Mallott Hall addition also included the construction of neutralizing manholes. According to Jim Modig, these are essentially manholes filled with limestone rock that neutralize any acidic flow-through waste from this laboratory structure.

There was also a stormwater study conducted on the KU campus fairly recently. DCM has the results of this study on file in their office. Jim Modig, Director of DCM, explained that while there were many good ideas suggested in the stormwater study, the funding is not there to accomplish much of what was suggested. He explained that DCM addresses safety issues first and foremost and if funding remains to tackle less pressing issues, they improve those areas as well. Mr. Modig is currently gathering more information that he hopes will prove helpful in our efforts. This will be discussed at the next Sustainability Task Force Meeting.

The Chevron energy study is also an important one to consider in that certain water saving techniques installed as a result of this 18.3 million dollar project.

**Campus Sustainability Task Force**  
**Report on Campus Environmental Policy Objective #7**  
Jeff Severin

*Improve purchasing specifications for all goods and services in order to optimize the level of reusable, recycled, and/or recyclable content of all goods.*

In reviewing current University purchasing policies, I was unable to find any specific wording addressing this issue. State statutes and purchasing procedures must be followed in most instances, and language relating to purchasing reusable or recycled goods is limited in these documents as well. Instances found in the Department of Administration, Division of Purchases Policy and Procedures Manual are noted here.

The Policy and Procedures Manual defines public purchasing as “The process of purchasing an item or service that meets the needs of the agency, at the best price, from the most responsive and responsible vendor.” In many cases, the stipulation of “best price” limits the ability to purchase materials with recycled content or making decisions based on environmental responsibility exhibited by a vendor. The only language that specifically address recycled content is in reference to State Statute No. 75-3740, which states that “in the case of bids for paper products specified in K.S.A. 75-3740b, the dollar amounts of bids received from two or more lowest responsible bidders are identical, the contracts shall be awarded to the bidder whose bid is for those paper products containing the highest percentage of recycled materials.” This is only in the case of a tie, and does not impact the awarding process if the product with a lower recycled content is the lowest bidder.

This manual does make mention of environmental concerns as related to Requests for Proposals and Bidding Provisions. Section 5.4.4.1 under Basic Contents of the RFP states that “specifications should list the minimum characteristics and objectives required by the user” and should “include issues such as environmental concerns...” Section 7.3 of the Bidding Instructions, Conditions, and General Provisions contains a section on Environmental Protection as related to the contractor. It states: “The contractor shall abide by all federal, state, and local laws, rules and regulations regarding the protections of the environment.”

Informal polling of campus departments indicated that most purchasing decisions are made based on availability of funds and purchasing the least expensive product, without consideration of environmental impacts. In some instances, the purchase of additional, unneeded materials was encouraged by the “use it or lose it” mentality. There are, however, instances of purchasing recycled or remanufactured materials. For example, print cartridges are purchased through the state contract with Cartridge King, which provides remanufactured products and requires that cartridges be returned after use. Facilities Operations shops also use remanufactured parts in some instances for repair of automobiles and other machinery. Additional research is needed to determine what guidelines are used for such purchases.

**Campus Sustainability Task Force**  
**Report on Campus Environmental Policy Objective #8**  
Stacey Swearingen White

*Be attentive to biodiversity and environmental concerns in planning and landscape decisions.*

In order to determine current policies and practices that relate to this objective, I reviewed both the KU Campus Master Plan and the recent Landscape Master Plan. I discuss each below.

**Campus Master Plan**

This 1997 plan defines the vision KU has for its future growth and development. In the Chancellor's introductory statement, he notes that the two guiding principles for the plan are: 1) preserve the beauty of Mt. Oread; and 2) create an environment which shows respect for learning.

The Plan has a section on "Environmental Issues" (pp. B-9 – B-10). The environmental subcommittee for the Plan "focused on the idea that physical development planning should steer the campus away from potentially negative environmental health and safety impacts." With respect to "open and green space," the plan states, "KU will develop and maintain unpaved open and green space. It will seek to minimize the effect of the built environment on these spaces. Green space improves campus views and vistas and preserves and enhances the campus climate." With respect to "building sites," the plan says, "KU will need to site buildings so as to use financial and infrastructure resources efficiently and to lessen the university's impact on areas surrounding the university."

The "Land Use" section of the plan (pp. B-13 – B-21) addresses the issue of amount of open space on campus (defined as land uncommitted to any university activities). The plan reads, "open space should be about three times as plentiful as built areas," acknowledging that this will differ across the various parts of campus. A map on p. B-27 shows open and green space landscape features on the central campus. It includes the following categories: existing significant green space; streetscape elements; open space features (to be preserved); traditional areas; plantings/buffers (existing or proposed); major pedestrian routes (landscape enhancement); new pedestrian routes; future significant green space; and academic/recreation.

The "Image and Environment" section of the Plan (pp. B-43 – B-49) lists four objectives, one of which is "addressing environmental concerns to preserve campus beauty and to assure health and safety." The plan notes that fulfillment of these four objectives "would lead to a strong and positive sense of place." In the subsection on "features of the campus landscape," several relevant objectives and principles are discussed. For example, "high quality open and green spaces are the result of successful building and site design." And, "landscape features may be as significant to a sense of tradition as signature buildings." The most notable objective may be the following: "Plantings should be thoughtfully designed. They should have definite objectives and specific functional and/or aesthetic purposes. *They should also be native to this area, in order to avoid the need for excessive maintenance.* The removal of diseased and damaged plantings and trees should be followed by replanting in accord with a long-range plan" (p. B-47, emphasis added).

In the final section on plan implementation, there is a recommendation for completing a comprehensive landscape plan for central and west campus. Among the six listed objectives are: "establish edges or limits of land use zones, buildable sites and development densities;" and "focus on sustainability in terms of maintenance and longevity of built and planted elements in the landscape."

Comments on Master Plan: The Campus Master Plan does show some level of attention to environmental concerns with respect to planning and landscape decisions. This likely reflects the fact that preserving the beauty of Mt. Oread is one of the two guiding principles of this plan. Biodiversity concerns, however, are not mentioned in the plan. Moreover, the emphasis on aesthetic appeal is central here. There is some mention of environmental health and safety, but in a very general sense.

**Campus Landscape Plan**

The KU Campus Landscape Plan fulfills the goal outlined in the Campus Master Plan. Completed in 2002, this plan has three volumes: 1) Design; 2) Maintenance; and 3) Signage. (Note: Volume 1 alone is 87 pages long!) Several consulting firms put the plan together. It appears that Jeffrey L. Bruce & Company (KCMO) was the

primary consultant. The primary objective of the plan is to provide “a general direction for preserving and enhancing the campus landscape” (p. 9). To do so, it implements the concepts and recommendations of the Master Plan. It seeks to provide a clear foundation for strengthening and unifying the campus landscape as a coherent, pedestrian-oriented collegiate environment.

Volume I: Design: The section on campus landscape history notes that Mt. Oread was originally “knee-high prairie grasses, clumps of sumac and red cedar, and views of the Kaw River valley and the early town of Lawrence.” The current landscape features began to take shape in the 1870s, following the influence of the “picturesque” idea of dominant landscape architects at the time. From then into the early 1900s, there were significant efforts to plant trees on Mt. Oread. For example, a local nurseryman donated the original lilacs for Lilac Lane in 1878. George Kessler’s Campus Plan of 1904 was also influential, though it was not implemented in total. Hare and Hare prepared another such plan in 1928.

The plan notes that West Campus “contains many acres that are not readily available for construction due to steep topography and areas that are heavily wooded. It also notes the environmentally sensitive features of West Campus, including the Yankee Tank floodway and Pioneer Cemetery. That plan states, “recreation, scenic open spaces, and views and vistas should be preserved as open and green space, as should unbuildable topography and floodplain areas.”

In the “Analysis of Existing Conditions,” the plan notes that its recommended tree species are based on the topography of the campus. It states, “the theory is based on respect for ecological and plant community systems naturally associated with the various land and climatic influences.”

The plan contains a section on natural “environmental influences” on the campus. In a subsection on existing tree community conflicts, it says:

“In the planning of the campus landscape, there should be regard for the selection of species based on their ecological relationship with the surrounding natural environment. This is because the performance of a plant or group of plants is dependent on the extent to which their ecological requirements are met. Furthermore, using properly associated plants together just as they are found in their natural community could enhance the aesthetic qualities of the campus landscape. As shown on Figure II-3, analysis of existing tree locations reveals little correlation with the plant communities that would naturally occur. This lack of plant community organization contributes to an unvarying vegetative palette and a landscape that provides little “sense of place.” The new campus planting approach involves looking at the native flora and plant communities that once existed or that naturally occur in the area and establishing or reestablishing regenerative planting strategies. With this approach, plantings are considered in community associations rather than individual species. The net effect of applying ecologically based strategies in the planning of the campus landscape will be a landscape that is environmentally adapted, lower in maintenance needs, more aesthetically pleasing, and representative of the region” (pp. 20-21).

The introduction to the section on Design Concepts reads, “the naturalistic, romantic architecture and landscape approach found in the traditional areas of campus, that is the Museum District, Jayhawk Boulevard and The Hill, should remain the staple approach of new landscapes and landscape renovations. These areas have been created with a natural arrangement of trees and shrubs that define open spaces and lawns, which complement the beauty and liveliness of the architecture of campus buildings and apply the time-honored Olmsted-style. What is needed is to create new landscapes that are expressive of gardens and that have a romantic character that can be memorable (p. 25). It also states, “The concept of “campus as an arboretum” should influence the selection of plant materials, particularly in the context of informal landscapes where species diversity can contribute to instruction and research as well as the aesthetics of the campus. In more formal and confined spaces, the selection of plants and the method of planting can serve as a laboratory for studying how plants adapt in an urban environment” (p. 25).

The plan discusses current conditions and proposed improvements for various sections of campus, such as Naismith Drive, Memorial Drive, and Jayhawk Boulevard. The subsequent section on Design Principles makes several interesting observations. For example:

- Existing steep “brows” Of Mount Oread. Those portions that are currently unplanted and in grass should be forested. These brows define the main framework of Mount Oread and the identity of KU as “The University on the Hill”.

- Green space north of Memorial Stadium should be preserved and enhanced to reflect its important function as a gateway to the stadium complex and a major gateway to the campus. The landscape around the Stadium should create a green setting that is in scale with the Stadium, thus enhancing the structure as an icon on the campus. It is important to emphasize, however, that the principal intent of transforming the site to a Stadium Green is to preserve the existing open space and the landscape setting through which visitors will arrive
- Prairie Acre is the only remaining parcel of original prairie from the early campus. The original parcel should be a delineated portion of an expanded prairie design concurrent with the development of a new gateway at the intersection of Sunflower Road and Indiana Street.

A section on “parking lots as open space” (hmmm?) is also interesting. The plan states, Parking lots serve as transitional open spaces and hold land relatively open for future uses. As the campus grows, some parking lots may be converted to building sites or other uses necessary for the campus to function. *Parking lot plantings should be designed to provide a naturalistic appearance. Clusters of trees provide better visual relief and reduction of glare than individual isolated trees. The importance of planting trees in parking lots is to provide shade, reduce glare, and lower summer temperatures”* (p. 54).

Plan objectives with respect to the campus landscape are as follows:

- Establish a consistent landscape-planting concept that will unify diverse areas on *the campus*.
- Landscape plantings should be employed to improve functional concerns such as modifying climatic conditions, screening objectionable views, controlling erosion, and directing circulation.
- Existing mature stands of trees are important for preserving the historic and environmental character of the core campus and West Campus and should be preserved.
- Institute a campus-wide effort to achieve at least fifty- percent summer canopy coverage of all pavements including streets.
- Plant materials chosen should be native or introduced plants that meet the requirements of the Master Plan and are adaptable to the campus without requiring special soil conditions and supplemental watering after establishment (p. 59).

The section that follows lists species that could be used in various plant communities on campus. This list also indicates whether a particular species is native or introduced (pp. 69-72). Another section addresses turfgrass on campus, noting that warm season grasses are more appropriate, as they are more suited to the climate and require less maintenance. Increasing them, though, “will require a shift in expectations and attitudes” (p. 73), as these grasses go dormant (brown) in the hottest times of the year. Cool season grasses may still be used in some high profile areas.

Volume II: Maintenance: This volume looks at landscape maintenance issues both campus-wide and by area (such as Student Housing, Athletics, etc.). One of the overall findings is that FO is significantly understaffed with respect to landscape maintenance: At one time there were 75 employees with the responsibility of maintaining turfgrass, trees, shrubs and flowers on campus. Today there are 26 employees plus four to six seasonal part-time workers doing the same job” (p. 13).

There is detailed discussion of fertilizer application and storage here. While I have not reviewed this in detail, the priorities seem to be minimizing workload and safety. The plan does make note of the need for a pesticide rinse facility. Water testing is also recommended. With respect to the issue of greenwaste (compost), the recommendation is: “In order to develop on-campus green waste recycling, purchase a tub grinder. Grind all wood, branches and green waste, wind row and turn the organic matter, and develop high quality mulch that can be used as mulch and an organic soil amendment for all KU campus needs” (p. 20).

Volume III: Signage This volume covers wayfinding issues; as such, it is probably the least relevant to the policy objectives we are looking at.

Comments on Landscape Plan: This Landscape Plan is extremely detailed, and makes some of the ideas found in the Master Plan more specific. As in the Master Plan, there is a good deal of attention paid to environmental

quality issues here. Most noteworthy, perhaps, is the emphasis on native, low-maintenance vegetation types. The overarching theme of the plan, however, still seems to be aesthetics.

### **Overall Comments**

The environmental policy objective considered here is to “be attentive to biodiversity and environmental concerns in planning and landscape decisions.” In reviewing both the KU Campus Master Plan and the Landscape Plan, it is clear that environmental concerns are present in both documents. These concerns are primarily couched in terms of aesthetics, less maintenance, and lower costs, but this seems appropriate. Biodiversity concerns are tangentially addressed in the landscape plan with respect to vegetation. Neither plan, however, covers this topic specifically.

With respect to how deeply these environmental concerns influence day-to-day activities on campus, I don't think there is any clear way to judge, particularly from the limited research done here. As I noted above, aesthetics seems to be the ruling goal for most of the decisions and recommendations. To the extent that the Task Force can present recommendations in line with this goal, I suspect we will be more successful. Health and safety concerns are also prominent, so additional attention to sustainable planning and landscaping could touch on those issues as well. Future research in this area should talk to those campus employees (e.g. in Facilities Operations and Design and Construction Management) who deal with these issues in their day-to-day work.

## APPENDIX C: INPUT FROM FACULTY AND STAFF

The Task Force gathered information from campus faculty and staff through a broadcast email sent on January 31, 2005. This email elicited 55 responses, of which 32 included examples of activities that use our campus as a resource or deal with environmental issues. Most responses fell under 5 major categories - academics, recycling/waste reduction, energy conservation, the physical environment, and design/construction - many of which are covered in the Environmental Policy. From unique classes to major energy conservation systems, there are many positive things happening on our campus related to environmental issues. It is evident that these efforts need to be brought to the forefront and shared with the greater community so other departments can learn from these examples and institute similar projects in their own offices. This is one basic need for a central hub or communication system relating to sustainability. Additionally, a majority of these comments are related to recycling and waste reduction, reflecting the success of efforts over the past several years to promote recycling on campus but also the lack of attention given to other environmental concerns.

Along with these highlights, however, were 26 responses with suggestions for improvement. These included issues within some of the same categories as existing campus activities (recycling/waste reduction, energy conservation, design/construction) along with concerns about transportation. The fact that there are both current activities and concerns within the same categories further reflects the need for a central hub to gather information and assist departments campus-wide with making environmentally responsible decisions.

### **Broadcast Email – January 31, 2005**

From: Jeff Severin  
To: Lawrence Staff, Faculty and Affiliates  
Subject: Sustainability and the KU Campus: Your Input Requested

Dear Faculty and Staff,

I am writing to ask for your help in gathering information that will make the University of Kansas more environmentally friendly while creating new opportunities for environmental research and collaboration. As part of an effort to document projects relating directly to our campus resources, the KU Sustainability Task Force is looking for examples of research, classroom study, and other activities centered on our campus environment.

Last fall, Provost Shulenburg appointed the task force to examine the feasibility of organizing an expanded hub for environmental research, data collection, and project implementation at the University of Kansas. Efforts of this “hub” would focus on making existing campus operations more environmentally friendly and guiding future campus growth in an environmentally responsible direction. We are in the process of gathering information about existing groups and individuals who are active in this regard and are asking for your feedback.

Do you, in your classes, research, or other work-related activities, draw on the KU campus as a resource or example? Do you play an active role in improving the campus environment? If so, we would like to hear about it. We are interested in the broadest range of activities, from classes that examine campus architecture, to research on campus energy usage, to departmental efforts to increase office paper recycling.

We will use this information to form the fullest possible picture of the current state of environmental activity on the campus and to guide our eventual recommendations to the Provost. We will not, however, share any information about you that you wish to keep confidential.

Please direct all responses to Jeff Severin, Environmental Services Manager, at 864-4703 or [jseverin@ku.edu](mailto:jseverin@ku.edu). However, if you have questions about this process or how your activities might pertain to the project, feel free to contact any of the task force members listed below. Thank you in advance for your assistance. We look forward to hearing from you.

*Sustainability Task Force:*  
Laura Adams - Student  
Anton Bengtson - Student  
Jason Boots - Student

Karl Brooks - Assistant Professor, Environmental Studies and History  
Rebecca Bruce - Student  
Dennis Lane - Professor, Environmental Engineering  
Mike Russell - Director, Department of Environment, Health, and Safety  
Jeff Severin - Manager, Environmental Stewardship Program  
Stacey S. White - Assistant Professor, Urban Planning

### **Responses to Broadcast Email**

Responses to the broadcast email are included here, and are organized under the categories mentioned above. Names have been removed for anonymity, but individuals are identified as faculty or staff and departments are provided to demonstrate the wide range of individuals who are involved with or interested in environmental issues on campus. Some responses have been edited for length or to help maintain anonymity. Not all responses are included.

### **Current Activities and Resources**

#### ***Academics***

*Faculty, Center for East Asian Studies:* I plan and lead a 3 week grant-funded trip to Japan each May-June for 9 undergraduates. Last year, for the first time, we met with Japanese college students and staff members associated with a Japanese non-profit group, Japan for Sustainability (JFS). Our meeting was funded by a Japanese corporate sponsor, Sendenkaigi, a big publisher, which ultimately published an article about our meeting in one of their magazines, Environmental Forum. My students had to do a presentation to the Japanese group and the summary for that was included in the article. The students' presentation, as well as an English language translation of this article is posted on my Blackboard course web site for the program.

My students' presentation was divided into three sections: sustainability efforts at KU, in Lawrence and other of their hometowns, and in the US generally. It also included a survey they created on sustainability awareness on the part of KU students that they distributed to about 200 students from various classes and living groups. Interestingly, when I began the project about 1/2 of my students didn't even know what the word "sustainability" meant. I think they were surprised at the results of the survey, particularly how few students knew what it was and considered it important.

I am having my new group meet with the JFS group in Japan also, and we hope to build on last year's event, not start from scratch. This year I think the presentations will focus on eco-friendly products. Last weekend we met and heard several specialists from the community discuss this issue: David Dunfield (city commissioner and architect) discussed eco-friendly building materials; Carey Maynard-Moody (Sierra Club rep) discussed eco-friendly local foods and agriculture); and Mollie Mangerich (City of Lawrence Solid Waste Division manager) discussed the city's official policy on procurement of goods and services that are eco-friendly as well as education events for the community on sustainability.

My students are not majoring in environmental studies programs, in fact their majors are quite diverse. I think they represent a good cross section of the KU student community. I think this program is a good way to enhance understanding of this important issue among the average KU student body.

*Faculty, Architectural Engineering:* I teach and do research in the following areas: heating, ventilation, and air-conditioning (HVAC), indoor air quality (IAQ), including environmental tobacco smoke, etc., energy management, solar energy (we have a system running on Marvin Annex), plumbing, fire protection, automatic controls, and all contribute to buildings' potential LEED ratings.

*Faculty, Urban Planning:* One of my classes spends approximately half of the semester studying campus sustainability. Drawing from knowledge of sustainability and values developed during the first half of the semester, students work on final projects related to some area of campus operations. Last fall's topics included: transportation, recycling, sustainable building, and impervious surface and land development. In fact, a couple groups did surveys on campus...in [another] course, I use Potter Lake as an opportunity to consider water quality. We go on a short "field trip" to look at the lake, the paths runoff takes to get to the lake, and the likely sources of contamination.

*Faculty, School of Social Welfare:* The doctoral Advanced Proseminar course in social work includes a section on ecophilosophy and deep ecology for social work.

*Faculty, English:* I do nature writing classes, and [West Campus] would be a good place to go, if there's part of it that is not a construction zone.

*Faculty, English:* We use Potter Lake, walk around the campus (I nickname the course Aerobic English 101), observe campus architecture, use the KU archives at Spencer Research Library, and have tours given by Dr. Ted Johnson. The campus is the handy laboratory to teach the necessity of careful observation of specific evidence in order to support assertions. Proposals to destroy the green space between the Campanile and the Stadium are remarkably shortsighted.

*Faculty, Physics and Astronomy:* Teaching Physics 111 includes learning about energy issues, personal, societal, global.

### **Recycling/Waste Reduction**

*Faculty, Department of Pharmacology & Toxicology:* What I do in my research lab is to recycle the outdated catalogs. We do collect them as new catalogs arrive and bring them in recycling bins

*Faculty, Art History:* The art history department office has boxes for paper recycling (newspaper, mixed paper, white paper).

*Staff, Ermal Garinger Academic Resource Center:* Our office has little to do with overall campus environment, but we do use internal recycling bins, and regularly empty them into the larger ones in the hall on 4th floor Wescoe.

*Staff, Visitors Center:* Working at the Visitor Center at the University of Kansas, I take advantage of the recycling bins we have located in the front area.

*Staff, School of Business:* I recycle all paper, newspaper and cardboard in my office, separating out white office paper from general mixed papers. We have recycling stations in Summerfield for the mixed paper, newspapers and cardboard. I take the white office paper to the recycling station at Wal-Mart, but would love it if we had a recycling location for that paper in Summerfield or some place close. Other faculty members have set up recycling stations for cans and plastic bottles in our kitchen area, so I use that. Whenever I am ordering printed materials, I prefer paper stock with some recycled content, and I always recycle whatever overruns we have that are not used.

*Staff, KU Athletics Corporation:* My department tries to stay up on recycling. It's a small thing but we try to recycle whenever we can. We have the three bins for plastics, news and office paper right by the main door so they get utilized. The plastic bin has been important to us due to the 20oz bottles of gatorade that we supply to our athletes and the athletes usually fill up the news paper bin with the Kansan.

*Staff, Spanish and Portuguese:* I would like to just put in a word of support for the recycling bins on 3rd floor Wescoe. I use them for materials from my office, and I think that their presence on each floor of Wescoe is very important.

*Staff, Bureau of Child Research:* In our office, we recycle paper that we can and print on the back of it for first drafts and the like.

*Staff, Watkins Memorial Health Center:* We recycle no 1 and no 2 plastic, glass, aluminum, chipboard, cardboard, magazines. The Student group on campus comes by most Wednesdays to pick up this recycling.

*Staff, Music and Dance:* When I'm asked to advise about purchasing items, I do my best to purchase items that will last and not ones that are cheaply manufactured and prone to break...Finally, I often collect recyclable materials into my office and then call the Recycling folks to come and pick them up rather than leaving them out for house-keeping and the dumpster.

*Staff, KU Edwards Campus:* I have taken it upon myself to take as much recycled paper, phone books, yellow pages to either my church or my children's school. They earn money from how much they fill up their paper "dumpster". It is very hard for me to see the amount of paper that we waste, be it copy paper, newspapers, telephone books, etc. and not do something to contribute to the "betterment" of the world we live in. It is so very little that I do, but I want to try to make a difference.

*Faculty, Theater and Film:* I don't have too much to contribute except that we've recently made a change in our office by purchasing recycled paper for our copy machine rather than regular...We have also participated in the campus wide recycling program in our office and it seems to be working well.

*Staff, Comptroller's Office:* Beginning in October 2004, the Bursar's Office began e-mailing bill notifications to those students with e-mail addresses rather than sending paper notifications. Both students and guardians can view the bill online and only need to print the bill if they are paying by mail or want a copy of this for their records. We can store the bill indefinitely. We bill more than just students so we have not been able to completely go paperless but we have cut down significantly on the amount of paper bills generated. In addition, not all students have activated their e-mail accounts. Students and guardians may also pay their bills online. By doing so, they eliminate the written check, the envelope and the stamp. It is also less paper for KU to store as we keep this information for backup of payments. For payment of tuition and fees and other charges on the student account, we only accept credit card payments online. Again this eliminates the bill, the envelope, the stamp and the handwork needed by staff to process these payments. This also eliminates our storage of this sensitive information.

*Staff, Human Resources and Equal Opportunity:* I think that the self service view paycheck and view leave balances view instead of printing all advices might fall in your category of saving resources - they may be the state's resources vs. KU's technically but it's still less paper. We still have folks who want to print but the intention is that you can view it so we did add a friendlier print option. We are hoping that as more folks become comfortable with using the view, they will discontinue printing. (We did build a print function in our actual database for those depts. whose employees do not have access to the web so we can't claim 100% of no more printing of advices.) In addition, the Payroll Office has been very active in the past couple of years to increase electronic funds transfers vs. paper paychecks that are in mailers. We do hope to move more employee information to the KYou Portal as we upgrade our software instead of sending paper.

*Staff, Vice Provost Research:* I receive about 600-700 applications a year, many of which use measurements or instruments that require multiple copies being made to send to committee reviewers. I am in the process of developing a digital Instrument Library that will allow reviewers to view research instruments without this office making hard copies. If I use the low figure of 600 applications and a low estimate of instruments used on just one per application that is 600 fewer copies, some of which are multipage. Not a great savings but I believe every little bit helps, and it does allow faster access to materials than getting application materials to reviewers via surface mail. The research community knows that they may submit their applications via email, rather than hard copy, so it saves paper there, plus the email applications that require board review may be forwarded electronically. When I first began, researchers were required to send 15 copies of their application. I quickly learned that about 75% of the applications did not require review by board members, indicating a great waste of paper and effort on the part of researchers. I ended that requirement and informed researchers that one copy is all I needed. Then, with email attachments being accepted as applications, reduced the paper load still further.

*Staff, Dining Services:* We have an active campaign to recycle all cardboard, office papers, cans, and bottles in all our residential and Union Dining operations. We recycle grease from our fryers and food preparation, and use enzymes in all plumbing to eliminate contamination from food acids and wastes from garbage disposers. We have a program in place to keep the outsides of our buildings look better by picking up cigarette butts in flower beds etc and pulling weeds. As we move forward we are looking at recycle of metal cans and reducing the amounts of paper we use. For instance we use some china in our Union operations, which keeps paper out of the system and use as little packaging as possible to reduce trash.

### **Energy Conservation**

*Staff, Memorial Unions:* I oversee the energy management system called Metasys by Johnson Controls. We are about to be written up in a national publication because we were the first building in the world to inter-connect our Metasys system to our reservation system. That connection allowed us to save \$13,000 in energy

consumption in the first 6 month of it's existence. Now, the Hawaii national airport is doing the same thing with its terminals. What it does for us: Building air handlers that are controled by Metasys receive a schedule at 1:00 AM every morning for the next days events from the Dean Evans Reservation system located and operated by our reservations staff. AHU's come on automaticly 30 minutes before the event start to make the space comfortable and shut down the AHU at the scheduled end of the reservation time. Example: Instead of the pine room AHU running from 8AM to closing because there are three meetings at various times throughout the day, it will only run when the room is reserved. 18 run hours reduced to 4.5 with this example.

*Staff, Department of Student Housing:* [We] try to practice environmental friendly installations. We have replaced hundreds of F40T-12 light fixtures with F32T-8 fixtures that are more energy efficient. We also try to install more energy efficient motors and A/C units.

*Staff, Vice Provost Research:* I would like to congratulate the person(s) responsible for the new campus street lamps. They are very well designed for limiting light pollution and getting our energy dollar where it belongs, directed downward.

*Staff, Music and Dance:* I manage all the computers in the building, so I set them to operate at low power mode or shut off to avoid all-night power consumption. I have programmed the lights in our recital hall to shut off to avoid the casual use of the powerful spotlights when the regular house lights would suffice.

### **Physical Environment**

*Staff, University Relations:* As a photographer for the University, I utilize the campus environment as a background or canvas, to paint (photograph) representations of KU as a recruitment tool. My goal is to present our university to prospective students, parents, others of influence in a positive, attractive manner. Obviously the general "look" of the University is important in that effort. The architecture, the landscaping, etc. should be pleasing. (There is of course the opportunity to "paint" a positive picture by deliberately avoiding any "ugliness" that might be present). I can choose to enhance the general perception of our environment by photographing only the positive. Naturally I would prefer a more perfect background environment for a realistic representation. You get the picture.

*Staff, Audio-Reader:* I am very pleased to report that the Audio-Reader Sensory Garden is a project that improves the campus environment. The garden also provides an educational aspect since the plantings are labeled in Braille and print. The fact that the garden is accessible to individuals with sight impairments (and those in wheelchairs) has made it a popular tour destination for groups with various handicaps, for children, and for the elderly. In addition, it serves as a sanctuary for area wildlife (we stock our birdfeeders regularly!). The goal of the Audio-Reader Sensory Garden is to provide an outdoor garden environment that stimulates a variety of senses, making the garden particularly accessible to individuals with visual impairments. Plantings include those that are very fragrant or have interesting textures; most plants are labeled with special markers that identify the plants in Braille and in print.

A veritable landscape quilt of texture and fragrance, the Sensory Garden weaves many lives together on the KU campus. Comprised of donated plants and volunteer labor, the Audio-Reader garden has involved KU staff, students, and community volunteers. Our most active garden volunteers include retirees, master gardeners, a KU law student, Delta Gamma sororoity members, and a professor of Environmental Science at JCCC. During the past year, two local garden clubs secured a grant which enabled us to add another wheelchair-accessible raised bed and additional plantings. A local boy scout (the son of a KU physics professor) is currently designing new Braille and print plant markers (with help from Jayhawk Trophy and a local iron craftsman) as his Eagle Scout project. The new markers should be in place this spring.

### **Design and Construction**

*Staff, Hall Center for the Humanities:* There is a great example on campus -- the little garden at the top of the stairs in front of the [Haworth Hall] on Sunnyside Avenue. Since they were planted, these xeric native and near-native plants have not had to be replaced and they provide lovely color and texture throughout the growing season.

*Staff, Continuing Education:* I have co-authored several books on the KU campus and its architecture (for the Univ. Press of Kansas and Historic Mount Oread Fund). I am currently helping on another 2-volume project on

student housing's history). There is a lot of material in these volumes and projects that should be factored into your report--also the fine work of Henry Fortunato and his great team of graduate students working on the KU History website should be included.

*Staff, Design and Construction Management:* This office has an obvious connection with our work in campus planning and development.

## **Suggestions for Improvement**

### ***Recycling/Waste Reduction***

*Staff, Office of the Provost:* I feel that recycling would be more efficient if there were a 'monitor' on each floor that would be a go to person with questions about what can be recycled and where to take it. I think that there is a big lack of recycling because people are in a hurry and don't take the time to do it. If the custodians took a more active part in leaving behind those items that can be recycled instead of throwing those items in the trash dumpsters, then it would be left to the department to see that the recycling was done. Recycling should be mandatory by each and every department on the University campus.

*Staff, Electrical Engineering and Computer Science:* I really wish we had an official recycling container of some sort, say a small plastic box the size of a case of printing paper, to place under the table of each of our printers. We have upwards of 20 of these and though I regularly put boxes underneath with a lovely sign requesting that folks recycle, stacks of waste collect nearby, the boxes disappear, and I can't seem to make it stick!! It's really something I think could make a difference, since we have such high paper consumption. We recycle the toner cartridges, we save and recycle paper book waste, boxes, and all the various things that I can influence disposal of, but I'd like to see that in each of these stations that produce paper waste really avoid the landfill.

*Staff, Music and Dance:* I would love to see more recycling bins in the place of trash cans, and I'd love to have the people be more aware of them. I'd love to have citizens be less focused on the mindless consumption which is thrown at us in countless advertisements -- all that stuff we buy can end up in a landfill, so it's be great to see fewer gizmos, tchotchkes, and trinkets bought all the time.

*Faculty, Pharmaceutical Chemistry:* I know that we do not recycle our glass solvent bottles, which seems silly b/c the solvent can be completely evaporated and washed. In my lab alone I probably go through 5-10 4Liter bottles a week. I am not sure what safety issues would have to be addressed to get these to be recyclable, but it might be worth looking into. I am sure Malott's labs go through 100's of bottles a month. Its a lot of glass to just throw away. Also, this might be something to address with environmental health and safety. At the campus I was at prior to being at KU, EH&S stored unused good chemicals, listed them on their website and other people on campus could "go shopping" there for chemicals instead of just ordering more from the chemical company.

*Staff (department name withheld):* My main frustration is with certain administrators who believe that the recycling bins don't look good and that they get to decide for everyone.

*Staff, Anthropology:* Every (or nearly every) trash can should have separate compartments for recyclables and non-recyclables. This is now standard in Western Europe. People here might gripe at first, but they'd get used to it. Right now, in Fraser Hall we have very limited recycling on alternate floors. On those floors that don't have recycling, 99% of recyclables get simply thrown away. Suggestions: have recycling containers on every floor, allow paperboard and cardboard to be recycled from offices, supply offices with unbleached, recycled paper for photocopying and laser printing. Develop new policy to encourage faculty to use this for drafts, memos, and all documents except where lily-white paper is absolutely required (e.g. page proofs for a book), Have the university sign contracts only with manufacturers (Dell, HP, etc.) that guarantee disposing of the device (including recycling recyclable components) once the machine is obsolete.

KU has made contracts with some of the most environmentally unfriendly food vendor companies: Coke, Burger King, etc. If KU is actually serious about improving its environmental record, it should re-examine its corporate vending contracts and require these companies to (1) deliver food in recycled packaging (merely recyclable is not sufficient), and (2) recycle their own recyclable waste. KU should also offer contracts to food vendor companies with better environmental records and practices.

*Faculty, Political Science:* My suggestions is to especially concentrate on faculty as they generate the most paper. Our dept. has a box in the copy room but I don't think many use it. I see lots and lots of boxes in the big trash dumpster. As to students - putting up signs in every classroom as to where the recycling bins are located for their drinks and making the bins more available would help. I think there needs to be a well thought out and attractive (so as not to ad to the junkiness) ad campaign in every office and class room.

*Staff, Information Services/Information Technology:* KU as an institution needs to realize that much work related to computer access for e-mail, databases, and other tasks can be done remotely. Combined with employees' potential ability to forward their desk phones to home or cell phones, or, with an initiative to make appropriate employees' desk phone numbers belong to cell phones in the first place, many workers, a majority of the time, do not need to be on-campus. This would not only reduce the need for office space, but also parking space. This would also reduce the amount of daily travel to and from work. Various free Internet technologies exist for group audio conferencing (up to 5 people at once) and other technologies exist to make remote workers part of "office water cooler" types of conversations. I'd like to see the University develop formal policies supporting this type of "telework" and work with managers to promote this work style, where it could be appropriate.

*Staff, Aerospace Engineering:* I see the Engineering computing staffers have no other way to dispose of their hundreds of new-computer packing materials; they tried to honor my request to recycle and were told to put all in trash. Most building custodial forces have no knowledge of recycling. Office personnel need close access to the depositories or it won't happen.

*Staff, KU Libraries – Edwards Campus:* I've been wanting to ask for a long time if there is any possibility of extending KU's recycling efforts to the Edwards campus. I think one of our facilities people recycles aluminum cans but office paper, newspapers from the library, and phone books are usually thrown away. We recycle our printer ink cartridges through a company in Kansas but we haven't found a place that will take used batteries. Often, if there is any recycling done, it is done as a service by one of our employees doing it on their own time. For example, one of our new employees now takes newspaper, office paper, and phone books to recycle, but this has happened before and usually after a few months the person gets tired of doing it and we start throwing it all away again.

### **Energy Conservation**

*Staff, Information and Telecommunications Technology Center:* I noticed the urinals here in Nichols Hall are an old style that uses 6 gallons of water per flush. In my Internet wanderings I came across urinals that use no water. They don't flush.

*Faculty, Sociology:* One thing I would like to see become much more of a common practice is for the people (instructors, staff, etc.) who are likely the last people out at the end of the day to close the blinds and doors of their classrooms as well as their offices and turn off the lights. While custodial staff may do this later in the evening, there are many times when I pass classrooms in the evening with their doors open, all the lights on, and the blinds up or open. This really does seem like a waste of resources. There are even windows left open, not only in offices, but also in classrooms - including ones on the first floors of buildings. Very problematic - in terms of theft as well as energy use, at least in my view

*Staff, Anthropology:* Central h/c units should be programmed at a higher temperature in the summer (NO one needs it to be 40 or 50 degrees F in the buildings in the summer -- 75 is just fine). The buildings are far too cold in the summer.

*Staff, Facilities Operations:* I strongly believe that the custodial department by itself can reduce the electricity consumption by a minimum of 15% just by turning off the lights. I have a detailed generic energy conservation program that is completed. I also have a training seminar and workshop to train custodians in energy conservation. The goal of utilizing this program is to reduce energy usage while at the same time, re-allocate a portion of these savings for the betterment of the housekeeping department. Also included in this program are many of the little things that individuals can do to save thousands of dollars in energy conservation.

*Staff, Vice Provost Research:* (Following a positive example of lighting use on campus.) I would ask the same wise people to address the light pollution (meaning wasted energy dollars as well as light that strays into the sky or on things not intended to be lighted) from the lighting of campus building facades. I realize this is counter to

the desire to illuminate the architecture at KU. However, I would submit that poorly designed and maintained night time illumination is unsightly and in bad taste as well as a waste of our energy dollar. I refer especially to the unnecessarily overpowering facade lighting of the rebuilt Hoch Auditoria/Budig Hall. I am sure there are other examples, but I picked one.

*Staff, Aerospace Engineering:* The winter forced air unit fans blow air that is colder than the what comes through the leaking windows, and a heater is illegal but necessary. I use an incandescent lamp to warm my hands to use the computer. In summer, it is so cold, I use the heater also. The thermostat is in another person's locked office. I dress warmly, leaving my coat and gloves on to conserve heat; I dress warmly at home. However, at work, the temps are usually out of synch with reality.

## **Physical Environment**

### **Design and Construction**

*Staff, Natural History Museum and Biodiversity Research Center:* It is very clear from the work done so far by a lot of people that the benefits of correct building design are numerous, and go beyond energy savings. If KU wants to get out in front, the first thing should be to create a design standards policy for new construction: use of daylighting (increases productivity, reduces absenteeism, learning is better), passive solar heating, ground-source cooling, heat-recovery ventilation, local materials as much as possible, gray water /rainwater collection for site irrigation...this is the stuff that comes to mind quickly. Next I would try to involve students and faculty from the appropriate departments in working with local developers to design, permit, and build self-powered subdivisions which are also walkable, parklike communities. Changing the direction of development in the area would be a very powerful statement and will have a positive esthetic and economic impact on the community. It is also suitable to apply these principles to re-development of core urban areas. Recycling and the usual efforts to save are great, but the real walk-the-talk impact will come from stuff visitors and users can see, like a building that powers its own HVAC and also makes the occupants feel better.

*Staff, Spencer Art Museum:* One option your group may want to look into is soy bean-based roofing material. The Shedd Aquarium in Chicago has gone to this material, and has an entire education display in the aquarium regarding the environmental and energy-saving benefits it provides. I would imagine that using progressive building materials like that as we face repairs and upkeep would provide great fodder for our teaching and resource mission.

*Faculty, Art:* Our campus is beautiful yet I have several areas I would like to mention where we might improve. These suggestions relate to the research interests of art, design, art history, and architecture faculty in terms of the visual appearance of our campus, the quality of life we offer, and the intellectual and cultural tenor inferred and embodied by our environment. The issues are 1) We are lacking even one visionary example of architecture by a prominent, internationally known architect, 2) I believe we lag behind other major universities in providing a major collection of public art, including outdoor contemporary sculpture, mosaics, frescoes, etc. that could be available on-line, in a catalogue, and could provide a draw to the Lawrence community and campus. Our environment should be a place where we live and work surrounded by art...art that is at various examples and times beautiful, invigorating, challenging, nostalgic, or progressive, 3) I believe the signage on our campus cheapens the appearance of the campus (must everything be blue) and closely resembles the signage at VA Hospitals. The signage lacks taste and distinction. I would suggest that we might reactivate and firmly invigorate the Public Art Committee at the University and actively work to provide funding support for initiatives that will achieve a more enlightened, informed, daring, interesting, and contemporary approach to our visual environment.

*Faculty, English:* What about preserving a part of West Campus as open space? It's not too far from the hill to take a class over there, and (at least until the recent spate of bulldozers) it's a good place to find wildlife.

*Staff, Vice Provost Research:* I'd like to see KU take some steps towards maintaining campus green space without the use of pesticides. As I understand it, Haskell has been doing so for almost a decade! So, KU would have a good local model from which to plan.

*Staff, Hall Center for the Humanities:* My suggestion, and one I've given a lot of thought to over my years of walking across campus to work every morning (since 1987), is that the grounds should be landscaped using a lot more native plants, which are more hardy and trouble free and require less water, fertilizer, and overall care.

These can be successfully combined with cultivars that are also hardy, self sustaining, and drought tolerant. If care is given to location (i.e., put sun loving plants in the sun, shade loving and under story plants and shrubs in the less sunny spots and shady areas) this could be extremely successful; save a money on water and chemicals, and save a lot of money and labor by not replacing the plants every season. I have watched the Chi Omega fountain be completely re-landscaped three times in the past seven years. Last year they tore out perfectly good hardy shrubs to create a labor and water-intensive lawn and annuals garden this past spring. I fail to understand the logic behind this and I resent use of the University's scanty resources in this wasteful way. Beyond that, there are grasses that require less mowing and fertilizer and virtually no water.

### **Transportation**

*Staff, KU Libraries:* What is the impact of the buses running up and down Jayhawk Blvd. on the environment? This question occurred to me when having to smell the exhaust. Then over the summer I noticed the leaves on some of the trees along Jayhawk were brown and shriveled and wondered if there was a correlation.

*Staff, KU Anthropology:* Get tough with Lawrence Transportation (or whatever company it is that supplies KU with its busses) - though some are new, they are right up there as the most polluting, smoke-belching busses on the planet. How incredibly third world! Require them to conform to reasonable (e.g. California) air quality standards, which may mean retrofitting smog filters. No agreement, no contract. In the non-inclement months, KU could in the future have a fleet of cheap, brightly (and uniformly) painted one-speed rental bikes like they have in the Netherlands, many west German train stations, and all over Berlin -- swipe your KU card in the electronically controlled lock, it deducts \$0.40/hr from your account, and you can ride it around campus/town and leave it at your next destination. Encourage bicycle commuting by providing covered bike parking. Encourage carpooling by e.g. providing parking discounts or other incentives.

*Staff, University Relations:* In the strongest terms possible, get rid of the diesel Buses! Diesel is the most prevalent particulate pollutant in the world. Surely, KU is smart enough to find another (more environmentally friendly) way to move students from place to place. Electric Buses!

*Staff, KU Libraries:* My biggest concern about the environment at KU is the dirty buses used by the students and administration. Every day we are all subjected to the pollution they produce. We have much more environmentally friendly city buses which could be used instead if the various parties involved would work at compromise.

*Staff, Vice Provost Research:* I had an idea that might help with the parking situation on campus; offer students who live four blocks (or some other set distance) from campus a \$50 break on their tuition or fees if they don't park on campus. Kind of a freebate sort of thing. Eligibility would be fairly easy to verify (an official rental agreement or other proof of residence would work), and the program would encourage bus transit, carpooling and other "alternative" transportation options, and perhaps slightly relieve the parking crunch on and near campus.

*Staff, Music and Dance:* I'd love to see the people here drive less. I usually bike to school, and I must say that Lawrence is a fairly easy town to get around in with a bicycle. The car addiction is very obvious here when people pay such high prices in gas, insurance, and parking so they can drive a mile or two to campus.

## APPENDIX D: CAMPUS RESOURCES

The following is a list of some of the resources available on the University of Kansas Lawrence campus. All of these entities play a role in making KU a leader in sustainability. However, greater coordination between these units is necessary to ensure success.

### **Academic Resources**

*Environmental Studies Program:* Established in 1971, the Environmental Studies Program at the University of Kansas is one of the oldest in the country and the strongest in the Midwest. Competitive in its offerings with other programs in the country the major provides undergraduates with a broad, interdisciplinary education focused on the environment, one that uses both scientific and social science perspectives.

*Academic Departments:* In addition to the Environmental Studies Program, a wide range of academic departments and programs offer courses that address sustainability and the natural environment. Disciplines include Architecture, Engineering, Urban Planning, Art, History, Literature, Philosophy, and Social Welfare, as well as the Natural and Physical Sciences. Some of these departments are connected through the Environmental Studies Program but not all courses are directly linked to the program. For example, in the summer of 2004, students involved with the Kansas Asia Scholars Program through the Center for East Asian Studies presented on sustainability at KU while studying in Japan.

### **Administrative Units**

*Department of Environment, Health, & Safety:* This mission of this department is to (1) Assist faculty, staff, and students with designing facilities that meet safety requirements and with inculcating and implementing safe practices in the conduct and operation of University programs, activities, and facilities; (2) Monitor campus activities to ensure that Federal, State, Local, and University environmental, health and safety laws, regulations, ordinances, and policies are being followed; and (3) Carry out the assigned management responsibilities associated with campus environment, health and safety programs:

*Environmental Stewardship Program:* The Environmental Stewardship Program (ESP) is responsible for assisting the University of Kansas and campus living groups with developing and implementing integrated waste reduction efforts and environmental awareness and improvement programs.

*Facilities Operations:* Facilities Operations' mission is to provide quality customer service by operating and maintaining a safe, reliable, healthy and aesthetically pleasing environment in which students, faculty and staff can function and accomplish their academic and research objectives. In November 2001, the University of Kansas partnered with Chevron Energy Solutions to complete a comprehensive energy audit that identified over 100 measures that would result in energy and water cost savings.

### **Student Organizations**

*Center for Community Outreach (CCO):* CCO has 2 programs that focus on environmental issues in the community. EARTH works in local parks, nature preserves and other areas whose natural environments need repair or protection, and educates and provides opportunities for service and direct action to improve the environment. GROW volunteers work with youth at the Lawrence Boys' and Girls' Club and other community sites to tend small organic gardens. Goals include learning about teamwork, horticulture, nutrition and environmental awareness.

*Environs:* KU Environs works within the University, the KU student body, and the Lawrence community to educate the public about local and national environmental issues. The group also strives to effect positive environmental change on local and national levels.

*Student Environmental Advisory Board (SEAB):* SEAB is the Student Senate board that represents student environmental interests on campus, including recycling, conservation, and other campus concerns.

## APPENDIX F: INITIAL STUDIES

Before Provost Shulenburg appointed the Sustainability Task Force, Anton Bengtson, KU student, and Jeff Severin, Environmental Services Manager, completed separate research reports on the subject of student environmental centers. Their reports are included here.

### Blueprint for an Environmental Initiative at the University of Kansas

Anton Bengtson

**Purpose:** The purpose of this blueprint is to outline a future plan toward creating opportunities, through collaborative efforts, in the area of environmental efficiency and sustainability at the University of Kansas. The efforts would be focused on organizing a core group of dedicated students, faculty, and staff, that would network environmentally-concerned campus individuals and groups under one name to create a hub, for faculty and student research, data collection, and project implementation. At the same time the Center would create a vehicle that KU governance could rely on to provide innovative and resource-efficient answers to future campus planning and design.

#### **Background:**

- The on-campus groups currently working on projects geared toward environmental efficiency and stability are scattered and disjointed.
- Similar initiatives geared toward integration have been successful at other colleges and universities.
  - a) *University of Colorado, Boulder*—Student Environmental Center
  - b) *Brown University* and the Brown is Green Initiative

**Examples:** Here are some examples of projects to be incorporated into the Center initiative:

- Campus transportation
- Campus parking
- Designing more efficient on-campus buildings
- On-campus recycling
- Energy use
- Education
- Campus Landscape/Green Space

**Structure:** The governing body for the Center would be comprised of individuals from various groups active in the initiative. Its role would be focused on collaborating Center operation in a functional and orderly fashion.

- **Integration**—the goal of this initiative would be to bring all environmentally-concerned campus groups and KU colleges (e.g. Environs, Student Environmental Advisory Board, School of Architecture and UD, Engineering, Journalism, and Environmental Studies) together in a coordinated operation.
- **Initiative Website** that would display projects, track progress, and allow for broader campus involvement
  - a) Website would be affiliated with several interested groups and would include up-to-date postings on projects currently being worked on, as well as past projects. The website would be a key vehicle to networking.
  - b) The website would also include links to helpful, environmentally-minded organizations nationwide, local groups, and groups helping to fund the operation.
- **Paid Staff** that would provide stability. These would likely number from one to as many as five individuals with offices in the center. For example, this staff would be in charge of networking interested individuals and groups, updating the website, and maintaining records.

#### **Objectives:**

- *Research:* This initiative would establish KU as one of the most integrated research universities in the United States. Provide an example to other universities nationwide that KU is committed to setting the standard for research, and not just research, but implementation as a result of our research.
- *Campus Life:* Address campus issues such as parking, transportation, and facilities/operations costs. Increased quality of life on campus by using KU resources to improve the campus environment.

- *Recruitment:* It would attract and support the nation's most informed professionals in the area of environmental efficiency and overall resource efficiency. Also, potential students would see an opportunity at KU to integrate their research and study with KU students in other areas of study, to work on projects that would be geared toward campus improvements.
- *Investment:* Making campus systems and facilities more resource and energy efficient could ultimately lead to lower maintenance and operating costs for the University.
- *Education:* Provide additional resources and opportunities to educate members of the KU community both in the classroom and out.

**Sources and Contacts:**

*University of Colorado, Boulder*--Student Environmental Center

Director: Hon. Will Toor, Boulder Mayor and Director of Student Environmental Center

<http://www.colorado.edu/ecenter/index.html>

*Brown University*—Brown is Green Environmental Stewardship Initiative

Providence, RI

[http://www.brown.edu/Departments/Brown\\_Is\\_Green/](http://www.brown.edu/Departments/Brown_Is_Green/)

## **Campus Environmental Centers: A Summary of Six College & University Programs**

Jeff Severin, Environmental Services Manager  
Facilities Operations Environmental Stewardship Program

### **University of Colorado Environmental Center**

Contact: Will Toor, Director

Website: <http://www.colorado.edu/ecenter/>

One of the largest student run environmental centers in the nation, the CU Environmental Center was established in 1970 by student volunteers. The program was able to hire staff through funding from a student referendum in the 1970's and now has 5 permanent staff and a number of student employees and volunteers. Primary funding still comes through student senate, but some projects receive funding from outside sources (e.g. the bus program is funded through administrative fees and not student fees).

The program is designed with a dual reporting structure: staff reports to a student-majority board and to the Vice-Chancellor for Student Affairs. The board consists of 7 students and 2 community members and is responsible for providing policy and programming direction and approving all budget requests from the Environmental Center. Director Will Toor feels that this structure has worked very well, giving the students a voice and a vehicle to shape campus policy without losing the administrative structure necessary to keep the program moving forward over time. He cited only one instance in the program's history where the board and the Vice-Chancellor were in disagreement and moving in different directions with an issue.

Major projects of the CU Environmental Center include:

- CU Recycling (in collaboration with Facilities Management, and the Department of Housing)
- Working with facilities management to administer the purchase of wind power
- Developing new programs for alternative transportation with Parking and Transit Services
- Providing outreach and education on campus and at area grade schools
- Developed the Blueprint for a Green Campus, endorsed by the Boulder Faculty Assembly and Student Union, among others
- House a library of research materials on environmental issues.

### **Brown is Green, Brown University**

Contact: Kurt Teichert, Director

Website: [http://www.brown.edu/Departments/Brown\\_Is\\_Green](http://www.brown.edu/Departments/Brown_Is_Green)

The Brown Is Green (BIG) initiative was adopted in 1990, and is carried out by a variety of departments and individuals. The Department of Plant Operations implements resource conservation measures related to utilities, while students conduct research on potential conservation strategies through Environmental Studies courses, internships, and the Brown Environmental Action Network student group. The program is an educational and advocacy program which links student research and education efforts with administrative offices to implement programs that reduce the environmental risks of operations. BIG has the support and guidance of a BIG committee, consisting of faculty, students and administration. The Department of Plant Operations manages the Brown Recycling Program and implements many of the resource conservation efforts. Funding for this program is included in the general operating budget for Brown University.

Office of Sustainability Programs, University of New Hampshire

Contact: Tom Kelly, Director

Website: <http://www.sustainableunh.unh.edu>

The Office of Sustainability Programs (OSP) was established in 1997 and integrates sustainability practices into teaching, research, operations, campus culture and public service. All initiatives involve collaboration with faculty, staff and students as well as local, regional and international partners. OSP is an endowed, university-wide program organized around four educational initiatives: Biodiversity, Climate, Culture and Sustainability and Food and Society.

### **University of California, Santa Cruz Student Environmental Center**

Contact: Leah Walsh, Co-Chair

Website: <http://www.ucscsec.org>

UCSC's Student Environmental Center (UCSCSEC) is still in early stages of development and was originally modeled after University of Colorado Environmental Center. Founded in 2001, it is an independent student lead organization. The center provides the opportunity for students to work with the campus community to apply their university education, environmental problem solving skills, and creative solutions towards tangible and progressive change. It is funded through a student referendum (\$3 per quarter student fee).

The staff is composed of three co-chairs and several campaign coordinators and guided by a steering committee. Input also comes from a Board of Advisors, composed of faculty, staff, alumni, and community members, which meets quarterly.

The UCSCSEC focuses on several major campaigns:

- Developed a Blueprint for a Sustainable Campus
- Research and compile information on best practices that contribute to the Blueprint
- Participate in Annual Campus Earth Summit, Campus Earth Festival, and the state-wide Education for Sustainable Living Program.
- Host educational community events such as organic dinners, slide shows, guest speakers, etc.
- Produce and distribute educational literature.
- Communicate with students, faculty, administrators, and the community regarding sustainability issues.
- Forming a Chancellor's Advisory Committee on Sustainability

### **Fort Lewis College Environmental Center, Durango**

Contact: Micheal Rendon, Director

Website: <http://envcenter.fortlewis.edu>

The Fort Lewis Environmental Center was established in 1991 to set up a recycling program for the college. A full-time coordinator and 10 student staff currently manage the various programs of the project, with support from faculty and facilities management. Funding comes entirely from student fees. Fort Lewis has a student-majority board that is composed of 6 students, 2 faculty, 1 staff, and 1 community member. While the board provides input and direction for the center, the director reports to the Leadership Center and Student Affairs.

This program is focused on advocacy and education for the campus and community through the following programs:

- Environmental Center Library, which is the largest environmental resource library in the Four Corners Region
- Campus Ecology, based loosely on the National Wildlife Federation Campus Ecology program, works with a variety of issues including energy-efficient lighting, drought resistant plants, non-toxic cleaners, and organic gardening on campus
- President's Advisory Council on Environmental Affairs, advising the Fort Lewis College President on the environmental state of the campus.

### **University of Kansas Environmental Ombudsman's Office (Defunct)**

Contact: Stephen Hamburg, Brown University

The Environmental Ombudsman's Office at the University of Kansas developed in the late 1980's out of a challenge from students to increase environmental responsibility on campus. At that time, it was one of the few environmental stewardship programs in the nation. Before the program was transferred to Environmental Health and Safety, the program was maintained by a director, 2 assistants, and 2 project coordinators, assisted by student volunteers and supported by additional faculty members and an advisory board. The director reported to the Executive Vice Chancellor. Former director Stephen Hamburg felt that the student involvement was important in pointing out environmental issues that needed to be addressed, but faculty members and office staffs were needed to complete the actual work, outside of smaller projects that students could accomplish in a short time frame.

Starting with a waste audit to demonstrate the amount of recyclable material being disposed of on campus, the office focused mainly on student-initiated stewardship projects including:

- Replacing cleaning chemicals with less toxic products
- Reclaiming CFC's at Motor Pool
- Removing Styrofoam from the union dining services
- Recycling office paper at the Computer Center and developing plans for a campus-wide program
- Encouraging use of energy efficient light bulbs and energy conservation

## **Conclusions**

A recurring trend in the management of successful programs is a student-led advisory board or other vehicle for student input. In effect, the University of Kansas already has this organizational structure in the Student Environmental Advisory Board (SEAB). With a more formalized system for electing members to this board, SEAB could play an important role in developing a campus center. A revived faculty/staff environmental committee could also be an important part of this process.

At the same time, it is important to have permanent staff to develop the program in its early stages and maintain it as students enter and leave the system. Initially, existing staff could assist with some of these duties. However, it would be important to consider staffing early in the process, as other programs have noted that shifting responsibilities to create "Sustainability Coordinator" positions has been a detriment to existing programs.

If this is an issue that the University wishes to pursue, I would recommend establishing a committee, starting with SEAB and selecting additional faculty and staff to begin more detailed discussions. Individuals from the following organizations and departments should be represented, along with other interested parties:

- Student Senate
- Environs
- E.A.R.T.H (Center for Community Outreach)
- Environmental Stewardship Program/Facilities Operations
- Provost's Office
- Environmental Studies Program
- School of Engineering
- School of Architecture & Urban Design

The charge of this committee would be to:

- Identify and recruit any additional partners, including student organizations and departments
- Determine the purpose of a KU environmental center (research, advocacy, education, etc.)
- Outline organizational structure and selection processes (steering committee, advisory board, staff, etc.)
- Identify funding sources

The "Blueprint for an Environmental Initiative at the University of Kansas" presented by Anton Bengtson is a good starting point for developing an environmental center. While some elements such as SEAB and the Environmental Stewardship Program currently do exist on campus, a more formal process connecting the generation of ideas and projects to research and action on campus is needed. While the Environmental Stewardship Program and other campus groups are able to accomplish some of this work, much more could be achieved if these efforts were coordinated through a central organization. As a hub for environmental education, research, protection and conservation, an environmental center would be a tremendous asset to both the University and the community.

## **Vision for an Environmental Center at the University of Kansas**

An Environmental Center on campus would serve as a hub for environmental research, an umbrella for campus environmental groups, and a source of information and education for the campus and the community. Such a center could be built from programs and processes already in place, such as the Student Environmental Advisory Board and Environmental Stewardship Program. However, the center would eventually develop into an independent entity, guided by a board of students, faculty, and staff. Project committees could also be established as needed to draw in departments related to specific projects. A full-time director would staff the center, along with additional staff as needed to coordinate projects, campaigns, and media. The director, or chair of the board, would report to the Office of the Provost.

The KU Environmental Center would be an organization that would:

- Work with campus departments to develop a campus sustainability plan encompassing all aspects of operation (construction, facilities management, transportation, purchasing, etc.)
- Coordinate research and implementation of projects meeting the goals of this plan
- Collaborate with student groups to address environmental issues on campus and in the community
- Encourage and promote sound environmental practices on campus through education and media
- Serve as a resource to campus departments working to reduce their environmental impact
- Serve as a resource to students and community members regarding local and global environmental issues

A physical structure for the center could house:

- Environmental Center staff offices
- Campus environmental organization offices
- Meeting rooms, study areas, and a computer lab

An environmental resource center/library