

**UNI Campus Conversation on Sustainability**  
**Maucker Union Ballrooms, Tuesday, April 14, 2009, 8:30 – 12**

**Campus Conversation on Sustainability**

Introduction

On April 14, 2009 approximately 120 UNI faculty, staff and students gathered in the Maucker Union Ballroom to engage in a campus wide discussion about sustainability and the role and responsibility of UNI as responsible environmental stewards. This meeting was sponsored and supported by the UNI Energy Conservation Committee, the UNI Sustainability Council, the Division of Administration and Financial Services and the Office of the President. The Energy Conservation Committee task group that planned the event consisted of Jan Hanish, Dean Shoars, Lou Weber, and Jack Yates (convener).

The goal of the project was to invite all members of the campus community to discuss thematic areas and to provide input, ideas, share concerns, and identify strategies that could assist the University in decision making as it pertains to sustainability initiatives outlined by the University, Board of Regents, and the state of Iowa.

Faculty, staff and students were invited to pre-register for one (or more) of seven topical areas. Though registration was not required for attendance, this information was used to help in the planning process. Many of those who registered did attend and there were a large number of “walk ins” as well. Those who pre-registered were sent “questions for discussion” specific to their breakout session, designed to stimulate thinking and reflection prior to the event. The seven breakout areas were: campus properties, educating the campus on sustainability, investments in sustainability, policies for campus buildings, sustainability in student life, sustainability in the curriculum, and transportation policy.

Dr. Dave Whitsett, emeritus professor of Psychology, served as the event facilitator. He provided training to 14 volunteers who served as small group facilitators and recorders. He instructed facilitators to engage in brief brainstorming around their assigned topic area, identify most effective information and, if possible prioritize information. At the end of the 75 minute session, all groups reassembled and recorders provided a summary of each session. Recorders (or other designated volunteers) were asked to provide a written summary to committee chair Jack Yates, for inclusion in the final report.

Final reports have been submitted and a draft of the executive summary was submitted to the Energy Conservation committee for preliminary review. The executive summary, and all submitted group information, was then submitted to the UNI Sustainability Council and President Ben Allen for further action. This summary will also be made available to the campus community on a web site for further input. It is hoped that this information will provide a basis for decision making and priority actions in order to further effective and responsible programs, policies and procedures that support sustainability.

The sections that follow are (a) an executive summary; (b) summary reports from each breakout session; and (c) an Appendix of bullet points taken from the flip chart pages used at the breakout sessions.

## **Executive Summary**

An examination of the reports from the seven breakout groups reveals several repeating themes. A distillation of those themes follows:

1. Designate or create an office to supervise and coordinate the comprehensive sustainability program, measure or track relevant parameters, establish baselines, make comparisons to other institutions, and ensure that progress is made. This office must take the responsibility for making the program a success, in cooperation with other campus departments.
  - a. Equally important would be for this office to make the university's efforts public and easily accessible in an organized fashion (e.g., via web site).
  - b. This office should work with the university to incorporate sustainability into the university strategic plan.
2. Establish a comprehensive, funded program for addressing sustainability in all its facets (reducing energy, water, paper, fuel, and chemical use; "green" purchasing; investing in renewable energy (solar, wind, biofuels); consolidation of energy-using appliances such as copiers and servers; transportation policies; and replacement/renovation policies, including LEED standards for buildings, that give sustainability high priority). Four initiatives received wide discussion:
  - a. A comprehensive recycling program: In addition to moving the institution toward sustainability, such a program has symbolic value in promoting sustainability and has considerable grass-roots support and "face validity" to many university constituents (regents, parents, legislators, the general public). It could serve as a point of engagement and departure for other efforts. It portrays the seriousness with which the university takes its obligation to become more sustainable.
  - b. "Opportunistic" reduction in resource use through moment by moment assessment of occupant needs for lighting, HVAC, etc: Building occupancy varies through the day and week; the demands for heating/cooling and artificial lighting depend on the task to be performed and availability of natural light. These factors are rarely taken into account in campus energy use or in the behavior of energy users. Opportunistic reduction can involve strategic building scheduling and shutdown, automatic systems that detect occupancy, and greater occupant attention to resource use (e.g., "Do my students need this much light?")
  - c. A transportation policy that makes it easier to avoid car use: Suggestions include: rewards and barrier removable for carpooling or no car on campus (students AND employees), making bicycling and taking the bus to common destinations easier; encouraging greater variety of core

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- services and businesses (groceries, banking, pharmacy, notions) within walking distance.
- d. Management of grounds and outdoor spaces to minimize pesticide and chemical fertilizer use, storm water runoff, salt use in winter, and mowing: These goals may in part be met by the development of natural/native plantings, rain gardens, and low maintenance areas on campus that also increase the variety of plantings, hence opportunities for enjoyment of outdoor beauty.
3. Fund programs that engage additional individuals in working toward a more sustainable university. These should aim to change the campus culture toward a pervasive ethic of sustainability and include both single events designed for a specific audience (such as campus conversations directed specifically at students or faculty) but also sustained year-round programs. It will be necessary to design (a) specific programs tailored to expand the numbers of interested faculty, students, and staff; (b) programs promoting behavior changes that encourage sustainability in specific ways; and (c) programs that use “co-curricular” strategies for educating and engaging students. The goal of these programs is to change the cultures (student, faculty, staff) on campus so that sustainability become the norm. Two important strategies:
    - a. freshmen should be purposely inducted into a culture where behaviors promoting sustainability (limiting car use, recycling, trayless dining, turning off unneeded appliances) are expected and unremarkable.
    - b. make energy use “visible” to users (other institutions do this)
  4. A reward system must be designed so that offices or individuals requiring more resources (e.g., for space heaters, cooler temperatures in summer, power-using laboratory equipment) would be billed for the extra use; likewise installation of energy saving equipment (pool covers; motion sensors) should be rewarded and funded. Sometimes this is called an inverted rate structure.
  5. Examination of practices at other universities can lead to an optimal curriculum, with an interdisciplinary certificate program in sustainability as its hallmark. Sustainability should also be included in the Liberal Arts Core and the First Year Experience. In these endeavors, student advice and input is important. In working toward incorporating sustainability into the curriculum, it is essential to identify all resources within the campus community (administrators, faculty, staff, and students) that have the passion, expertise and resources to participate in building a sustainability curriculum. They can also assist with mentoring opportunities. A website needs to be established to hold and update this information. For sustained faculty participation, a rewards structure needs to be established that defines what is rewarded, what is allowed, what types of merit

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pay and course release would be available. Yearly assessment is necessary to assay the impact on the learning community.

This summary suggests several **specific actions** to be taken. The Energy Conservation Committee found that most of these specific actions fall into three **broad categories** that should receive immediate attention. In the following list, these broad categories are stated, followed by the relevant specific actions frequently mentioned at Campus Conversation breakout sessions.

1. Create or designate and fund a central office to (in cooperation with the University administration and other entities on campus) (a) formulate, (b) supervise and (c) coordinate a comprehensive sustainability program (see items 1 and 2 in the summary above). This was universally discussed with approval in breakout sessions.
2. Formulate and implement a comprehensive solid waste reduction program (including a comprehensive campus-wide recycling program, greater use of recyclables, food composting, trayless dining, reduction in use of disposable or single-use materials, and other strategies for reducing waste and using fewer supplies.) This item is based on the following specific actions favored by Campus Conversation breakout sessions.
  - a. implement a campus-wide comprehensive recycling program
  - b. establish a campus-wide sustainable dining program (reduced packaging, composting food waste, trayless dining, etc.)
3. Formulate and implement a comprehensive energy management strategy (including energy conservation, employment of renewable (solar, wind, biofuels) energy, building scheduling to reduce energy requirements, remodeling and construction practices that make energy savings a priority.) This item is based on the following specific actions favored by Campus Conversation breakout sessions.
  - a. install PV on university buildings as appropriate (PV generates electricity from sunlight).
  - b. install solar thermal water heating on the WRC (which uses large quantities of hot water needed for showers and pool heating)
  - c. purchase wind-generated electricity or generate electricity from wind (from a large unit remote from campus or small units mounted on buildings)
  - d. establish specific standards (e.g., Leed silver) for sustainable architecture, construction, and remodeling
  - e. consolidate classroom/building usage for energy efficiency, with special attention to summer school and night class scheduling
  - f. evaluate lighting level (interior and exterior) for need, efficiency, and safety
  - g. create a program for long term ability to efficiently manage HVAC in all campus buildings (zones, temperature controls, tailoring energy use to occupancy, etc.)

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In addition to these broad categories, several other actions were frequently mentioned in breakout sessions. The Energy Conservation Committee recommends them for immediate attention:

- a. establish incentives that reduce auto use (parking and parking pass incentives for car pooling, making walking and bicycling more convenient, incentives for not bringing a car to campus, etc.)
- b. make landscaping for sustainability a high priority (handling water run-off using rain gardens and swales; reducing mowing; reducing pesticides and chemical fertilizers; using native landscaping, etc.)
- c. fund year-round education/engagement programs for faculty, staff, students
- d. mandate green purchasing of supplies, vehicles etc.
- e. establish a certificate program in sustainability and otherwise incorporate sustainability into the curriculum (Liberal Arts Core, First Year Experience)

**Green Project Survey of Students**

At their booth on Earth Day, 2009, the UNI Green Project (a student organization led by student Matt Kostle) surveyed 70 students concerning their priorities for a “greener” UNI. Student priorities (listed in priority order) were similar to those of attendees at the Campus Conversation: (a) campus recycling; (b) composting of dining center waste; (c) energy and resource conservation (consolidating classes, motion sensors for lights, etc.); (d) renewable energy generation (wind, solar); and (e) solar thermal water heating for WRC and residence halls. Although the number of students surveyed was small and unsystematic, the results suggest that some proportion of UNI students are aware of the actions that can be taken to move toward a sustainable campus, and are supportive of such efforts.

## **Summary Reports for Breakout Sessions**

Summary Reports were compiled from reporters' notes, reporters' narratives, flip chart bullet points, and in some cases consultation with selected attendees. So as to retain as much of the voice of the attendees as possible, most received only minor revision or editing.

### **Policies for Campus Buildings:**

The University has goals to reduce its dependency on coal, purchased electricity and water consumption and is pursuing alternate energy sources such as wind energy, solar and renewable fuel sources. The Policies for Campus Buildings group focused the majority of its efforts on conservation efforts to support this University goal.

Campus building usage was discussed at length. Many of the campus buildings are open when there is very little occupancy. The group recommended consolidating evening and summer classes into fewer buildings. Buildings may be subjected to reduced hours of operation on a daily basis and during University breaks, and those reduced hours could be enforced. The University could consolidate department servers and computer labs to allow building HVAC systems to be turned off earlier, and could design building HVAC systems to allow portions of the buildings to be turned off to better meet occupancy needs. Better thermostats could assist with this process, as could windows that open. Stop-gap measures should be used on windows that are not energy efficient at present.

In addition, sensitive areas like labs could be required to install individual/zone HVAC controls. Other improvements suggested were reducing the amount of chilled water use/waste water discharge and requiring solar hot water heating for buildings with locker rooms and kitchens.

Improvements in building efficiency were discussed. Space temperature policies should be developed to reduce energy usage. Personal use items such as space heaters, fans and appliances should be prohibited or subject to a surcharge, which would require that HVAC be adjusted so that individual fans/space heaters are not needed. Copiers, printers, refrigerators, coffeemakers, microwaves and similar should be consolidated into common areas and be energy star rated products. Designs of buildings should incorporate LEED standards, occupancy sensors for lighting control, efficient building envelope components and green roofs (if applicable). Utility metering should be installed to track building performance, and a baseline data collection about energy use should be required.

Recycling was also discussed. A campus wide recycling program should be developed to improve comprehensiveness and uniformity. Building designs need to provide areas for recycling containers for paper as well as for other materials. More attention should also be given to recycling items that don't work in recycling containers, like books and computers. The University should develop "Building Green Groups" to educate staff on which items can be recycled and where they may be recycled. These "Green Committees" would organize the moving of the recyclables to the University's recycling center, and could also conduct contests concerning energy savings.

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Additional items that were discussed include consolidation of campus pools, installation of pool covers and cleaning systems, production of electricity (ReRev system) by stationary exercise bikes, turning off office computers and other equipment during off hours and energy conservation competitions between Departments. It was suggested that setting computers for automatic overnight shutdown could prove helpful.

### **Sustainability in the Curriculum:**

Components that should be prioritized:

- **Assess the resources that currently exist.**

Before we can move forward, we need to get a better sense of current academic/service learning initiatives. It is also suggested to identify all resources within the campus community (administrators, faculty, staff, and students) that have the passion, expertise and resources to advance sustainability. They can also assist with mentoring opportunities. A website needs to be established to hold and update this information.

- **Development of a certificate program.**

It is important that a sustainability curriculum be more of an interdisciplinary/virtual department as opposed to a stand-alone program. A sampling of best practices programs the currently exists across the country can assist us in the development of our model.

- **Revise the Liberal Arts Core.**

It is suggested to work collaboratively with the Liberal Arts Core Committee as well as actively engage students in the process. By folding sustainability into the curriculum, the LAC can be presented as more relevant to students by incorporating these themes into the classroom as well as incorporating an activities based learning component into it as well.

- **Incorporating into the First Year Experience.**

Sustainability should be integrated into other components of the First Year Experience. There is an untapped potential by utilizing the College Hill Neighborhood to serve as a laboratory for research and service learning opportunities.

- **Provide for Faculty/Staff Development.**

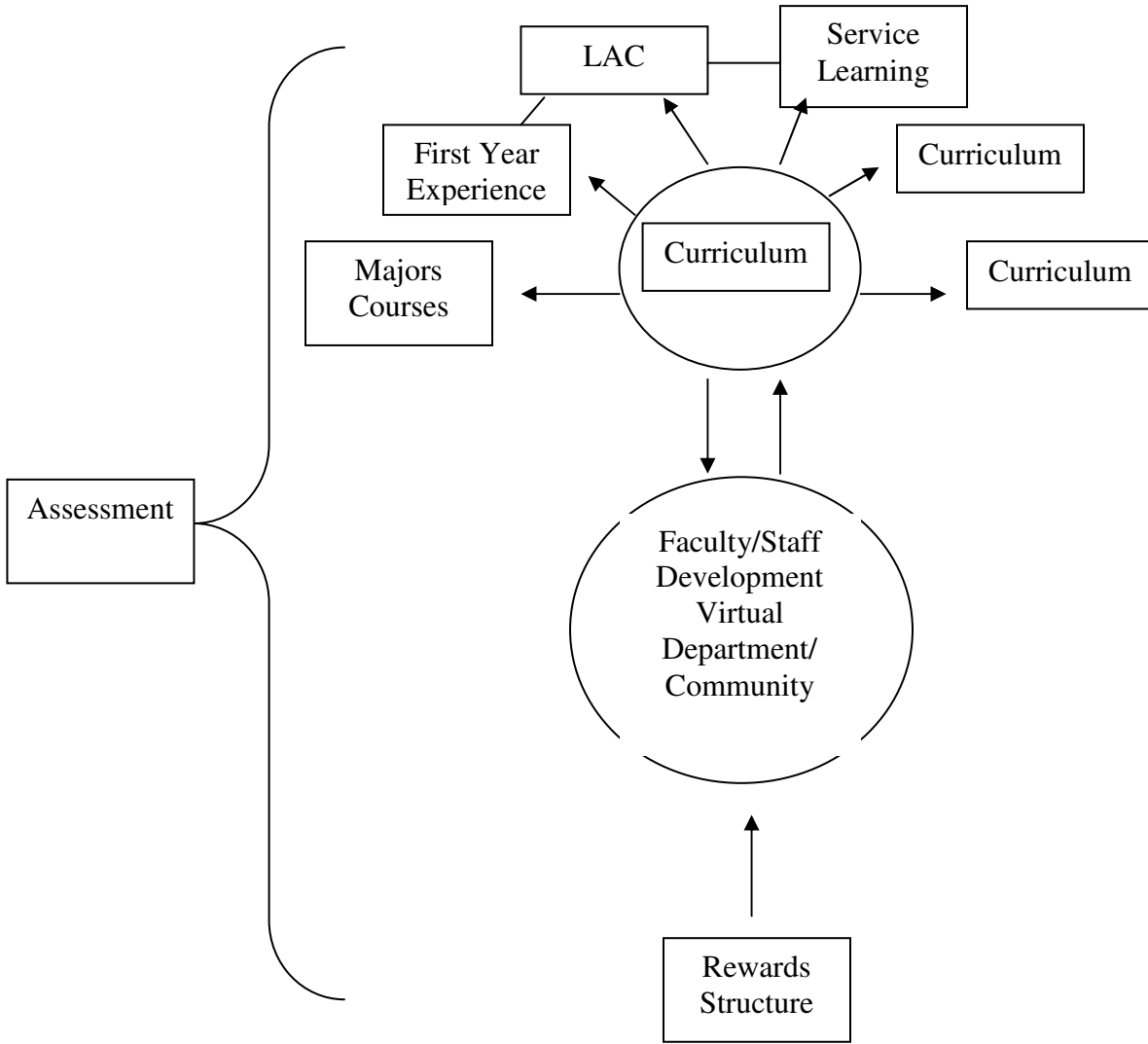
Faculty/staff must have a true understanding of what are current best practices as well as possess a comprehensive definition of what sustainability is. For faculty, a rewards structure needs to be established that defines what is rewarded, what is allowed, what types of merit pay and course release would be available. The university must provide faculty workshops for curriculum development on how to incorporate sustainability into the classroom.

- **Continual assessment of progress/change.**

Yearly assessments must be done in order to identify how this type of change is impacting the learning community.

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Design of Virtual Department



## **Investments in Sustainability:**

This group understood that **some potential investments are very expensive**. However, these are **worth exploring** not only because of their value in reducing the University's carbon footprint, but also their symbolic value in highlighting the institution's sustainability efforts to public officials, students, parents, and other segments of the public.

- Investigate purchasing wind energy, or installing a wind generator
- Investigate installing solar thermal or solar PV on some building roofs.  
This might involve a public-private partnership.

Other **investments are simple and cheap** (stickers reminding users to turn off lights or computers), but **often involve changes in occupants' behavior**, which can be resistant to change. Some examples listed by the group included

- careful evaluation of lighting (taking into consideration the occupancy of an area, and occupants' needs) throughout the university, and shutting off or reducing unneeded lighting, using daylighting.
- reducing the number of printed documents and paper by making greater use of electronic documents and double sided printing;
- efforts to get all members of the University community (faculty, students, staff) involved and engaged. Select and target specific energy behaviors for change.

A third category includes **continuous replacement and turnover** of University property:

- vehicle replacement should emphasize high-mileage, smaller but adequate vehicles
- infrastructure changes to encourage fewer miles driven, such as more bicycle racks and carpooling policies
- when buildings are refurbished a high priority needs to be placed on making them both comfortable to the occupants and energy efficient
- grounds can be transformed over time to require fewer inputs of pesticides and fertilizer, etc.
- use of waste heat from electronics for space heating; use of outside air for cooling electronics

The group felt that all three of these categories should be pursued in a coordinated fashion. Several people expressed the need to proceed on multiple fronts at the same time for progress to be made. Also, all three categories require a long-term, coordinated planning process, perhaps supervised by a dedicated office.

One investment which the group discussed at length was **recycling**. Although a substantial monetary investment may be necessary, discussion indicated wide support for a comprehensive recycling program at UNI. This is seen as a first step toward sustainability that has great symbolic value for both members of the UNI community and

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external constituents (parents, legislators). It sends the appropriate message of having a serious policy of sustainability.

In addition to investments, the group stressed that assessment, awareness, and education are critical elements of any sustainability plan. Assessment can inform us of low-hanging fruit, relative costs of various investments, and document progress. Awareness and education play an important role because so much of becoming a more sustainable university involves changing the behaviors of the occupants of building and users of facilities. Furthermore, awareness can reduce duplication of efforts; awareness of university policies can encourage participation and efforts toward greater sustainability.

### **Educating the Campus Community on Sustainability Issues:**

Our group was enthusiastic about pulling the campus together around the issue of sustainability and making real change. People felt that there were lots of isolated efforts on campus and that it would be productive for those efforts and information to be centralized in some fashion, thus a UNI Sustainability Coordinator. The group was eager to generate ideas to change the culture on campus to allow us to incorporate real change; and this should happen through an exciting marketing campaign that will get people on board because it is the “cool thing to do.” It needs to be both a personal commitment and university in partnership.

Key points shared at the session:

1. Establish a Sustainability Coordinator to connect information and resources on campus and to disseminate information. This might be a person or an office charged with the responsibility of moving us forward on sustainability.
2. Change the culture on campus. This should include students, faculty, and staff. Freshmen are especially important to address, because their expectations and habits are unformed. The process should begin during freshman orientation. Orientations of faculty and staff should also emphasize a culture of sustainability. Additionally, a broad array of educational, communication, and persuasion techniques can be used to move toward a climate and culture of sustainability at UNI.
3. Establish partnerships among campus social scientists, communications specialists, and environmental specialists to construct both specific programs (like the Campus Conversation) and long-term efforts directed at specific audiences (e.g., faculty, students, student opinion leaders). These programs should have as goals education, behavior change, and “buy-in” (personal adoption of sustainability goals).
4. Incorporate key sustainability goals in the UNI Strategic plan.
5. Consult with key constituencies (faculty, students, staff) to (a) inventory barriers to change and (b) consider how to remove them.
6. Establish visible behavioral role models... in the area of sustainability, energy, and resource use, deans, department heads and the provost are role models for

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faculty; administrative executives are role models for staff; faculty have a moral obligation to be role models for students. Celebrate student role models.

7. Clarify UNI's key values and best practices. Create, adopt or adapt them.
8. Inventory UNI's talents and expertise in the area of sustainability.
9. invite the CEEE to partner with departments and programs, for training and education outreach on campus and in the larger community.

### **Transportation Policy:**

In discussion our group placed the most stress on two issues

1) improving and incentivizing public transportation, so that it would be more feasible for faculty, staff and students to get to campus, and for students to get around town (i.e. HyVee) without using cars. Specifically they were interested in improving service by adding more buses in a targeted fashion - -exploring new routes where faculty and staff live, adding more buses to existing routes at peak hours and negotiating free or reduced rates on more bus lines (in addition to current agreement re: Route 9).

2) encouraging people to live and conduct business close to campus, so that they can easily walk many places. Specifically they were interested in encouraging new businesses to move to the College Hill Neighborhood to provide needed services (i.e. drug stores), and providing incentives to faculty and staff to live close to campus.

The group discussed raising parking fees and other punitive measures to reduce cars on campus, and did not dismiss these ideas, but felt overall that it was important to provide incentives more than deterrents – for example raising parking rates might discourage people from buying parking passes, but if they still commute and park their cars off-campus a few blocks away, we won't have accomplished our goals.

### **Campus Properties:**

The discussion in the campus properties break-out group included Internal and External environments. One of the group's areas of focus regarding components of a successful sustainability University program included the adoption by the President's Cabinet of well- integrated University sustainable practices and policies that would stand the test of time. These practices and policies should be based on an assessment (cost-benefit analysis) at the University level, Department level and individual level. The implementation of sustainable practices and policies must include a proactive educational/marketing campaign with incentives to generate campus pride in "being green". A plan needs to be established that will ensure that an appropriate accountability system is in place for on-going management and oversight of adherence to sustainable policies and practices.

The discussion originated six significant categories:

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**Natural systems:** The design and management of the natural systems would include numerous activities and practices related to the external environment. Some of the ideas are already in place and practiced by the Grounds Unit. Targeted practices that the group discussed included reducing areas that are mowed the traditional way and replaced by naturalization, which includes prairie plantings; the use of low-mow vegetation; composting plant material; reducing mowing frequency in selected areas; planting trees for carbon sequestering; implementing efficient planting strategies; reducing the use of commercial pesticides, herbicides and fertilizers and to implement xeriscaping and reducing the use of salt on sidewalks in the winter months to prevent die-off of the adjacent grass.

Other ideas included focusing on reducing storm-water runoff from parking lots and roof tops by developing more bio-swales; building rain gardens and developing wetland areas on campus; implementing improved flood plain management techniques and preservation management of existing outdoor spaces.

Ideas also were exchanged about how to utilize the outdoor environment for the benefit of the campus community. Those ideas included developing pathways through the shared open spaces for walking and relaxation and developing outdoor relaxation areas throughout the campus.

**Energy Production:** The University uses fossil fuels as primary fuel sources to generate heat and electricity for the campus. Ideas shared by the group included expanding the use of bio-based fuels; developing and implementing wind energy sources; utilizing solar energy systems and ensuring that the HVAC systems are efficient.

**Energy Utilization:** There are many accepted practices to conserve energy that can be implemented by the University. Those practices are not limited to building use, but also include vehicle use and personal behaviors in this category. Ideas included creating policies and practices to establish heating and cooling set points in buildings; purchasing organic and non-chemical cleaning supplies; ensuring that lights are turned off when not in use; implement lighting standards to take advantage of natural light; requiring appliances to have an energy star rating; replacing gas powered vehicles with electric vehicles where applicable; using bio-based fuels in the University's vehicles; working with the City of Cedar Falls to designate biking routes through town and implementing practices that would preclude the need for additional buildings and evaluating whether selected buildings can be eliminated.

**Building Utilization:** The academic buildings appear to be underutilized and the group discussed strategies regarding practices that could be adopted that would increase the efficiency of building use on campus. Ideas that were generated included more efficient classroom use and reducing the number of buildings in which evening classes and summer session classes were scheduled. The result would be that cooling and heating temperatures in classroom buildings that were not used during evenings and summers could be adjusted as a way in which to save energy.

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**Recycling:** The group agreed that to be effective, there was a need for a campus-wide coordinated recycling and reuse program. One program would support existing recycling strategies and support expansion of recycling throughout campus by assigning program responsibility and identifying resources needed to fully implement a campus-wide recycling program. A University program would likely provide an effective alternative to littering that is associated with some campus events. An often overlooked way of recycling includes the concept of the “reuse” of existing excess materials (furniture; equipment; clothing, etc.). Surplus furniture can be used by departments that may not possess the funds to purchase new; students leaving campus can have the option of donating used furniture and clothing to organizations that resell gently used materials (Salvation Army, St. Vincent de Paul, Goodwill) thereby avoiding excess material being sent to the landfill.

**LEED Standards:** Adopting LEED (Leadership through Energy and Environmental Design) standards for University buildings, either for new facilities or for renovating existing buildings would promote recycling of used materials; support preservation/reuse of existing building components; support the use of products manufactured with “natural” materials; promote the use of efficient HVAC systems; utilizing day lighting technologies in building construction/renovation; ensuring that contractors are following “best practices” for building and to the extent possible, make use of local contractors for construction/renovation projects. Implementing the use of alternative energy sources including wind energy, solar energy and green roofs would also promote environmental sustainability.

These words capture just the overview of the of the groups’ discussion and does not do justice to the detail of the ideas presented through this sharing opportunity. The persons attending this break-out session generated exciting ideas for discussion and displayed a real commitment to support the University moving in the direction of sustainable practices.

### **Sustainability in Student Life:**

Priorities:

1. Welcome Week Green event focusing on campus sustainability. New students will see reducing energy and acting in a sustainable way is part of their new UNI lifestyle. Show/tell what is done at UNI in Parent Preview Days and New Student Orientation. One student suggested a \$10 student sustainability fee to use for projects on campus.
2. Central recycling program on campus. Need to educate users and also people who empty the bins.
3. Real-time electricity monitoring on-campus to show carbon usage. Make energy use/water use visible. See Berea College and what they're doing.
4. Spring event for students as follow up to year-long student-led programming for on and off-campus students. At event students discuss their energy reduction ideas, barriers. Use student endorsements on how they can make it into a lifestyle choice.
5. Dining Services go trayless, begin composting. Start trayless in the fall with new group of students on campus so they see if just part of being a UNI student. More education

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(not policies) and let students know when this will happen. Need for psychological behavior change; let them know the impact of what they're doing.

6. Tuition rebate for no car on campus; Publicize shuttle bus, commuter bikes, remove pedestrian barriers, have Travel Board in Res Halls to encourage carpooling when students want to go home. One in Union for off-campus students to get to campus. Offer financial incentive like tuition break, \$35/credit for not buying parking pass; Make it visible; incentives to NOT bring car to campus. Provide Residence Hall commuter bikes; sponsor shuttle trips to HyVee and Walmart once a week and publicize.

7. Web site for info on energy conservation reduction; include practical ideas; make interactive. Want to have all UNI sustainability info in one place.

8. Acknowledge successes in energy reduction, sustainability. Some kind of reward/award program. No specific ideas came from this, but the UNI Energy Challenge is an example of what could be done. Maybe student success could be highlighted at the spring student campus conversation.

## **Appendix A**

### **Brainstorming Bullet Points Taken for Flip Charts for Each Breakout Session**

#### **Policies/issues for Campus Buildings**

- Long term reduction in coal/water use
- Expand campus wide recycling
  - Green committee in each building
  - Coordinator for each building
  - Designated areas
- Reduce energy consumption in all buildings
  - Policy on building use
  - Policy on temperature set point
  - Policy on personal office appliances
  - Policy on efficient building materials (Leed certification)
  - Integrate research into practice (bikes, wind turbine, green roofs)
  - Policy on procuring energy efficient equipment, lighting, etc.

#### **Sustainability in the Curriculum; \*indicates items that were circled.**

- Sustainability baseline for current practices
- What is sustainability
- What other institutions are doing
- Philosophy, action, design lifestyle project – 3 week program
- Student project – cutting back
- Imbedded in any class
- Interdisciplinary certificate\*
- New models of curriculum
- Student voice\*
- Community based programs on campus?
- List of 180 courses
- Web site
- Build into first year experience\*
- What do we want students to learn; empower
- Sustainability literacy
- Environmental emphasis in economics major
- Dept. of sustainability
- Nation-wide organizations?
- What have we done with AASHE?
- Getting things out there; use the word
- Global studies program; global resources and environment
- Global and domestic perspective
- \$ - budget cuts

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- Release time to write grants
- Best practices; ownership; coordinator; no silos
- Linke between department curriculum and activities
- Bridge gaps
- UNI Mission and vision\*
- Student research
- History- difficult with interdisciplinary units
- No rewards to participate in interdisciplinary initiatives
- Merit pay
- Michigan Tech model – De-couple from discipline based department\*
- Arizona State\*
- Virtual department\*
- List of faculty\*
- Hiring objectives/priorities for new faculty
- Change face of faculty
- Iowa Core curriculum – sustainability; add Lab School\*
- First year and all 4 years, no matter what discipline
- Service Learning; Hill, community, UNI\*
- Need to promote our activities and curriculum
- Inventory all courses and research and outreach and promote it.
- Connect the dots; we have a model; fragmented
- Problem based learning model\*
- Identify courses with sustainability focus in schedule of classes
- Certificate\*
- Certificate for public school; graduate level and non-gov; NGOs
- UNI-CUE
- Grants
- What is being legislated? One step ahead
- Research conference on sustainability
- Student research; institutional support-STEM
- Enhance LAC component; science
- Across LAC\*
- Faculty workshops for curriculum development; Carver
- Student group-diversify and funding
- **OUTCOMES and process: PRIORITIES**
  - Certificate-interdisciplinary
  - LAC-activity based learning
  - FYE- service learning; virtual department
  - Mapping of current initiatives, interests, expertise, resources
  - Who is passionate?

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- Transforming UNI's culture- publicize
- Structure for curriculum change-best practices
- Structure for assessing yearly
- Faculty development and reward structure

**Investments in Sustainability**

Reducing consumption (RC)

Recycling (Re)

Energy Usage (E)

Education (Ed)

Improvement (I)

Assessment (A)

- Measuring waste generation; RC, Ed, A
- Rooftop gardens; I
- Education on how to recycle; Ed
- Using 2 sides of paper and showing people how (equipment); RC
- Computer shutdowns at night; RC
- Evaluation of adequate lighting; A
- Thermostat adjustments; RC
- Environmentally friendly building materials; I
- Prioritize renovation of inefficient buildings in capital plan; I, RC
- Alternative plantings, reduce mowing, care; I
- Shutting off lights; auto shut offs, etc. RC
- Composting for food service; RC
- Separating trash in food service; RC
- Plastic recycling in Union; Re
- Recycling in buildings; Re
- Decrease paper towel use; awareness stickers, etc.; RC
- Decrease campus mail/printing such as schedule books, directories; RC
- Less sensitive toilets, RC
- Rearrange academic schedule to fit climate RC, E
- Investments in renewable energy smaller stand alone renewable energy; E
- Incentives for energy efficient technology; Ed
- Energy efficient washers and dryers for residence halls; RC
- Wind turbines and solar panels; I, E
- Use of deposit bottles and cans (and money from them) RC
- Fewer chemicals for landscaping, RC
- Garbage, what happens to it and how do we handle it?
- Document imaging on campus

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- Computer room consolidation
- Recycling computer room generated heat (use outside air to cool) E
- Overall recycling plan; comprehensive with data ; Re
- Evaluate the way mail is processed and directed; RC
- Incentives for community to participate; Ed
- More use of electronic forms; RC
- Student awareness and incentives; Ed
- More bicycle racks; I
- Improve metering system; I, A

**Campus Facilities**

- Develop/change policies and practice
- Manage storm water
- Building and lights; utilization policies
- Coordinated assessment, change, accountability
- Classroom utilization
- Integrate program to R, R, R
- Best practices; given to contractors; Education of construction community
- Local building contractor demos
- Building lights auto off/timer
- Mowing reduction
- More efficient pesticide, fertilizer applications
- Use more green vehicles
- Organic pesticides
- Preservation management (prairie, etc.)
- Building utilization
- Building recycling locations and bins\*
- Composting,
- Grass area
- Use of natural vegetation
- Efficient heating, ventilation, AC controls
- Plant waste reduction
- Alternatives to coal for energy
- Cleaning methods: organic, natural
- Faculty office light policy
- Tree planting
- Policy on energy: charge back to departments\*
- Campus competitions
- Policy on appliance use

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- Building materials for construction
- Efficient planting strategies
- Designated bike routes
- Buildings; basics before exotics
- Policies on energy and building use
- Prevention of poor usage
- Too many buildings? Sharing resources
- Policy on visiting buses; outlets to plug into
- Low hanging fruit- lighting and lights out; who is responsible
- Evening classes earlier
- Custodial staff earlier
- Fewer buildings at night
- Energy production and usage practices: internal/external
- Energy star lights
- Natural resources: Dry Run Creek; State bench marks; design utilization management
- Establish baseline on what we are doing
- Wise prioritizing
- New buildings; LEED; renovations
- Personal/individual self assessment: what am I using/doing;
- Shared facilities
- High quality appliances
- Motivation to change?
- Marketing campaign to reduce personal energy use
- Where do we dump the snow?
- 200 pounds of salt per person used
- Pedestrian campus
- What might be alternatives
- Sand? Building? Recycled glass?
- Bioswales; filter rainwater into ground
- Campus paths and shared open spaces
- Outdoor relaxation areas
- Natural systems: trees, wildlife, green corridors, creeks, outdoor spaces/systems designed to work with natural system
- Reduce salt usage
- Energy production
- LEED certification- as a campus
- Human generation- Rec Center energy

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- Use of perennials vs. annuals/ timing; planning; high visibility; wasting living things
- Rain garden; wetland area; filtration
- Preventative tree maintenance
- Less food waste; dining halls
- Expand preserve system on campus
- Flood plain management
- Quantifying value
- Green roofs
- Asset disposal (furniture, etc.)
- Gray water usage
- Quality pervious pavement
- Efficient vehicle usage
- Less paper and copying on campus
- Less littering
- Opportunities to redirect excess heat (tunnels)
- Just in time
- Use of plants with large experimental plots
- Low mow vegetation
- Creating policies and practices
- Action item changes: what do we know about what we are doing

**Transportation**

1. Improved public transportation
  - a. Study new routes; Greyhound service; MET, cities, shuttle, carpooling-incentives
2. Alternative transit/incentives
  - a. Cost benefit ratio
  - b. Discounts for transit passes/UNI ID
3. UNI motor vehicle use/efficiency
  - i. Coordinate rides;
  - ii. Fuel efficient vehicles;
  - iii. Fleet management
4. Neighborhood/employee proximity incentives
  - a. Work with the Hill
  - b. Incentives for fewer vehicles/parking passes
  - c. Change UNI culture

**Brainstorm list:**

- Pilots-assessments

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- Incentive program for new faculty to live closer to campus
- Expand public transportation
- Car pooling opportunities
- Tax free incentives for alternative transportation
- Incentive to restrict student vehicles
- flex hours for carpooling
- Coordinate trips for meetings, etc.
- I.T. for virtual meetings.
- Telecommute
- Coordinate travel across campuses and municipalities
- Short term/seasonal parking passes
- Work with MET transit and UNI system
- Map out demographics for MET transit; new routes?
- Reduce University vehicle use on campus
- Smaller vehicles for carpool\
- Identify where people live for carpooling

**Educating the campus community on sustainability: \* indicates priority**

- Build buildings so parts can be closed when not in use
- Motion detectors for lighting\*
- Policy for computers to shut off at night; copiers, appliances, etc.
- Heating/cooling systems that work so don't need fans, space heaters\*
- More light switches to turn off lights in individual areas\*
- Recycling centers in building, offices; use WRC model\*
- Better way to regulate heating\*
- Surcharge for appliances in office
- Room temperature restrictions for heating/cooling\*
- Be able to open windows
- Replace windows so they are energy efficient
- Green roofs
- Energy star equipment; need policy (already purchasing)
- Class consolidation; evenings in few buildings; summer\*
- Green committees in each building; coordinators; training occupants each semester\*
- Close PLS pool
- Stop gap measures for energy in-efficient buildings; caulking, weather stripping, etc.
- Install UV system on WRC pools\*
- Pool covers for WRC\*

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- Re-rev systems for bikes in WRC and MU fitness rooms; student driven
- Consistent programs to recycle books, unwanted library materials\*
- Establishment of building hours\*
- LEED certification for new and renovated buildings\*
- Enforce building close downs\*
- In critical spaces have individual controls for HVAC\*
- Consolidate department servers into data centers\*
- Develop long term plan to decrease dependence on coal use and to reduce well water usage\*
- Solar hot water heaters for showers in swimming pools\*
- Install on demand water heaters\*
- Develop policy plan for copiers, printers, etc. to share/standardize\*
- Purchase energy efficient products, building materials, lighting, equipment, etc.\*
- Contest between buildings/residence halls for fun competition; student driven; need to meter buildings

**Sustainability and Student Life**

- Visit with Morris and dean to talk about standards and codes
- New standards
- Approval by DOR and Foundation
- Life of Dave and Cindy
- No East \_\_\_\_ promise. Note: I could not figure this word out.
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