UMD Sustainability Education Initiative

Report for the UMD Strategic Plan Initiative: Sustainability Projects

2012-13

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Executive Summary

A team of faculty and staff who were working on sustainability education across the UMD campus procured grants from the Chancellor’s Strategic Plan Initiative (Sustainability Projects) and from the Chancellor's Small Grant Program through the College of Education and Human Services to design a campus-wide plan to provide sustainability education. These grants were combined to determine the interest and needs of UMD employees regarding sustainability education and training, so that UMD can move forward to become a model of sustainability.

This project supports many of UMD’s Goals listed within its Strategic Plan, both directly and indirectly.

- Goal 6: This project directly supports the advancement of sustainable knowledge and practices that will positively impact many elements of UMD.
- Goal 1: Ultimately, a key part of this project is to advance curricular, co-curricular, and living-learning opportunities for students toward sustainability.
- Goal 2: We believe that sustainability education supports the elements of equity, diversity, and social justice.
- Goal 5: To move sustainability education forward, it is important for the University to contribute as well as use expertise in the community through mutually beneficial partnerships.

As result of a campus-wide survey, data from prior projects, and a literature review, the following are recommendations broken down into six categories:

Communication

- Provide regular (at least weekly) blog postings related to sustainable activities/actions that are occurring on campus as well as tips for taking action. The campus community should be notified of the opportunity to access this blog each fall, with a reminder in the spring. New employees should be informed of the blog during their orientation.
- Create a quarterly e-Newsletter that summarizes sustainability related topics during the past period that are newsworthy. The newsletter should be disseminated through the UMD.Business.Announce email.
- Build upon the successes of the Office of Sustainability to use social media tools to get info out about sustainability.
- We recommend that someone in each division take on the role of “sustainability liaison” to work with the Office of Sustainability, and be part of the sustainability committee, to communicate the activity in that division and assist in supporting
sustainability efforts. This role would also help in alleviating overlap of similar events at the same time.

Training

- An office, such as the UMD Instructional Development Services (I.D.S.), becomes the lead in providing training in these topic areas, with direction and support from the Office of Sustainability and the UMD Sustainability Education Sub-committee (already in existence). For this to occur, however, the mission of the selected office (I.D.S.) would need to be expanded to include the non-faculty staff of UMD as recipients of its services.

Time

- Provide faculty with some level of release time to incorporate sustainability into their curricula or learn more about sustainability in their field.
- Allow staff to participate in officially sponsored trainings in sustainability that may pertain to their work area.

Visibility

- Develop a centralized site for a “Center for Sustainability” that would house the Office of Sustainability (or at least a portion of it) and provide a contact and information point for sustainability on campus.
- Expand upon the signage around campus to portray the sustainable practices, modeled after some of the signage already in place (for example: rain gardens, Bagley Classroom).

Collaboration

- Provide staff with opportunities, either through electronic or in-person means to discuss and brainstorm best practices for sustainability. For example, purchasers in departments may be able to share the sustainable products they use and the source, or office staff could brainstorm how to reduce paper consumption.
- Continue the “Course Design for Sustainability” program established by Instructional Development Services.
- Encourage collaboration across work units.
- Deliberately allow promotion and tenure for activities that are collaborative across work units and within the greater off-campus community. Faculty who collaborate with others at UMD and off campus should get "credit" for sustainability work in the tenure and promotion process.
Consistency

- Create a uniform set of criteria to guide sustainable practices and instruction/curricula across campus, while still allowing the appropriate, independent educational approach per discipline. These criteria should be based on the UMD Strategic Plan and the U of M’s sustainability initiatives. This should be the responsibility of the UMD Sustainability Committee.

Coordination

- Create a formally recognized team (possibly modelled after the Campus Change Team and/or Unit Change Team) that takes this role. The Sustainability Committee should be the formal, recognized committee that takes this role (or the Education Sub-Committee of the Sustainability Committee).

Implementation and Maintenance

- Establish performance goals and assess the success of delivery and changes in sustainable practice at UMD in both academic and non-academic realms
- Adjust accordingly
Table of Contents

Executive Summary .............................................................................................................. i
List of Figures .................................................................................................................. 2
List of Tables ..................................................................................................................... 3
Introduction ....................................................................................................................... 4
Goals and Process ............................................................................................................. 5
Literature Review ............................................................................................................. 6
Methods ............................................................................................................................ 10
Results ............................................................................................................................... 11
Recommendations ............................................................................................................ 25
References ......................................................................................................................... 29
Appendices ......................................................................................................................... 30

Appendix A ......................................................................................................................... 30
Websites of 7 Universities Incorporating Sustainability Education

Appendix B ......................................................................................................................... 31
UMD Survey for Training for Sustainability and Sustainability Education

Appendix C ......................................................................................................................... 34
UMD Student Life Sustainability Practices As Reported By Department

Appendix D ......................................................................................................................... 43
Green Your Office: Sustainability Practices for Departments
List of Figures

Figure 1 Eco-Rep Program Logic Model................................. 9
Figure 2 Respondents by position ........................................ 12
Figure 3 Summary of interest in sustainability projects.............. 13
Figure 4 Motivations towards supporting sustainability .......... 16
Figure 5 Sustainability training received by staff .................... 17
Figure 6 Interest towards sustainability training methods .......... 18
Figure 7 Sustainable practices seen in the work area ............... 21
List of Tables

Table 1 Common Eco-Reps Programs .................................................................9
Table 2 Level of motivation towards sustainability by job.................................14
description
Table 3 Support of sustainability efforts by department ..................................15
Table 4 Interest toward sustainability training methods ....................................19
by campus unit
Table 5 Desired sustainability training topics ..................................................20
Table 6 Sustainability practices respondents wished to see ............................22
in their department
Table 7 Non-sustainable practices observed within departments ....................23
Table 8 Tracking of sustainability-related information .................................23
Introduction

Responding to proposals aiming to implement the campus strategic initiative for sustainability, a team of faculty and staff who were working toward sustainability education across campus and within their colleges procured grants from the Chancellor’s Strategic Initiative fund and from the College of Education and Human Service Professions Chancellor’s Small Grant program to design a campus-wide plan to provide sustainability education. These two grants were targeting faculty and academic programs. A second grant from the Chancellor’s Strategic Initiative fund was awarded to provide sustainability training for Student Life employees. From these two grants, it was determined that it would be beneficial to survey all UMD employees in all units across campus to determine their motivations, support and needs to receive training to provide sustainability education to students as well as sustainable practices within their units. Subsequently, this report has blended all three grants to determine which sustainability training approaches are most preferred by all full-time employees to best attain sustainability education and management within all campus units to meet goal six of the UMD campus Strategic Initiative.

The starting point was to provide a definition of sustainability since it appeared that there were various ideas of what sustainable practices means, based upon anecdotal discussions with faculty and staff around campus as well as by evidence in the wide range of courses that were proposed as meeting the Liberal Education Sustainability requirement. Simultaneous with the UMD Strategic Plan was the University of Minnesota President’s Initiative on Sustainability. Sustainability has been defined by the U of M System-wide Task Force on Sustainability and by the UMD Office of Sustainability as follows:

“Sustainability is often defined as “development that meets present needs without compromising the ability of future generations to meet their needs.” Put simply, sustainability is about being responsible with our resources. It is about not using more than our share. It is making sure there is enough, for all, forever.” (Annual Report to President Kaler, 2012, p.4; https://umdsustain.wp.d.umn.edu/)

This definition is based upon what is perhaps the most commonly used definition of sustainability defined in the Brundtland Report (1987) which determined that sustainable practice needs to include a balance between ecological, economic, and community needs while allowing future generations to meet their needs.

We feel that there needs to be a uniformly agreed upon definition of sustainability to guide consistent practices throughout the UM system. Following the Brundtland definition, key concepts of sustainability were determined so that basic issues could be addressed to achieve sustainability both in practice and in students’ education at the University of Minnesota.
The key elements of sustainability need to include the balance of ecological integrity, economic stability, and social (community) acceptance.

The UM system-wide Sustainability Committee has identified the following issues:

- Sustainability initiatives are disconnected
- There is insufficient communication between sustainability initiatives
- There are critical gaps in content and skills offerings
- It will be vital to integrate community-based projects into the curriculum
- Since students spend more time out of class, it is felt that co-curricular activities within student life plays a crucial role to foster sustainability attitudes and practices. In short, student life is perceived as the primary area to establish a culture of sustainability.

**Goals and Process**

This project has been a combination of two projects supported by the Strategic Plan Initiative: The UMD Sustainability Education and Outreach Initiative and the UMD Sustainability Education Initiative: Student Life. The goals for this project are to:

- **Gather data** to determine how sustainability education is currently occurring at UMD.
- **Identify opportunities** to expand sustainability education
- **Determine what resources and training the staff need** to provide sustainability education in their work area, and,
- **Design a plan for sustainability education**

This project follows what is called the R.P.T.I.M. model (Wood, F.; Thompson, S.; Russel, S.; & Francis, 1981). Applying the R.P.T.I.M. approach, the phases of determining and implementing a campus-wide sustainability education program are identified as:

- **Readiness:** The President of the U of M and the Chancellor of UMD through the UM system-wide sustainability committee and the UMD Strategic Plan and Sustainability Committee have put into place the strategic elements for sustainability education.
- **Planning:** The phase we are currently in (the focus of this project)
- **Training:** Training faculty and staff on a campus-wide basis
- **Implementation:** Putting the education plan into action on a systemic and sequential manner.
- **Maintenance & Assessment:** Ensuring that the training, delivery, and educational support are appropriately maintained so the organizational development remains sustainable.

This approach was designed for teacher training workshops. Different styles of this approach have been identified, yet they are fundamentally the same. Thus, we determined that the Wood, et.al. (1981) approach to sustainability education provides the most practical
approach to the purpose of this report as well as providing the most sound theoretical foundation for using the R.P.T.I.M. approach.

**Literature Review - Sustainability in Higher Education**

**Academic Programs**

A literature review was conducted to determine what other campuses were doing to provide sustainability education for the benefit of their students. We were seeking examples that could provide specific examples of pedagogical approaches to teaching sustainability in higher education. While there are numerous examples of higher education institutions showing what they are doing via their websites, there were five examples of sustainability education (SE) that had clear goals toward enhancing curricula. Those institutions are: Emory University, Georgia (Piedmont Project); Indiana University, Bloomington; Oberlin College, Ohio; University of Oregon (Sustainable Cities Initiative); the University of British Columbia; and, Arizona State University. While none of the sources we found provided any specific pedagogical approach to SE, they all had a set of goals to attain SE that were common among all five. They are:

1. Reduce barriers for faculty to offer applied learning experiences.
2. Create a campus culture to collaboration among faculty from different disciplines. Included with this goal was the emphasis to allow that collaboration and the outcomes (e.g. publications and practices) to count toward promotion and tenure.
3. Reinforce the mission of the university to make connections and contributions within the state.
4. Encourage engaged and experiential learning on a broad scale while reducing the logistical and time commitments for faculty-community partnerships (University of Oregon, 2011) (See Appendix A for in-depth information).

Perhaps the most guiding source for sustainability in higher education is the “2012 Higher Education Sustainability Review” (Association for the Advancement of Sustainability in Higher Education. [http://www.aashe.org/](http://www.aashe.org/)). While there are numerous examples of projects and changes across the world in higher education, there is yet to be guidance on pedagogical approaches for faculty and staff beyond the five key concepts identified above.
**Student Life**

This section reviews literature pertinent to sustainability education in student life programs within university settings. The areas of literature reviewed focus on creating sustainable behavior change and best practices for student life sustainability education.

**Creating Sustainable Behavior Change**

The ultimate goal of sustainability education in student life programs is to create a campus culture that is collectively devoted to sustainable living practices. In order to change the culture of a campus, change must begin with individual student behavior. The *Best Practices Guide: How student affairs professionals can contribute to campus climate neutrality* produced by the Association for the Advancement of Sustainability in Higher Education (AASHE) identifies the following three strategic behavioral requirements for change: knowledge and action, personal change, and contextual change.

The first strategic behavioral requirement of **knowledge and action** is simply summarized as, “students must have knowledge of the problem and potential ways they can contribute to the solution.” (Speers, 2007, p. 5). Without the appropriate knowledge of a problem, individuals are not likely to actively participate in a solution to the problem. It is important to provide students with knowledge of the problem as well as knowledge of how their actions can impact and contribute to the solution. With this knowledge students are more likely to actively participate in the solution.

The second strategic behavioral requirement of **personal change** can be summarized as, “[students] must be motivated to change their behavior.” In order for personal change in behavior to occur it is important to change how individuals see themselves. If students see themselves as supporters of sustainability, they are more likely to “engage in the action they are promoting” (Speers, 2007, p. 6). Once students see themselves differently, they must commit to changing their behavior. This can be done through signing a pledge stating they are committed to action. The best practice for personal change is through Community-Based Social Marketing (CBSM). According to Speers, “CBSM works by identifying and increasing appropriate benefits and decreasing barriers to a particular behavior.” CBSM is described as marketing that “draws heavily on research in social psychology which indicates that initiatives to promote behavior change are often most effective when they are carried out at the community level and involve direct contact with people” (Erickson, 2012).

The third and final strategic behavioral requirement is **contextual change**. The culture that the university is portraying must be one of sustainability. According to Speers (2007), “The goal of [student life] professionals should be to create a context in which a student must embrace sustainable living in order to feel like a true member of the campus community.” To create a sustainable context students should be educated on sustainability during their
first campus experiences. Sustainability should be a topic during new student orientation and other programming that occurs during the start of the academic year. Upon welcoming new students into the campus community university administrators should endorse sustainable behaviors.

It is through these three strategic behavioral requirements for change that sustainability education programs should be developed. By providing knowledge, helping change individual behavior, and changing the context of the university setting sustainability education programs will change campus culture to one focused on sustainability.

**Best Practices for Student Life Sustainability Education Programs**

Increasing numbers of universities and other institutions of higher education across the country are committing to sustainability in varying capacities. There is literature outlining and describing sustainability education programs, simply called inreach, but little research has been conducted on the successes or failures of such programs. The literature *Environmental Sustainability ‘Inreach’: How the Campus Community Informs Itself About Environmental Issues* by Townsend (2005) addresses this issue. According to Townsend, “Despite the valuable benefits that inreach can accomplish, from publicizing existing campus sustainability efforts to increase compliance to raising general environmental awareness, little is known about the extent to which universities are using this strategy or about the program structures, methods, or success of inreach efforts.”

Despite the lack of systematic data for support, there is one model of sustainability education program that is most common for institutions of higher education committed to sustainability called the “Eco-Rep” program. Eco-Rep programs are peer-to-peer communication programs which Speers states, “are one of the most effective ways to change student behavior.” Christina Erickson, Sustainability Director at Champlain College, has written a guide on such programs titled *Student Sustainability Educators: A Guide to Creating and Maintaining an Eco-Rep Program on Your Campus* (2012). Erickson (2012) describes Eco-Rep programs as student-based programs that have the following characteristics: focus on sustainable living practices, are based in residential buildings, use peer education techniques, and have a direct relationship with or are supervised by an employee of the institution.

Eco-Rep programs build a collective of actively engaged students devoted to educating their peers on sustainability issues and solutions (see figure 1). According to Speers (2007), these programs work because “[students] are more likely to accept and absorb new information when their peers are the informants.” These programs reach a broader student audience than just individual students who already participate in sustainable behaviors. The following logic model demonstrates how such programs produce desired sustainable outcomes:
Figure 1. Eco-Rep Program Logic Model (Erickson, 2012, p. 5)

When this guide was written there were over 60 active Eco-Rep programs within institutions across the United States and Canada. The guide was written with collaboration from many Eco-Rep program coordinators, willing to share their experiences and resources. *Student Sustainability Educators* is edited by the Association for the Advancement of Sustainability in Higher Education, the association dedicated to setting the industry standards for this particular field of education. The guide provides an included appendix with example activities, events, job descriptions, and organizational tools collected from many different programs. Table 1 is a list of popular events and activities common of Eco-Rep programs.

Table 1. Common Eco-Rep programs

<table>
<thead>
<tr>
<th>Bathroom Stall Newsletters</th>
<th>Bulb Swaps</th>
<th>Bulletin Boards</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBSM projects</td>
<td>Door-to-Door Outreach</td>
<td>Electricity Reduction Competitions</td>
</tr>
<tr>
<td>Event Promotion and Participation</td>
<td>Facility Tours</td>
<td>Film Nights</td>
</tr>
<tr>
<td>Green Room Certification</td>
<td>Potlucks</td>
<td>Recycling Room Audits</td>
</tr>
<tr>
<td>Social Media and Film</td>
<td>Tabling</td>
<td>Visual Displays</td>
</tr>
<tr>
<td>Waste Sorts</td>
<td>Zero Waste Events</td>
<td></td>
</tr>
</tbody>
</table>

Competitions are the only activity that has data to support their influence on sustainable practices that have reduced energy consumption. According to Speers (2007), “Contests
provide a tangible cause and effect relationship between students' actions, the amount of energy they consume, and the amount of carbon they generate.” During an energy reduction competition between resident halls and apartment complexes at the University of New Hampshire, the following results were achieved (Speers):

- Approximately 300,000 kilowatt hours in electricity
- $40,000 in energy and water costs
- Almost 200 metric tons of carbon
- The winning dorm reduced its energy use by 28%.

Similar results were achieved in a related competition program at Oberlin College put on by the campus’ Eco-Rep program.

**Conclusion**

It appears that the Eco-Rep program model is the ideal and most common model for student life sustainability education programs. It allows a campus to create a group of educated, informed, and engaged sustainability leaders while reaching out to the broader campus community. Peer-to-peer communication programs work because students are more likely to absorb and accept information provided to them by their peers rather than adults. By using the three strategic behavioral requirements for change these programs can contribute to changing the campus culture to one focused on and devoted to sustainability. These conclusions were supported by the study that Tom Beery (2012) conducted with UMD students. In short, students seek concrete projects/activities that require specific action and produce measurable results.

**Methods**

Methods involved three phases. Phase one was implemented by Dr. Geoff Bell in the Labovitz School of Business and Economics. Dr. Bell surveyed all faculty on campus to determine how many and which courses have sustainability as a part of the curriculum.

His results revealed that there were 40 courses providing SE. This may seem impressive. However, when compared to the total number of courses provided on the UMD campus each term, 1,345, a clearer picture of our potential emerges. That is, at best, our campus is attaining 10% of its potential (estimating for non-responses) and at worst only 3% (Bell, 2012; UMD CDI 2012-2013).

Second, Dr. David Syring from the Department of Sociology/Anthropology conducted a series (5) focus groups with faculty in the Spring of 2013. The faculty represented disciplines from across campus. Results of Dr. Syring were that faculty favored either a mentor type of training and/or short 1-2 hour training sessions. Three to five day intensive workshops (much like Tech-Camp) were deemed the least favorable.
Third, an electronic survey was designed to query all employees from all units across the entire UMD campus. Survey categories included: understanding of sustainability; motivation to participate in sustainability efforts; support from supervisors; and types of training preferred to be able to provide sustainable practices and/or education. The survey was administered during the first three weeks of Fall term, 2013 (Sept. 3-20). Campus Labs was the survey program used to present and analyze the survey (See Appendix B for a copy of the survey). Validity (face, content, and criteria) of the survey was conducted using a panel of sustainability faculty and staff. Finally, the survey was pilot-tested with a select group of 5 sustainability education team members.

Results

Demographics

A total of 604 respondents completed the survey in full, which accounted for 37% (N=1,631) of the employees who received the survey. Of the 604 responses, 559 were valid responses. Of the 559 respondents, 30% (n = 182) identified as working in the Academic Affairs division, 13% (n = 81) identified as working with Student Life, and 38% (n = 230) listed their division as “Other”. The remaining percentage of respondents was divided into Finance and Operations, Chancellor’s Units, or did not know their division. There appeared to be some confusion as to which division faculty were a part of (based on a cross tabulation with question #2), as 47% (n = 84) of faculty respondents associated with Academic Affairs and 43% (n = 78) listed their division as “Other” (see Figure 1).

Respondents by division.

In terms of actual job position, 30% (n = 180) of the respondents identified as faculty, 19% (n = 112) identified as P&A, 18% (n = 110) identified as Civil Service, 13% (n = 77) identified as AFSCME Clerical, and 9% (n = 53) identified as Civil Service V-Class. The remaining respondents were spread among the Teamster, AFSCME Technical, AFSCME Health Care, and University Police positions (see Figure 2).
Figure 2. Respondents by position.
**Interest Towards Sustainability**

91% (n = 548) of respondents expressed some type of positive interest towards sustainability efforts and projects in their departments (see Figure 3).

![Interest towards sustainability](image)

**Figure 3.** Summary of interest in sustainability projects.

By cross-referencing the results of Question 2 with the results of Question 3, interest in sustainability is distributed across different job positions. For example, 86% (n = 154) of the faculty were either “Somewhat” or “Very” interested in sustainability, while the remaining 14% (n = 26) either had little or no interest, or didn’t know their level of interest. The complete table showing the distribution of attitudes towards sustainability by department is shown in Table 2.
Table 2. Level of motivation towards sustainability by job description.

Q3. To what extent are you motivated in efforts and projects involving sust. in your department?

<table>
<thead>
<tr>
<th></th>
<th>Faculty (n=180)</th>
<th>P &amp; A (n=112)</th>
<th>Civil Service (n=110)</th>
<th>AFSC ME Clerical (n=77)</th>
<th>Civil Service V-Class (n=53)</th>
<th>Teams (n=32)</th>
<th>AFSC ME Tech (n=18)</th>
<th>DK (n=16)</th>
<th>AFSCME Health Care (n=3)</th>
<th>Police (n=3)</th>
<th>Total (n=604)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somewhat or Very Motivated</td>
<td>85.56%</td>
<td>94.64%</td>
<td>89.09%</td>
<td>94.80%</td>
<td>93.34%</td>
<td>96.88%</td>
<td>88.89%</td>
<td>93.75%</td>
<td>100%</td>
<td>66.67%</td>
<td>90.73%</td>
</tr>
<tr>
<td>Very Little or Not at All Motivated</td>
<td>12.77%</td>
<td>5.36%</td>
<td>6.37%</td>
<td>3.90%</td>
<td>5.66%</td>
<td>0.00%</td>
<td>11.12%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>33.33%</td>
<td>7.45%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>1.67%</td>
<td>0.00%</td>
<td>4.55%</td>
<td>1.30%</td>
<td>0.00%</td>
<td>3.13%</td>
<td>0.00%</td>
<td>6.25%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>1.82%</td>
</tr>
</tbody>
</table>

Support for Sustainability

The survey also measured how well individuals thought they would be supported by their department in sustainability efforts and projects. 80% (n = 385) of the respondents thought they would either be “Very” or “Somewhat” supported in their efforts, with the remaining 20% (n = 118) feeling either neutral, undecided, or negative about the amount of support they would receive. By cross-referencing the results of this item with the division background of the respondents, it is possible to see each division’s average view of how well-supported it is. The results of this analysis are listed in Table 3.
Table 3. Support of sustainability efforts by department.

<table>
<thead>
<tr>
<th>Q5. To what extend do you feel your department will be supportive in your efforts and projects involving sustainability?</th>
<th>Other</th>
<th>Acad Affairs</th>
<th>Student Life</th>
<th>Finance and Operat</th>
<th>Chanc Units</th>
<th>Don't know</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very or Somewhat Supportive</td>
<td>78.26%</td>
<td>82.42%</td>
<td>88.89%</td>
<td>84.00%</td>
<td>76.47%</td>
<td>55.55%</td>
<td>80.30%</td>
</tr>
<tr>
<td>Neutral, Very little, or no support</td>
<td>16.95%</td>
<td>12.09%</td>
<td>11.11%</td>
<td>12.00%</td>
<td>14.71%</td>
<td>22.22%</td>
<td>14.41%</td>
</tr>
<tr>
<td>Don't know</td>
<td>4.78%</td>
<td>5.49%</td>
<td>0.00%</td>
<td>4.00%</td>
<td>8.82%</td>
<td>22.22%</td>
<td>5.30%</td>
</tr>
</tbody>
</table>

Motivations Toward Sustainability

Question 4 of the survey measured respondents’ motivations towards supporting sustainability. Respondents were able to select as many motivations towards sustainability that they wanted, as well as to provide their own motivations if they were not listed as a response choice. Thus, the following percentages reflect proportion of respondents that selected that particular response as at least one of their choices.

- 80% (n = 484) of respondents support sustainability because it is the right thing to do.
- 80% (n = 483) of respondents support sustainability because it is helpful towards the environment. The next tier of responses seems to mostly tie into supporting sustainability as a means of supporting the community.
- 46% (n = 281) selected “social reasons” as a motivation.
- 46% (n = 276) chose helping their department save money as a reason.
- 45% (n = 274) were motivated out of a desire to support the campus plan.
- 38% (n = 232) desired to support their department through sustainability. The summary of all responses can be seen in Figure 4.
Figure 4. Motivations towards supporting sustainability.

**Previous Sustainability Training**

Seventy-one percent (n = 428) of the respondents had at least some prior sustainability training, ranging from mentoring to multi-day workshops. The most common type of training was reading about sustainability tips and ideas through some form of online media, such as a blog or website. 56% (n = 338) of the respondents indicated they had used this method at some point. The training type used least frequently was multi-day workshops, as only 2.48% (n = 15) of respondents had been trained in that method (see Figure 5).
Preferred Types of Sustainability Training

In terms of what types of training programs the employees would like to see, most requested \((n = 498)\) some form of online blog, website, or newsletter dedicated to sustainability tips and ideas. At a more detailed level:

- 48\% \((n = 268)\) of respondents wanted a quarterly UMD newsletter on sustainability.
- 41\% \((n = 230)\) requested a website or blog to provide sustainability tips.
- 30\% \((n = 167)\) wanted 1-hour brown bag training workshops.
- 13\% \((n = 73)\) did not want any kind of sustainability training. There were a few free responses that indicated that staff did not feel they had time to add another requirement onto their pre-existing duties.

Other responses noted that, if a sustainability newsletter were to be produced, it would be best if it was a digital newsletter since that would eliminate waste and send a good example to the rest of the community (see Figure 6).
Figure 6. Interest towards sustainability training methods.
Table 4. Interest toward sustainability training methods by campus unit.

<table>
<thead>
<tr>
<th>Method</th>
<th>Academic Affairs (n = 458)</th>
<th>Student Life (n = 208)</th>
<th>Finance and Operations (n = 127)</th>
<th>Chancellor's Units (n = 84)</th>
<th>Other (n = 506)</th>
<th>Don't know (n = 56)</th>
<th>Total (n = 1439)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A quarterly UMD newsletter on sustainability efforts on our campus</td>
<td>18.78%</td>
<td>15.87%</td>
<td>22.05%</td>
<td>20.24%</td>
<td>18.58%</td>
<td>17.86%</td>
<td>18.62%</td>
</tr>
<tr>
<td>(including updates on trends, news items, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustainability ideas and tips via a blog or website</td>
<td>15.72%</td>
<td>16.83%</td>
<td>14.17%</td>
<td>14.29%</td>
<td>16.01%</td>
<td>21.43%</td>
<td>15.98%</td>
</tr>
<tr>
<td>Short “brown bag” type workshops (1 hour) on specific topics</td>
<td>11.79%</td>
<td>12.98%</td>
<td>12.60%</td>
<td>9.52%</td>
<td>10.47%</td>
<td>16.07%</td>
<td>11.61%</td>
</tr>
<tr>
<td>Online training (e.g., webinar, coursework, video)</td>
<td>7.64%</td>
<td>12.02%</td>
<td>7.87%</td>
<td>7.14%</td>
<td>8.30%</td>
<td>3.57%</td>
<td>8.34%</td>
</tr>
<tr>
<td>Department allowing time for professional development related to</td>
<td>6.55%</td>
<td>6.73%</td>
<td>7.09%</td>
<td>11.90%</td>
<td>9.49%</td>
<td>8.93%</td>
<td>8.06%</td>
</tr>
<tr>
<td>sustainability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brainstorming sessions with people who do the same type of work as me</td>
<td>6.77%</td>
<td>9.62%</td>
<td>7.87%</td>
<td>5.95%</td>
<td>6.32%</td>
<td>5.36%</td>
<td>7.02%</td>
</tr>
<tr>
<td>Short 2-3 hour workshops</td>
<td>6.55%</td>
<td>10.58%</td>
<td>3.15%</td>
<td>3.57%</td>
<td>5.14%</td>
<td>7.14%</td>
<td>6.18%</td>
</tr>
<tr>
<td>Work on shaping sustainability policy</td>
<td>6.11%</td>
<td>5.77%</td>
<td>5.51%</td>
<td>8.33%</td>
<td>4.74%</td>
<td>1.79%</td>
<td>5.49%</td>
</tr>
<tr>
<td>I'm not interested</td>
<td>4.59%</td>
<td>2.40%</td>
<td>6.30%</td>
<td>3.57%</td>
<td>6.13%</td>
<td>8.93%</td>
<td>5.07%</td>
</tr>
<tr>
<td>Financial support from department to attend conferences and workshops</td>
<td>4.15%</td>
<td>1.92%</td>
<td>6.30%</td>
<td>4.76%</td>
<td>5.73%</td>
<td>5.36%</td>
<td>4.66%</td>
</tr>
<tr>
<td>Discussion and/or book groups</td>
<td>3.71%</td>
<td>2.88%</td>
<td>3.15%</td>
<td>2.38%</td>
<td>3.16%</td>
<td>3.57%</td>
<td>3.27%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>4.15%</td>
<td>0.96%</td>
<td>0.79%</td>
<td>2.38%</td>
<td>3.36%</td>
<td>0.00%</td>
<td>2.85%</td>
</tr>
<tr>
<td>Having a mentor that helps me</td>
<td>1.75%</td>
<td>1.44%</td>
<td>0.79%</td>
<td>4.76%</td>
<td>1.98%</td>
<td>0.00%</td>
<td>1.81%</td>
</tr>
<tr>
<td>2-3 day training</td>
<td>1.75%</td>
<td>0.00%</td>
<td>2.36%</td>
<td>1.19%</td>
<td>0.59%</td>
<td>0.00%</td>
<td>1.04%</td>
</tr>
</tbody>
</table>
Preferred Sustainability Training Topics

In addition to the format of training the staff would like to see, the questionnaire also collected ideas about sustainability topics. Many of the respondents provided topic ideas that ranged from information about the economics of sustainability to the science of energy conservation. Since this was an open response question, a wide variety of topics were suggested. In order to provide an effective summary, they have been categorized and organized in Table 5.

Table 5. Desired sustainability training topics.

<table>
<thead>
<tr>
<th>Training Topic</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycling/Reduction</td>
<td>17</td>
</tr>
<tr>
<td>Education</td>
<td>16</td>
</tr>
<tr>
<td>Any</td>
<td>18</td>
</tr>
<tr>
<td>Energy</td>
<td>12</td>
</tr>
<tr>
<td>Communication</td>
<td>11</td>
</tr>
<tr>
<td>Building Design/Technology</td>
<td>8</td>
</tr>
<tr>
<td>Economics</td>
<td>8</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>6</td>
</tr>
<tr>
<td>Integration</td>
<td>5</td>
</tr>
<tr>
<td>Culture/Social Justice</td>
<td>4</td>
</tr>
<tr>
<td>Daily Life</td>
<td>4</td>
</tr>
<tr>
<td>General Workplace</td>
<td>3</td>
</tr>
<tr>
<td>Transportation</td>
<td>3</td>
</tr>
<tr>
<td>Healthcare</td>
<td>2</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>2</td>
</tr>
<tr>
<td>Arts</td>
<td>1</td>
</tr>
<tr>
<td>Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>Climate Change</td>
<td>1</td>
</tr>
<tr>
<td>Population</td>
<td>1</td>
</tr>
<tr>
<td>Nothing/Don't Know</td>
<td>15</td>
</tr>
</tbody>
</table>

As can be seen in Table 4, the requested training topics cover a wide range of issues. Sustainability education, energy consumption, and recycling/reduction were the most requested categories. Of those that indicated not being interested in receiving training in sustainability, some commented that they already had a great deal of duties scheduled and thus did not feel that they could accommodate another responsibility.
**Sustainable Practices Observed**

Respondents to the survey indicated a wide range of sustainable actions seen in practice in their departments. Many of the practices fell into the realm of recycling and reduction or reduced energy consumption. The practices most lacking in department use were economics (4%), composting (3%) and protected land use (2%). The complete report of these responses can be seen in Figure 7.

![Sustainable practices in work area](image)

**Figure 7.** Sustainable practices seen in the work area.

**Preferred Sustainability Practices**

A follow-up question also asked participants what practices they would like to see in their department. Once again the responses included a wide variety of requests, but the most sought-after practices were energy reduction, waste reduction, and recycling. These results closely match up with the practices that were already seen in the departments, suggesting that many of the respondents wish to see more of what is already being done, or in some cases the same practices done to a larger scale. These findings also reveal a lack of perspective in teaching sustainability in areas other than the “traditional” such as in the arts and/or humanities. For example, understanding of sustainability can be quite useful in courses such as writing, social justice, or artistic expression that does not need to focus on energy, recycling, or food use. The full results of this response can be seen in Table 6.
Table 6. Sustainability practices respondents wished to see in their department.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Use Reduction</td>
<td>60</td>
</tr>
<tr>
<td>Waste Reduction</td>
<td>42</td>
</tr>
<tr>
<td>Recycling</td>
<td>28</td>
</tr>
<tr>
<td>Sustainable Products</td>
<td>18</td>
</tr>
<tr>
<td>None</td>
<td>17</td>
</tr>
<tr>
<td>Education/Training</td>
<td>16</td>
</tr>
<tr>
<td>Composting</td>
<td>16</td>
</tr>
<tr>
<td>Communication</td>
<td>10</td>
</tr>
<tr>
<td>Gardens/Food</td>
<td>7</td>
</tr>
<tr>
<td>Transport</td>
<td>6</td>
</tr>
<tr>
<td>Other Operations</td>
<td>5</td>
</tr>
<tr>
<td>Local Shopping</td>
<td>4</td>
</tr>
<tr>
<td>Finance</td>
<td>4</td>
</tr>
<tr>
<td>Social Justice</td>
<td>3</td>
</tr>
<tr>
<td>Power Generation</td>
<td>2</td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>1</td>
</tr>
</tbody>
</table>

Non-Sustainable Practices Observed

In addition to sustainable practices seen on-campus, the survey recorded practices that the respondents observed within their departments that were not sustainable. These responses ranged from paper waste to lack of social justice, but most had to do in some part with resource use. The responses are summarized in Table 7.
Table 7. Non-sustainable practices observed within departments.

<table>
<thead>
<tr>
<th>Practice</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper Waste</td>
<td>48</td>
</tr>
<tr>
<td>Inefficient Energy Use</td>
<td>48</td>
</tr>
<tr>
<td>Non-paper Resource Waste</td>
<td>17</td>
</tr>
<tr>
<td>Don't Know</td>
<td>15</td>
</tr>
<tr>
<td>No recycling/Inefficient recycling</td>
<td>10</td>
</tr>
<tr>
<td>Finance/Economics</td>
<td>6</td>
</tr>
<tr>
<td>Food Waste</td>
<td>4</td>
</tr>
<tr>
<td>Harmful supplies</td>
<td>3</td>
</tr>
<tr>
<td>Social Justice</td>
<td>3</td>
</tr>
<tr>
<td>Transportation</td>
<td>3</td>
</tr>
<tr>
<td>Communication</td>
<td>2</td>
</tr>
<tr>
<td>None</td>
<td>16</td>
</tr>
</tbody>
</table>

Tracking Sustainable Practices

Finally, participants were asked to indicate whether or not they tracked sustainability-related information within their department. Only 11% (n = 59) of the respondents affirmed that they did track some sort of information. The information recorded covered a wide variety of topics, and is summarized in Table 7.

Table 8. Tracking of sustainability-related information

<table>
<thead>
<tr>
<th>Topic</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budgeting</td>
<td>7</td>
</tr>
<tr>
<td>Waste Reduction</td>
<td>6</td>
</tr>
<tr>
<td>Purchases</td>
<td>6</td>
</tr>
<tr>
<td>Communication/Participation in Events</td>
<td>5</td>
</tr>
<tr>
<td>Energy Use</td>
<td>5</td>
</tr>
<tr>
<td>Recycling</td>
<td>4</td>
</tr>
<tr>
<td>Tracked Only by Dept. Head</td>
<td>3</td>
</tr>
<tr>
<td>None/Don’t Know</td>
<td>3</td>
</tr>
<tr>
<td>Equipment/Maintenance</td>
<td>2</td>
</tr>
<tr>
<td>Education</td>
<td>2</td>
</tr>
<tr>
<td>Cleaning Supplies</td>
<td>1</td>
</tr>
<tr>
<td>Resource Management</td>
<td>1</td>
</tr>
<tr>
<td>All</td>
<td>1</td>
</tr>
</tbody>
</table>
Summary of Key Points

● 559 staff responded to the survey, with the majority identifying as “Other” (n = 230), “Academic Affairs” (n = 182), or “Student Life” (n = 81). 34 respondents were associated with the Chancellor’s Units, which represented a large portion of that group. It is not clear what “other” means other than implying the respondents may not have wanted to be identified with their unit of work.

● 91% (n = 548) of the respondents were either somewhat or very interested in sustainability efforts in their division. The Chancellor’s Units showed very strong support towards sustainability, with 71% (n = 21) very supportive of sustainability efforts.

● For those that were not motivated towards sustainability, lack of time was often cited as a barrier to sustainability action. It can be surmised that there is a lack of expertise in integrating sustainability effectively into everyday practices that would save time and solve this dilemma.

● Most respondents felt they would be well-supported by their divisions in efforts towards sustainability, with 80% (n = 385) feeling very or somewhat supported in their efforts.

● Motivations towards sustainability were roughly broken down across values-driven (intrinsic/extrinsic) motivations. Values-driven motivations (“It’s the right thing to do”, “To help the environment”) were the most common, followed by intrinsic motivations (“To help my department”, “Social reasons”). Extrinsic motivations (“Part of department policy”, “Useful on performance review”) being the least common.

● Approaches to the types of sustainability education training preferred were:
  Most common:
  o Online media, such as blogs
  o websites, or
  o newsletters,

The least-requested trainings were more time-intensive methods such as:

  o multi-day workshops and
  o mentoring.
Recommendations

Communication
It is clear that tools for communication of information about sustainability are needed to help people understand WHAT is occurring at UMD and HOW they can play a role in furthering sustainable activities. Many exemplary things are happening on this campus (for example, see Appendix C), but many people are unaware of them. They may also be unaware of how they can contribute.

Recommendations:

- Provide regular (at least weekly) blog postings related to sustainable activities/actions that are occurring on campus as well as tips for taking action. The campus community should be notified of the opportunity to access this blog each fall, with a reminder in the spring. New employees should be informed of the blog during their orientation.
- Create a quarterly e-Newsletter that summarizes sustainability related topics during the past period that are newsworthy. The newsletter should be disseminated through the UMD.Business.Announce email.
- Build upon the successes of the Office of Sustainability to use social media tools to get info out about sustainability.
- Continue to support after grant funding runs out (and if success is demonstrated) the “Communicator to Support Cross-Disciplinary In Curricular and Campus Sustainability Conversations” coordinated by LeAne Rutherford in I.D.S.

The first two action items are the top areas of interest by the faculty and staff. At first glance, it would seem that this should come out of the existing Sustainability Office, which is housed as a part of Facilities Management. However, the other divisions of campus (Academic Affairs and Student Life) should have a means for providing input on a consistent and comprehensive basis (the staff of the Sustainability Office cannot keep up with meeting the needs of the entire campus).

- We recommend that someone in each division take on the role of “sustainability liaison” to work with the Office of Sustainability, and be part of the sustainability committee, to communicate the activity in that division and assist in supporting sustainability efforts. This role would also help in alleviating overlap of similar events at the same time.

Training
In regards to training, the data showed that three primary opportunities exist as viable options that should be pursued: Short workshops on specific topics (1 hour), on-line training, and, 2-3 hour workshops. The content of these, at least initially, should follow the topic areas listed in Table 4.
Recommendations:

● An office, such as the UMD Instructional Development Services (I.D.S.), becomes the lead in providing training in these topic areas, with direction and support from the Office of Sustainability and the UMD Sustainability Education Sub-committee (already in existence). For this to occur, however, the mission of the selected office (I.D.S.) would need to be expanded to include the non-faculty staff of UMD as recipients of its services.

Time
It is clear that faculty and staff on campus have little time to add additional tasks and projects to their workload. There were a number of comments on the survey that clearly stated that there is not time to address sustainability.

Recommendations:

● Provide faculty with some level of release time to incorporate sustainability into their curricula or learn more about sustainability in their field.
● Allow staff to participate in officially sponsored trainings in sustainability that may pertain to their work area.

It is important for all employees at UMD to explore sustainable practices. In the long haul, it is essential for the future of the campus.

Visibility
In concert with the communication element mentioned above, it is important for sustainability to become more visible on the UMD campus. This goes beyond the focus on faculty and staff to include students as recipients.

Recommendations:

● Develop a centralized site (located in the “core” of campus) for a “Center for Sustainability” that would house the Office of Sustainability (or at least a portion of it) and provide a contact and information point for sustainability on campus.
● Expand upon the signage around campus to portray the sustainable practices, modeled after some of the signage already in place (for example: rain gardens, Bagley Classroom).

Collaboration
One element of sustainability that could be addressed is working together to learn and develop new ideas. Some of this could come out of the Training recommendations listed above, but opportunity needs to be provided for faculty and staff to be able to work across departments to advance sustainable practices.
Recommendations:

- Provide staff with opportunities, either through electronic or in-person means to discuss and brainstorm best practices for sustainability. For example, purchasers in departments may be able to share the sustainable products they use and the source, or office staff could brainstorm how to reduce paper consumption.
- Deliberately allow promotion and tenure for activities that are collaborative across work units and within the greater off-campus community.
- Continue the “Course Design for Sustainability” program established by Instructional Development Services.
- Encourage collaboration across work units.
- Support, beyond the grant period, maintenance of the “Enhancing Interdisciplinary Resources for Teaching and Learning Sustainability at UMD” coordinated by Dennis Falk, CEHSP.

Consistency
In general, there seems to be inconsistency in what defines sustainability instruction and sustainable practices at UMD (this is a common challenge throughout society).

Recommendation:

- Create a uniform set of criteria to guide sustainable practices and instruction/curricula across campus, while still allowing the appropriate, independent educational approach per discipline. These criteria should be based on the UMD Strategic Plan and the U of M’s sustainability initiatives. This should be the responsibility of the UMD Sustainability Committee.

Coordination

It is important that the wide range of staff at UMD have input on the processes recommended above in a coordinated manner. Based on data and best practices, someone or some group needs to make decisions on what will happen regarding sustainability education.

Recommendation:

- Create a formally recognized team (possibly modelled after the Campus Change Team and/or Unit Change Team) that takes this role. The Sustainability Committee should be the formal, recognized committee that takes this role (or the Education Sub-Committee of the Sustainability Committee).

Implementation and Maintenance
The final phases of R.P.T.I.M. need to be addressed. Implementation is the actual use of what is learned through opportunities recommended above. Part of the process is assessing progress and then revising the Training via the Maintenance stage. These elements should be overseen by the abovementioned coordinating body.

Recommendation:

- Establish performance goals and assess the success of delivery and changes in sustainable practice at UMD in both academic and non-academic realms
- Adjust accordingly

Conclusion

It is clear that in order for sustainable practices to succeed, they must occur in a systemic and systematic manner. That is, they must include all aspects of the community from managers to the staff working directly with students. It must also occur in a sequential manner to ensure a consistent delivery that allows the constituents to grow as their knowledge and practice grows into a sustainability behavior and state of mind.

The UMD campus has accomplished a great deal toward sustainable practices and is moving steadily forward with sustainability education. Methods for training employees about how to teach sustainability appears to be the next challenge not only for this campus, but for higher education institutions, in general. It is our hope that this survey, and the R.P.T.I.M. approach can serve as a guide to unite our campus toward working together for the benefit of students’ education, to serve as a model for sustainable practices, and for the health of the Earth.
References

The Association for the Advancement of Sustainability in Higher Education.

Beery, T. (2013). Making sustainable behaviors the norm at the University of Minnesota Duluth. Unpublished report. Department of HPER. University of Minnesota Duluth. Duluth, MN.


Appendix A: Websites of 7 Universities Incorporating Sustainability Education

Emory University, Georgia: http://sustainability.emory.edu/page/1021/Piedmont-Project
Northern Arizona University: http://www2.nau.edu/~ponder-p/
University of Oregon, Portland: http://sci.uoregon.edu/scyp
Oberlin College, Cleveland, OH: http://new.oberlin.edu/office/environmental-sustainability/policy/

Arizona State University Prospectus and Global Sustainability Institute http://sustainability.asu.edu/about/resources/prospectus/index.php
Penn State Sustainability Strategic Plan and Sustainability Institute http://sustainability.psu.edu/sustainability-strategic-plan/our-strategy-sustainability-strategic-plan

Appendix B: UMD Survey for Training for Sustainability and Sustainability Education

Greetings. As you may know, the University of Minnesota Duluth has a strategic plan to guide our future. As part of the plan, sustainability is a primary goal for our campus. To succeed, each member of campus will need to incorporate sustainability into their work and circle of influence. A team of staff and faculty is working on a plan to provide the best training and opportunities to achieve our goal of being a sustainable campus. To have effective training in and about sustainability, we first need to hear from you on what you think you need will help our campus to achieve its goal of becoming sustainable. This survey will take just a few minutes of your time. Your responses will be completely confidential, and not reviewed individually. We will only be compiling and utilizing summary data. We want you to give us your most honest thoughts and feelings toward achieving sustainability.

What is “sustainability”? While there are several definitions of sustainability, it is important to include a balance of a healthy environment, sound economics, and social acceptance of how we behave. The University of Minnesota uses the following definition for sustainability: “Sustainability is a continuous effort integrating environmental, social, and economic goals through design, planning, and operational organization to meet current needs without compromising the ability of future generations to meet their own needs.” (Brundtland Report, 1987)

Thank you in advance for taking this survey. Your responses will help us best meet your needs as a UMD employee to achieve our goal of becoming a sustainable campus.

Sincerely,
Tim Bates, Recreational Sports and Outdoor Program
Ken Gilbertson, Department of Health, Physical Education, and Recreation

1. In what division of UMD do you work?
   a. Student Life
   b. Academic Affairs
   c. Finance and Operations
   d. Chancellor’s Units
   e. Other
   f. Don’t know

2. Select the category that best describes your current position
   a. P & A
   b. Civil Service V-Class
   c. Civil Service
   d. AFSCME Technical
   e. AFSCME Clerical
   f. AFSCME Health Care
   g. Police
   h. Teamster
   i. Faculty
j. Don’t know

3. To what extent are you interested in efforts and projects involving sustainability in your department: a- not at all, b- very little, c- somewhat, d- very, e- don’t know

4. What is your motivation to support sustainability on campus? (Check all that apply)
   a. Because it’s the right thing to do
   b. To help support my department
   c. To contribute to the campus plan
   d. To help the environment
   e. For social reasons (such as: justice, equality, fairness)
   f. To help my department save money or increase revenue.
   g. Because my supervisor expects me to
   h. Because it is useful on my performance review
   i. Because it is part of my department’s policies
   j. I’m not motivated toward sustainability
   k. Other: _________________________

5. To what extent do you feel your department will be supportive in your efforts and projects involving sustainability?  a-not at all,  b- very little, c- neutral, d- somewhat, e- very, f- don’t know

6. What types of sustainability training have you had previously?  Please check all that apply:
   a. None
   b. Have been mentored by another person
   c. Read about sustainability ideas and tips via a blog or website
   d. Participated in short “brown bag” type workshops (1 hour) on various topics
   e. Attended a departmental meeting that was focused on sustainability
   f. Participated in discussions and/or book groups
   g. Involved in brainstorming sessions with people who do the same type of work as me
   h. Participated in 2-3 hour workshops
   i. Participated in 2-3 day training
   j. Attended conferences and off-campus workshops
   k. Participated in on-line training (for example: webinar, coursework, video)
   l. Other: (comment box)

7. Please check the sustainable practices you see implemented in your work area. (Check all that apply):
   a. Water reduction
   b. Energy conservation
   c. Social justice behaviors
   d. Economic factors
   e. Educational programs
   f. Supplies (cleaning, maintenance, office)
   g. Recycling and/or Re-useable supplies/materials
   h. Purchasing more sustainable products (local, recycled content, organic, energy-saving appliances, etc.)
   i. Use of bio-degradable and/or non-toxic products
   j. Reduction in paper use
k. Composting
l. Protected Nature Areas (Parks and Forests)
m. Don’t know
n. Other (list in the following box)

8. What sustainable efforts would you like to see that you or your department are not already doing? comment box

9. What departmental practices have you observed that are not sustainable?  comment box

10. To help you incorporate more sustainability efforts in your work area, which of the following options for training would you be interested in participating (Please check all that apply):
a. Having a mentor that helps me
b. Sustainability ideas and tips via a blog or website
c. Short “brown bag” type workshops (1 hour) on specific topics
d. Discussion and/or book groups
e. Brainstorming sessions with people who do the same type of work as me
f. A quarterly UMD newsletter on sustainability efforts on our campus, including updates on trends, news items, etc.
g. Short 2-3 hour workshops
h. 2-3 day training
i. Financial support from department to attend conferences and workshops
j. On-line training (for example: webinar, coursework, video)
k. Department allowing time for professional development related to sustainability
l. Work on shaping sustainability policy
m. I’m not interested
n. Other: (comment box)

11. What would you like to learn about sustainability management and/or sustainability education?  comment box

12. Do you track any information related to sustainability for your department? (Purchases, resource savings, money-savings, participants, etc.) Yes/No
   a. If “yes” what tracking do you do?  comment box

Thank you! Your time and effort is greatly appreciated.
Appendix C: UMD Student Life Sustainability Practices As Reported By Department Directors or Representatives of Directors - Collected May-June 2013

The University of Minnesota system is committed to incorporating sustainability into teaching, research, outreach, and operations under the direction of six guiding principles: leadership, modeling, operational improvements, energy efficiency, research, and education & outreach. The UMD Student Life departments and programs are currently practicing and making improvements in these aspects of sustainability. The departments have made many sustainable operational improvements towards energy efficiency, resource reduction, and material re-use. Several departments (housing, health services, UMD stores, and food & vending) have made recent replacements to high efficiency and Leadership in Energy and Environmental Design (LEED) certified appliances. Departments are reducing their paper and other resource use, increasing the use of re-usable items, buying more eco-friendly and sustainable products, and increasing their recycling efforts.

The Student Life departments are also making efforts to educate and outreach to students and staff. Several departments (Kirby Student Center and Health Services) have had the Office of Sustainability do an in-service training on sustainable office practices for their staff and student employees. Dining Services and UMD Stores both hang posters educating on a variety of sustainability topics ranging from water savings to the benefits of buying recycled/sustainable products. Housing & Residence Life hosts a variety of sustainability education programs throughout the school year. They will also be implementing the Green House Living Learning Program in partnership with the Office of Sustainability and Students in Transition with 25 students participating in sustainability education throughout their freshman year.

HEALTH SERVICES

Educational
- Sustainability In Service April 2013 from UMD OFFICE OF SUSTAINABILITY held for our staff.

Operational
- Health Education led the initiative to begin vegetable and herb gardens on campus.
- Electronic Medical Record since 2007 cuts down on paper usage.
- Recycle cans, plastic and paper.
- New building plans being discussed which will be far more energy efficient than current building.
- Work with Env. Health office to dispose of expired medications and electronics and hazardous waste Computers on timers to reduce power usage.
- Donate old medical equipment
● Hosted fall regional college health conference and gave re-usable shopping bags as gifts and provided jump drives for course syllabi instead of paper syllabi.
● Autoclave and sterilize and reuse surgical instruments.
● Used local foods for fall conference
● SHAC initiative for water bottle refilling stations
● Replaced old windows to more energy efficient models
● Replaced old refrigerator and incubator for more energy efficient models
● Meeting minutes are placed on common drive rather than printing copies of them.
● All scratch paper is made into tablets to reduce buying post it notes

FOOD & VENDING OPERATIONS

Educational
● Fall Semester 2008: Housing, Northern Shores Coffee Shop and the Food Court have combined efforts and distributed 3,000 mugs to on-campus residents; these mugs may be used multiple times and filled with beverages in either retail location AND the user will receive a discount each time it’s used
● Posters are hung throughout Plaza Food Court highlighting the grass-fed beef that is purchased from Wrenshall
● “Toss The Tray” posters in DC promote not using a tray and educate on the benefits of water savings

Operational
● Aluminum, plastic and glass are recycled from all areas
● Cardboard boxes are compacted, baled and picked up by a paper recycler
● Purchases are made when available with “Pouch-Pack” packaging which eliminates cans and bottles, thus taking up less transportation and storage space
● Bulk ordering (salad dressings, frying oils) reduces excess containers and helps to hold down costs
● Pop, juice and water bottles are delivered to campus in returnable cases
● Bakery products are delivered to campus in Rubber Maid® containers that are reused daily, thus eliminating bakery boxes
● Food grade plastic containers are washed and re-used for other needs or recycled
● Food grade plastic buckets are washed and re-used
● Non-food grade plastic buckets are saved and given away to other departments for non-food use
● Hot beverage vending machines allow customers to use their own mugs in lieu of using a machine-supplied cup
● Since 1995, unbleached napkins have been used in Food and Vending operations, keeping bleach and other whitening chemicals out of the paper making process
● Dining Center curtains and tinted windows reduce the demand placed on air-conditioning
• State-of-the-art Leadership in Energy and Environmental Design (LEED) Certified dishwashing machine installed in the Dining Center (DC) August, 2006 - replaced two smaller/older machines that had longer run-times; use of steam heat saves water; larger wash chamber ensures shorter run times, resulting in less water consumption than the previous unit; new unit utilizes rise and wash water more efficiently before releasing it to waste water stream. Water consumption was reduced by 35% after installation of this Hobart Flight-Type warewasher; electric power and soap reduction also realized from the installation of this unit

• Dining Center and Dish Room lighting improvements in 2007 include retrofitting inefficient bulbs/lamps and ballasts with energy efficient (low wattage/high output) lighting products

• Washable dishware, linen napkins and table cloths are used where applicable for events hosted by the Catering Department

• Plaza Food Court customers may supply their own coffee mugs and receive a discount on their beverage

• Food Court trays supplied for customer convenience, reducing paper bag usage

• Additional recycling bins now located in Food Court seating area for recycling aluminum, glass and plastic

• State-of-the-art Leadership in Energy and Environmental Design (LEED) Certified pot and pan washing machine installed in Production Kitchen in 2007 saves water, soap and electricity, similar to the previously noted DC installation

• Leftover food that can’t be used by the UMD Food Service is picked up by Second Harvest Northern Lakes Food Bank and utilized at area shelters. These food donations are sent back and forth in reusable containers.

• The beverage contract that just concluded was awarded utilizing weighted selection criteria and “recycling” was the second item on the list

• Departmental computer and ink /toner cartridges are recycled from all departments

• Most basic cleaning chemicals are “green” certified, indicating these products are environmentally friendly. In addition, modern chemical dispensing systems are utilized to reduce overuse and to ensure the proper dilutions are used.

• The Western Lake Superior Sanitary District (WLSSD) is using the Food Operations pulpers as part of a large-scale composting program; this started operating in late 2000 and will further reduce the amount of garbage entering the local waste stream. Additionally newly installed state-of-the-art pulpers in the Dining Center Dish Room and the Production Kitchen operate using recycled cool water; food grease (ultimately picked up by a local rendering company) is deposited in the pulpers and not in the waste water stream. Scrap food from the pulping operations is collected and mulched at the WLSSD, resulting in lower tipping fees for the University. This very successful operation has been featured on local media outlets and the finished product provides a
high quality fertilizer to area residents, proving also to be a profitable venture for the WLSSD.

- Food Court eating utensils were relocated to a spot near the cash registers in Sept. 2007 - they were formerly “out in the open” and passersby routinely grabbed a handful of these items, raising costs to all. These were ultimately tossed in the trash; this relocation reduced excess consumption and, as a result, we saw a 30-40% reduction of these items entering the waste stream.
- End of Fall Semester 2007, Food Court eating utensils were switched to a biodegradable product
- Reduced the use of foam plates and cups in Food Service operations by 80% in the summer of 2007; foam products are used now only to ensure customer safety is not compromised
- Lamps and fixtures in various sections of the Food Court (Burger Hub, Center Court, Grab ‘N Go) were changed to Compact Fluorescent Lights (CFL) in November 2007; this resulted in an average 82% reduction in power consumption with no corresponding loss of illumination
- New Xpressnap tabletop napkin dispensers greatly reduce napkin (paper) waste in the Dining Center. These dispensers increase hygiene and cut waste by delivering one napkin at a time. Customers touch only the napkins they take and take only what they use.
- Food Court Xpressnap Stand Napkin dispensers, now located in this high volume eating area, have resulted in savings of 25% reduction in napkin usage although actual results often show savings as high as 40%. Utilizing this recently introduced product saves labor, too, as each dispenser holds up to 900 napkins, nearly three times the capacity of traditional dispensers.
- Pre-cleaned & cut produce and fruit are purchased when feasible to reduce food waste.
- Produce waste records for over-production, out dated, discarded food and “trim” on produce items; employees are trained in minimizing “trim” from these products.
- Service records are maintained so that prepared amounts of food match demand - food consumption is tracked to save money initially and later to reduce garbage.
- Smaller food containers are used on salad lines, buffets and hot lines to prevent over preparation and reduce spoilage.
- DC portion sizes are served to encourage customers to return for “seconds” rather than over-serving initially, resulting in food waste.
- Computerized weekly inventories are conducted in all areas - helps to keep food products low and avoid waste and spoilage.
- Foods are prepared in smaller batches throughout the day and appropriate meal period.
- Food products are dated as they are received and rotated to ensure freshness and quality and reduce waste.
- Fountain pop sales incentives are promoted to reduce the use of cans and bottles.
• Computerized recipes utilized to make exact numbers of needed proportions.
• Fair Trade coffee is used extensively in Northern Shores Coffee Shop and Catering.
• Empty buckets are used in recycling and/or donated to organizations.
• Stainless steel serving pans utilized when feasible rather than aluminum foil disposable pans.
• Cloth towels that can be used many times are laundered and placed back into service.
• A green degreaser is used in various Food Service venues - replaced a non-green product.
• Paper straws purchased to replace the former plastic product.
• Dining Services frying oil is picked up by a vendor and re-used in certain items such as crayons, lip stick, bio-diesel etc.

PRINTING SERVICES
Operational
• recycle paper wrappers, reusing cardboard cartons for deliveries
• using paper with high recycled content while maintaining print quality
• convert paper off cuts (end cuts) into notepads rather than throwing in the trash
• keep envelope stock and cut sheet papers on just-in-time basis as much as possible to avoid spoilage due to humidity or lack thereof
• returning toner cartridges back to vendor for reuse/recycling - sent back at vendor expense and at their request
• recycle used paper for fax sheets, fax tracking sheets, file copies of invoices
• environmentally friendly dishwashing soap at the backroom sink

Note: Printing doesn’t use liquid chemicals now that offset printing is no longer a part of its operation

HOUSING AND RESIDENCE LIFE:
Educational
• Electronic kiosk showing building energy consumption
• Sweep The Halls 2009-2010
  ○ Help clean up the beach and grounds around the residence halls
  ○ Remove dirt from the parking lots
• Earth Hour for last 2009-2011
  ○ Collaborative program with the Office of Sustainability
  ○ Get students to turn off their lights, library, and lift bridge
  ○ Acoustic mic night
• Earth Week 2012-2013
  ○ Collaborative program with Office of Sustainability
  ○ Pot a plant/smoothies sustainable farming
• Acoustic mic night/no electricity
• Tune bikes and register bikes for
• Sustainable grocery bags out of old t-shirts

● Donation program to Chum and Damiano Center 1990-Present
  ○ Donated food from apartments and residence halls
  ○ Donated appliances from apartments
  ○ Donated clothes from Apartments/Residence Halls (Good Will for Residence Halls)

● Bike Donation program 1990-Present
  ○ Off campus provider

● Green House Living Learning Program 2013-2014
  ○ Collaborative program with Office of Sustainability and Students in Transition
  ○ 22 candidates signed up for program

● Apartments Making Mittens out of old sweaters

**Operational**

• Changed more than 550 light fixtures in public areas from fixtures with two 40 watt T-12 bulbs to fixtures that use one 32 watt T-8 bulb
• Changed more than 3,500 incandescent bulbs in desk lamps and swag lights to compact fluorescent bulbs
• Converted 350 shower heads in apartments and residence halls to shower heads with a flow rate of 1.75 gallons per minute, in an effort to reduce water consumption
• Continue recycling program for residents so they can recycle glass, plastic, tin cans, aluminum cans, mixed paper and cardboard. Between 60 and 65 tons of material are recycled each year from UMD housing residents
• Work with local social service agencies to promote re-use of older furnishings that are being replaced
• Participant in the NE Minnesota Mattress Recycling Project
• Offer collection sites at the end of the school year for residents to donate clothing, furniture and food items that can be passed on to social service agencies
• Currently participating in a Lake Superior Hall multi-year window replacement project, utilizing newly designed, high efficiency window units to reduce heat loss
• Decreasing vehicle usage
• Lowering chemical dependency (drain chemical, degreaser, lubricant, etc)

**UMD STORES**

**Educational**

• Bag free campaign April through end of semester each year / involved with Duluth Bag-It efforts/ signage, BagMonster, Bag Free Buttons. wooden nickel $ donation
• Have formed a sustainability committee for the store and involved students: Organized a student produced “BAG FREE” video and posted on YouTube.
● Created and out a campus survey to gauge customer’s attitudes towards plastic bag usage.
● Presentation each fall to student workers regarding our Sustainability efforts.
● Sustainability is being written into our Mission/vision statement.
● Bag-free display with facts on plastic bags during Bag Free Campaign
● Display in book store educating on Sustainability practices
● Signage identifying sustainable products
● Signage educating on the why it is important to conserve energy and buy recycled products

Operational
● Purchase recycled paper for store use
● Purchase reusable bags for student book reservations and reuse boxes each semester
● Erase boards for some signage, and new digital screens for advertising to reduce paper usage
● Recycle plastic films - recycle bins in store - plastic goes to Airpark Services - gets made into decking / building materials
● Recycle bins throughout store for paper/ cans/glass/plastic bags
● Incorporated energy efficient lighting in new remodel
● Lights are on timers
● Discovered a few years ago that we can recycle our thermal receipt paper
● We do not print receipts for cash purchases under $5
● Take button batteries for recycling
● Take ink cartridges for recycling
● Recycle packing materials on the shipping dock.
● Involved in sustainability fairs on campus
● Originators with other groups on Helped to organize the Farmer’s market the past
● U-Pass - brighter UMD energy event project w/ MNpower - to secure products at good price: receive rebate and % donated to fund U-Pass program
● Eco/green product offerings where possible and feasible
● Biodegradable grad regalia
● Compostable cups
● Digital textbook options, Book rentals. Book Buyback

CAREER SERVICES

Educational
● Currently not doing anything formal

Operational
● We carpool on travel whenever possible, or eliminate travel by using electronic communication tools.
● We practice recycling of all that the university supports: paper, plastic, cans, cardboard, etc.
● We reduce use of paper by communicating electronically and posting educational materials on our website.

MULTICULTURAL CENTER
Educational
● Sponsored the sustainability event last spring semester and all students and staff were encourage to attend this event.

Operational
● QASU no longer allows use of balloons at their events because they are not biodegradable.
● QASU does not support Sam's Club or Wal-Mart and their group will not spend SSF funds there because of these superstores' irresponsible and negative impact on the environment (as well as their discriminatory practices toward women and GLBT people)
● WRAC collects used cell phones, the phones are donated to Safe Haven Shelter and we also collect use clothes for Teens. The clothes are donated to the Life House.
● LCSA holds the annual clothing drive for Circle of Hope.
● Partnered with the Pharmacy school students to collect use books to send to other parts of the world.
● Carpool when traveling to meetings in the Twin Cities
● Recycles paper, boxes, cans and bottles- we have several bins around the center
● We have also several pieces of furniture that have been recycled from other dept.

KIRBY STUDENT CENTER
Educational
● We will be doing a training for our student staff on sustainability and sustainable office practices (as one of our student employee development training modules next academic year.)
● The same training will be done for our staff in the next academic year
● Kirby has been the venue for several campus-wide trainings such as the Sustainability Fair, the Food Summit and others.
● We have had Mindy Granley at a staff in-service training discussing ways KSC could be moving towards more sustainable office practices

Operational
● As a department, we encouraged staff members to move away from personal printers and use one office printer - which saves on ink usage and electricity, etc.
● We also moved to one large refrigerator instead of using several mini-refrigerators as part of an exchange program
• We moved to an online room reservation system which eliminated excess paper usage
• We are stewards of re-using, recycling and maintaining KSC furniture and equipment & we all use energy star light bulbs
• In our renovation project for the Kirby lounge, we are following many LEED practices: lighting will be on a sensor / we are using local finishes/ efficient energy usage / reduced water usage / reduced materials waste and disposal/ recycling and reusing of materials and making use of passive solar power
• Kirby has been working with Catering to promote compostable events in which compost, plastics, paper and waste are collected separately and properly disposed of
• Purchased 3 refuse bins for KSC hallways which feature a place to dispose of compost, as well as plastic, paper and waste (the bins are made of recycled plastic milk jugs.)

RECREATIONAL SPORTS OUTDOOR PROGRAM

Educational
• Many programs for students that have a theme of low impact on the earth.
• Leave no trace incorporated into outdoor trips.

Operational
• Large events catered on-campus using compostable and recyclable materials or smaller events where participants bring their own reusable eating utensils.
• Transport as many people as possible in single vehicle instead of multiple vehicles
• Local purchasing of products to support local businesses and reduce transport costs and carbon. T-shirts and outdoor gear.
• Purchase high quality, long lasting equipment rather than cycle through regularly
• Encourage reducing carbon footprint on campus through active transport: Walk, bike, board.
• Pursuing American made & organic cotton t-shirts.
Appendix D: Green Your Office: Sustainability Practices for Departments

Compiled by Mindy Granley, Office of Sustainability

Energy Conservation

- Has everyone in your office signed the UMD Energy Pledge?
- Available at [www.d.umn.edu/sustain](http://www.d.umn.edu/sustain)
- Do light switches have stickers to remind people to turn off lights?
- Are lights turned off when space is unoccupied?
- Is natural light used, when possible, to reduce artificial lighting use?
- Is equipment, including computers, monitors, printers, photocopiers, and other small appliances, turned off when offices are unoccupied?
- Is coffee/tea brewing equipment, microwave, and other appliances in a centralized location for multiple users?
- Are video, webinars, and telephone conferencing used to reduce travel to meetings?
- Are windows shut tightly during cold weather? During the air conditioning season?
- Are window treatments closed at night in winter to trap in heat?
- Are window treatments closed to keep out sunlight and warmth during the summer?
- Is there a refrigerator in a centralized location available for multiple users?
- If so, is the refrigerator Energy Star rated?

Waste Reduction

- Are electronic waste and battery disposal handled through appropriate channels (work with EHS)?
- Are toner and ink cartridges sent back for recycling?
- Are employees encouraged to reduce paper use?
- Are envelopes and boxes for outgoing mail reused?
- Are file folders, envelopes, and binders reused?
- Is unwanted mail reduced by sharing periodicals, newspapers, and catalogs, and removing names from mailing lists?
- Are reusable mugs, water bottles, dishes, and utensils used?
- Are sufficient recycling containers provided?
- Note: Request additional recycling bins by calling Facilities Management at x8262
- Are employees encouraged to use direct deposit, rather than paper paychecks?
- Can a central trash container be designated in the office, allowing for a change to desk-side recycling pick-up?
- Are departmental events planned with low-waste options in mind?

Water Conservation

- Are reusable water bottles encouraged, instead of bottled water?
• Are any water leaks in pipes, sinks, or toilets reported immediately to Facilities Management (x8262)?
• Does the office practice water saving techniques by turning off the faucet while soaping hands or scrubbing dishes?

Purchasing
• Does copy paper have at least 30% post-consumer recycled paper (100 percent preferred)?
• Are refillable pens or pencils purchased and refilled?
• Can infrequently-used office equipment be shared with another office, or rented/leased as needed?

Communication
• Do staff meetings include discussions about sustainability issues?
• Does new employee orientation include information on your department’s sustainability issues?
• Is there regular communication with employees and students about sustainability issues and best practices?
• Do employees in your department receive feedback about their support of sustainability efforts during performance reviews?
• Do you regularly read updates on sustainability on the UMD Sustainability website (www.d.umn.edu/sustain), in Currents, or in the U of M Brief?

Laboratory
• Are fume hoods lowered when not in use?
• Is unneeded equipment turned off or unplugged?
• Could timers be installed or set for seldom used equipment?
• Are lights being turned off?
• Are uncontaminated glass, paper, and plastic being recycled? Note: pipette tip boxes can go into recycling with cans/bottles.
• Are products purchased with reduced or recycled-content packaging
• Are batteries recycled?
• Can old, inefficient refrigerators, coolers, or freezers be consolidated and/or replaced through the UMD Refrigerator Exchange Program? http://www.d.umn.edu/sustain/energy/Refrigerator_Exchange_Application.pdf
• Is the lab working to conserve water?