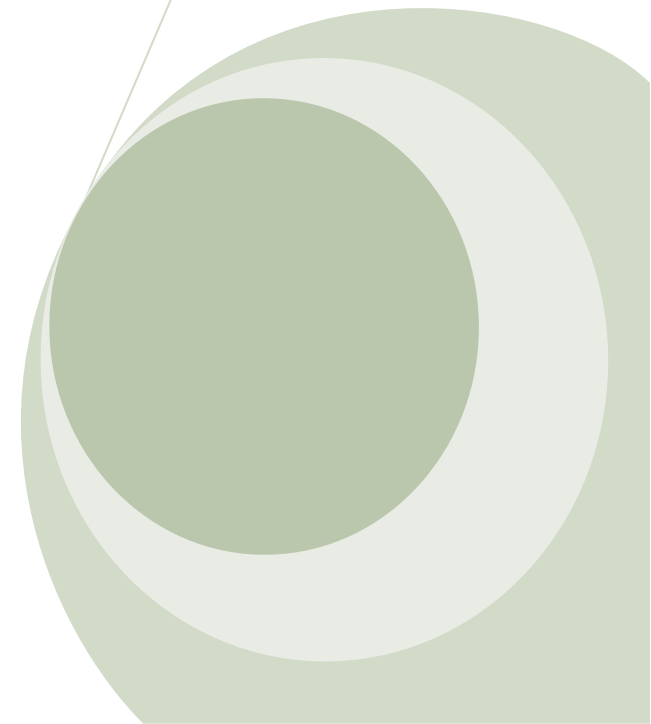
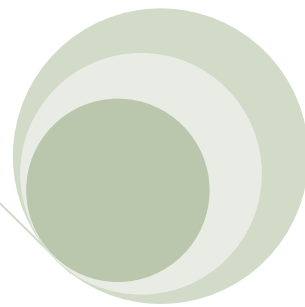


Strategic Plan for a Sustainable Ambler Campus

Planning Studio, Spring 2009



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INTRODUCTION

INTRODUCTION

This plan builds upon previous efforts of Temple University and particularly Ambler Campus to integrate sustainable principles into the operations of all facets of the College. Ambler Campus recently was declared the “Green Campus.” This Strategic Plan for a Sustainable Ambler Campus makes recommendations that will lead Ambler Campus toward becoming the “Greenest Campus.” Given Temple’s commitments already made to sustainability such as President Hart’s signing of the American College and University Presidents Climate Commitment, Ambler Campus is poised to be a leader in the movement toward sustainability and can serve as an example to Temple Main Campus as well as to other colleges and universities.



Source: Temple University, Ambler Campus website,
<http://www.ambler.temple.edu/about/missions.htm>. Accessed April 28,, 2009

The Association for the Advancement of Sustainability in Higher Education (AASHE) has recognized that colleges and universities can provide a leadership role in the movement toward sustainability. AASHE’s mission is “to promote sustainability in all sectors of higher education - from governance and operations to curriculum and outreach - through

education, communication, research and professional development.”¹ To that end, AASHE has collaborated to develop a rating system to guide higher education institutions towards sustainability. This rating system is called Sustainability Tracking, Assessment and Rating System (STARS). This plan uses the STARS 0.5 program as a framework to guide Ambler Campus toward “advancing sustainability in all sectors of higher education.”

STARS is designed to:

1. “Provide a guide for advancing sustainability in all sectors of higher education.
2. Enable meaningful comparisons over time and across institutions by establishing a common standard of measurement for sustainability in higher education.
3. Create incentives for continual improvement toward sustainability.
4. Facilitate information sharing about higher education sustainability practices and performance.
5. Build a stronger, more diverse campus sustainability community.”²

This plan uses the STARS framework to highlight current activities and to identify projects that, if implemented, would elevate Temple Ambler’s sustainability presence. This plan provides background research for each of the three main STARS categories: Education and Research, Operations, and

¹ Association for the Advancement of Sustainability in Higher Education website, Date Accessed: March 2009,
<<http://www.aashe.org/about/about.php>>.

² Association for the Advancement of Sustainability in Higher Education website, Date Accessed: March 2009,
<<http://www.aashe.org/stars/index.php>>.

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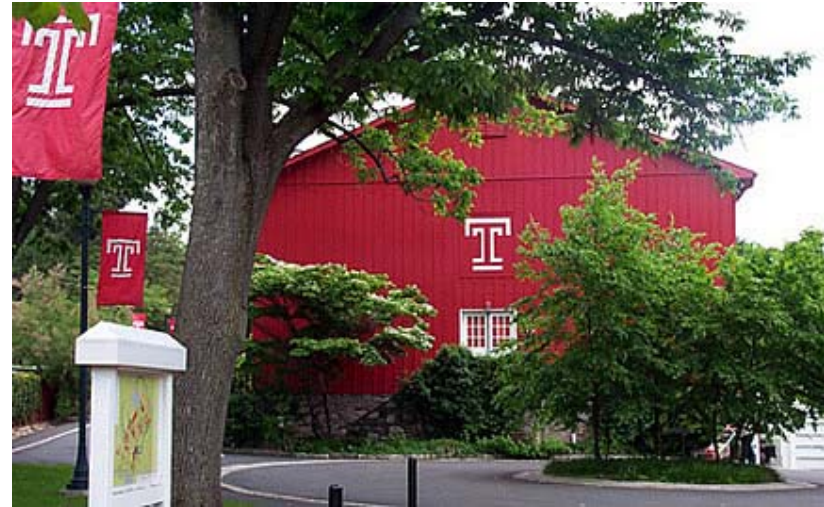
Administration and Community Relations. In this plan, as in the STARS program, each of the three categories is further divided into sub-categories (see Table 1). Each sub-category has between two and 13 credits assigned to it and each credit contains between one to six obtainable points. Table 1 shows the credits available for each sub-category and the number of points associated with each. For a complete list of STARS credits, see Appendix 1.

Table 1. STARS Sub-Categories and Credits

STARS CATEGORIES & SUB-CATEGORIES	CREDITS	POINTS
EDUCATION & RESEARCH (ER)	26	66
Co-Curricular Education:	3	3
Curriculum	13	40
Faculty and Staff Development and Training	3	3
Research	7	20
OPERATIONS (OP)	28	59*
Buildings	4	13
Dining Services	3	7
Energy and Climate	4	16
Grounds	2	3
Materials, Recycling, and Waste Minimization	5	7
Purchasing	6	6
Transportation	4	7
ADMINISTRATION & FINANCE (AF)	34	50
Investment	5	8
Planning	4	4
Sustainability Infrastructure	3	5
Community Relations and Partnerships	6	12
Diversity, Access and Affordability	8	8
Human Resources	6	9
Trademark Licensing	2	4
TOTAL POSSIBLE POINTS		175*

* STARS 0.5"Summary Scorecard reports 61 Total Possible Points for "Operations"

Under the current STARS program, there are 175 possible points to achieve. However, at this time, the program does not indicate how many points are necessary to achieve STARS certification. STARS 1.0 is expected to be released later in 2009 and will explain how many points are needed to achieve STARS certification



Source: Temple University Ambler Campus, website, http://www.ambler.temple.edu/campus_life/recreation.htm Accessed April 28, 2009

This plan is organized into three chapters following the three main categories in STARS: Education and Research, Operations and Administration and Finance. The Administration and Finance chapter has been renamed "Administration and Community Relations" to highlight the importance of connecting the Ambler Campus with the local and global community. Additionally, the Trademark Licensing sub-category has been included with the Purchasing sub-category. Each sub-category in the plan provides an introduction to the topic, followed by a "How Green Are We?" section, which provides information on current sustainable initiatives undertaken at Ambler Campus and at Temple University. Investigations

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into these sustainable initiatives were achieved mainly by speaking with personnel at Temple Ambler and at Temple’s Main Campus.

Table 2. Achievable STARS credits

TEMPLE UNIVERSITY, AMBLER CAMPUS: STARS CREDITS		
	EDUCATION & RESEARCH (ER)	POINTS
	Co-Curricular Education	
ER-2	Sustainability-Related Competition	1
ER-3	Sustainability in New Student Orientation	1
	Curriculum	
ER-4	Sustainability Course Identification	1
ER-6	Sustainability-Related Academic Courses	6
ER-7	Sustainability Course by Academic Department	3
OPERATIONS (OP)		
	Purchasing	
OP-19	Energy Star Purchasing	1
ADMINISTRATION AND FINANCE (AF)		
	Community Relations and Partnerships	
AF-13	Community Service Infrastructure	1
AF-14	Student Participation in Community Service	1
	Diversity, Access and Affordability	
AF-21	Non-Discrimination Policy	1
	Human Resources	
AF-28	Faculty and Staff Benefits	1
AF-30	Parental Leave	1
AF-31	Domestic Partner Benefits	1
TOTAL POINTS		19

Many of these previous efforts could achieve STARS points and would only need to be reported to STARS in order to receive points. Table 2 reflects those credits and points already achieved by Temple University and Ambler Campus.

The “How to be a Green Star” section provides recommendations on how to create a more sustainable Ambler Campus. The formulation of these recommendations was guided by Sustainability Task Force Report conclusions, ideas presented by the Ambler Campus Sustainability Council, STARS credit requirements, and case studies from other universities. Case studies describe other institutions’ sustainable solutions and a case study example is provided under many of this plan’s sub-categories. Some extended case studies are presented in Appendix 2. The recommendations for each section are then prioritized based on the following criteria: the ability of the recommendation to achieve STARS points, the applicability of the recommendation to Temple University and Ambler Campus, the low relative cost to implement the recommendation, and the perceived effort required to implement the recommendation. A set of symbols has been developed to help guide readers in assessing the recommendations:

-  - STARS points
-  - applicability to Temple University
-  - low cost relative cost to implement
-  - ease of implementation

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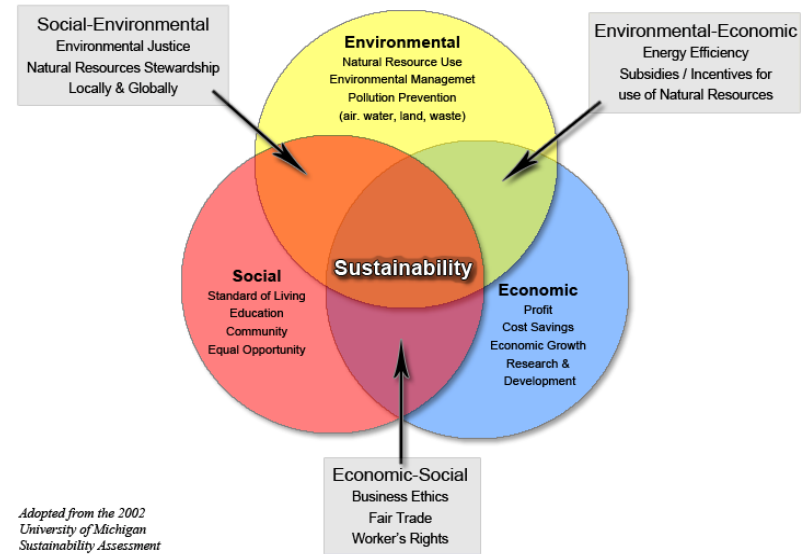
The plan also identifies potential funding sources for the proposed sustainability initiatives (Appendix 3) and strives to minimize costs incurred by Temple University to implement these initiatives. Many of the initiatives presented are cost-neutral and/or will lead to long term savings for Temple University and Ambler Campus.



Source: Temple University Ambler Campus, Landscape Arboretum website.
<http://www.ambler.temple.edu/arboretum/bloom.htm> Accessed April 28, 2009

Due to the all-encompassing nature of sustainability, many of the section recommendations apply to other sections in the plan. This is reflected in the Synergy Recommendation Table in Appendix 4. By supporting sustainability across all disciplines, Temple Ambler would create meaningful opportunities for cross-fertilization of ideas and problem solving.

The Three Spheres of Sustainability



Source: Vanderbilt University.

<http://www.vanderbilt.edu/sustainvu/sustainability.php> Accessed April 23, 2009

*EDUCATION
and
RESEARCH*

EDUCATION AND RESEARCH (ER)

CO-CURRICULAR EDUCATION

School-supported programs and activities extending beyond the formal curriculum are known as co-curricular education. The integration of sustainable practices into the daily lives of students can be achieved by organizing programs and activities that are fun and educational. When campus administrators set up an organizational framework for developing programs in sustainability, the stage can be set for maximizing student involvement and peer-to-peer outreach. If students can be employed to help run programs and campaigns, university resources can be maximized and sustainability goals can be met without substantial financial burden on the university. At the same time, students' university experience is enriched by taking on increased responsibility and leadership. STARS deems a co-curricular education important because it deepens a student's understanding and application of sustainable principles, while an emphasis on co-curricular education also creates an opportunity to change campus culture and set a positive tone for the institution.

HOW GREEN ARE WE?

Temple Ambler currently integrates sustainability into freshman orientation, features topics in sustainability during major events, participates in a sustainability-related competition, and disseminates outreach materials concerning sustainable initiatives on campus.

In 2007 and 2008, "Environmental Responsibility" became a part of the freshman orientation schedule. In 2007, Community and Regional Planning Department Chair Deborah Howe led a tour of the Shoemaker House to demonstrate how the site served as an opportunity for environmental restoration, historic preservation, and stewardship. The "Environmental Responsibility" theme in 2008 consisted of a tour of the arboretum

gardens, a history lesson about the campus, which previously was a women's horticulture school, and an overview of the sustainability features of the campus, all led by Jenny Rose Carey, the Director of the Temple Ambler Arboretum. FRESHSERVE, a freshman community service project, also coincides with orientation events.

EarthFest, sponsored each year since 2003 by the Center for Sustainable Communities and partners, is a community outreach event held at Ambler Campus and is one of the most important Earth Day events in the region with 12,000 visitors and 90 exhibitors in 2008. Ambler also regularly presents its "Ambler Campus Cultural Affairs Series," featuring speakers on sustainability issues and the arts that are free and are open to the community.



Source: Temple Ambler Earthfest website

<http://www.temple.edu/ambler/earthfest/index.htm> Accessed April 28, 2009

Temple Ambler participated in a sustainability-related competition, RecycleMania, which is a 10-week nationwide campus recycling competition in which colleges and universities compete with each other

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and students learn more about the importance of recycling. Finally, Temple Ambler disseminates outreach materials about sustainable features on its campus. The Ambler Arboretum provides pamphlets in dispensers outside for visitors who would like to learn about our constructed wetlands, rain gardens, native gardens, greenhouse, green roof, and more.

CASE STUDY: AMHERST COLLEGE

Amherst College has an “Energy Hog” campaign that educates students about “vampire” appliances that use energy whenever plugged in. The “Energy Hog” Campaign urges students to turn off and unplug appliances during school breaks. According to Amherst College, students and staff following these simple steps at Amherst College could save 78,000 kilowatt-hours over winter break, enough to power 750 homes and save almost \$7,000!¹

HOW TO BE A GREEN STAR

1. Create a student sustainability outreach program, otherwise known as a peer-to-peer outreach and education program, tentatively called the “Student Campaign for Social, Economic, and Environmental Responsibility,” which could house student groups associated with sustainability, a “Sustainability Officer/Director” and “Eco-Reps” (for individual tasks tagged with each worker and more explanation, please see Appendix 5).

★ T \$ ♻️ (1 point)

- Implementation by the College and Campus community.
2. Launch sustainability-related competitions that are campus-wide, or are between dorms, classes, offices, departments, or other institutional entities. Competitions help cut energy, reduce waste,

or promote sustainability in various ways, while at the same time educating and engaging the student body. Popular campus campaigns include dorm hall energy and water reduction competitions, waste watch challenge competitions, alternative transportation challenges, or light bulb or computer monitor drives.

★ T \$ ♻️ (1 point)

- Implementation by the Green-Challenge Eco-Rep.
3. Begin student-run organic garden on campus and use produce in dining facilities.

T \$ ♻️

- Implementation by the Student Outreach Eco-Rep.
4. Dedicate a section in the student-led publication, *The Temple Column*, to sustainability initiatives.

T \$ ♻️

- Implementation by the Communications Eco-Rep.
5. Host major sustainability-themed conferences and symposia on Ambler Campus.

T

- Implementation by the Community Eco-Rep.
6. Start new green “themed housing” or “model dorm” initiative.

T

- Implementation by the Green Challenge Eco-Rep and the Office of Student Housing.

CURRICULUM

The twenty-first century has brought forth a multitude of environmental challenges. By having academic disciplines involved in the confrontation of these challenges, the goals of sustainable development and management can be advanced. If each academic discipline within an institution incorporates sustainability into its curriculum, then sustainability principles can be more methodically introduced within this institution. In the UNESCO publication, *United Nations Decade of Education for Sustainable Development*, the following is stated:

¹ Amherst College website, Date Accessed: April 2009, <<https://www.amherst.edu/campuslife/greenamherst/awareness#The%20Big%20Turn%20Off>>.

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The international community now strongly believes that we need to foster - through education - the values, behavior and lifestyles required for a sustainable future. Education for sustainable development has come to be seen as a process of learning how to make decisions that consider the long-term future of the economy, ecology and equity of all communities. Building the capacity for such futures-oriented thinking is a key task of education.²

The STARS Curriculum credit system was developed on this same belief and recognizes institutions that have formal education programs and courses that address sustainability.

HOW GREEN ARE WE?

Temple Ambler currently offers a handful of courses that incorporate sustainability into the curriculum. Temple Ambler's homepage currently provides a link to a list of these courses. Having these courses listed where all students can access the information fulfills one credit requirement.

Sustainability "related" courses are those where sustainability is only a component of the curriculum. At Temple Ambler, the majority of these courses are offered by the Community and Regional Planning and the LA HORT departments. Only one business class with a "green theme" was offered this past spring semester, leaving much room for improvement. Temple Ambler would receive a number of points under the ER Credit 6 for these "related" courses and would receive points for having multiple departments offering sustainability related courses.

² *United Nations Decade of Education for Sustainable Development Framework for a Draft International Implementation Scheme*, (UNESCO 2003, January 2005 - December 2014) 4.



Source: Temple University Ambler Campus website, <http://www.temple.edu/ambler/about/missions.htm> Accessed April 28, 2009

CASE STUDY: PONDEROSA PROJECT

In order to encourage and educate professors on sustainability and teaching sustainability in their classrooms, Northern Arizona University started the Ponderosa Project, which is a group made up of faculty from different departments who attend a three-day seminar. At the seminar, faculty learns about various environmental issues and ways to address these issues in their class curriculums. Seven goals were developed focusing on empowering faculty and students and introducing sustainability throughout the duration of the students' collegiate education experience.

HOW TO BE A GREEN STAR

1. Introduce more “sustainability-focused” courses into the curriculum. These classes could be expanded to create a degree program dedicated to sustainability.

★ T \$ ♻️ (1 to 6 points)

- Between 0 to 0.1 percent of the institution’s courses are sustainability-focused. (1 STARS point)
- Between 0.1 to one percent of the institution’s courses are sustainability-focused. (2 STARS points)
- Between 1 to 2 percent of the institution’s courses are sustainability-focused. (3 STARS points)
- Between 2 to 3 percent of the institution’s courses are sustainability-focused. (4 STARS points)
- Between 3 to 4 percent of the institution’s courses are sustainability-focused. (5 STARS points)
- 4 percent or more of the institution’s courses are sustainability-focused.(6 STARS points)

- Implementation by the Department of Academic Affairs and the new Student Campaign for Social, Economic and Environmental Responsibility.

2. Offer campus-based learning. The existing buildings, both historic and new, and campus grounds would act as both laboratory and tool for teaching.

T \$ ♻️

- Implementation by the Department of Academic Affairs, the new Sustainability Officer, and department Chairs.

3. Create a task force for developing a more sustainable curriculum. The members of the Task Force can be faculty and students.

T \$ ♻️

- Implementation by CSC

4. Develop curriculum modules with supplemental course syllabi, teaching notes, online resources, and sample assignments. Department faculty meetings could include sustainability as an agenda item and provide time for faculty discussions and suggestions.

T \$ ♻️

- Implementation by Department of Academic Affairs, the Student Campaign for Social, Economic, and Environmental Responsibility, and department Chairs.

5. Encourage the Sustainability Officer from the new student sustainability outreach program to meet with the department Chairs on a regular basis to provide support and help further develop their sustainability modules.

T \$ ♻️

- Implementation by Department of Academic Affairs, the Student Campaign for Social, Economic, and Environmental Responsibility, and department Chair.

FACULTY AND STAFF DEVELOPMENT AND TRAINING

To fully incorporate the principles of sustainability into the daily functioning of life on a college campus, the faculty and staff must understand and adopt the principles of sustainability. STARS recognizes institutions that encourage education related to sustainability at all levels. Because an institution’s faculty and staff drive decision-making on a campus, in order to advance sustainability objectives at that institution it is important to ensure that these individuals are informed about the principles of sustainability and how sustainability-related issues can be addressed. It should be the responsibility of the institution to provide this education and training to staff and faculty to insure that this occurs.

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HOW GREEN ARE WE?

There have been several steps taken towards increasing faculty and staff's awareness of sustainability-related issues at Ambler Campus. Much of the sustainability awareness that takes place on campus is organized through the Ambler Campus Sustainability Council (ACSC), which hosts re-visioning workshops intended to prompt sustainability efforts on campus, for example. The ACSC is also responsible for organizing monthly meetings to address sustainability issues, and encourages faculty and staff to attend these meetings. Faculty and staff serve on committees through the ACSC intending to make positive changes throughout Temple Ambler.

The sustainability agenda is also advanced through the Office of Sustainability, located at Main Campus. The Office of Sustainability makes presentations to various colleges and departments concerning issues of sustainability. Workshops for faculty and staff that are organized by the Office of Sustainability include "Sustainability 101". There is also a page at the introduction of the Employee Handbook that introduces the concept of sustainability to new employees and explains that the Office of Sustainability can be used as a resource for additional information on the subject.

CASE STUDY: UNIVERSITY OF VERMONT AND DICKINSON COLLEGE

The University of Vermont and Dickinson College provide good examples of how sustainability can be integrated into the training of staff and faculty in an institutional setting. At both of these institutions' new employee orientations, sustainability has a role to play, whether during walking tours of the campuses or concerning the expectations of the employees throughout the duration of their engagement at the institution. Both of these institutions provide staff support to implement new sustainability-

related courses and encourage cross-departmental communication about sustainable initiatives.

HOW TO BE A GREEN STAR

1. Integrate sustainability into new employee orientation by having new employees take a tour of the sustainability initiatives on campus and the expectation of faculty and staff's engagement in sustainability while working at Ambler Campus.

★ T \$ ♻️ (1 point)

- Implemented through a partnership between the Temple Human Resources Department and the Office of Sustainability.

2. Hold one campus-wide sustainability event per semester.

T \$ ♻️

- Coordinated through the Ambler Campus Sustainability Council.

3. Provide staff and faculty with funding assistance to bring sustainability-related training programs to the Ambler Campus or to attend them elsewhere.

T \$ ♻️

- Coordinated by the Office of Sustainability

4. Segue the intermittently-occurring Food for Thought Lecture and Activity Series into a regular event focusing on topics or research pertaining to sustainability, which will engage and enlighten faculty, staff, students and the public.

T \$ ♻️

- Implementation by the Communications Eco-Rep.

RESEARCH

Conducting research is a major function of colleges and universities. By researching sustainability issues, institutions can help the world understand sustainability challenges and can present solutions and strategies to face these challenges. Research is a process of investigation and examination of a subject from different points of view. It is getting to know a subject or topic by reflecting on it, playing with different ideas and educating oneself. The only way we can become sustainable on any scale, global or communal, is to first understand what it means to be sustainable and further research all possible steps we can take to become sustainable. The Sustainability Tracking, Assessment and Rating System (STARS) recognizes the value of research at the University and College level and awards STARS credits to schools that focus on sustainability related research.

HOW GREEN ARE WE?

Temple University currently offers two main areas for research development related to sustainability: The Center for Sustainable Communities and The Office of Sustainability website. The Center for Sustainable Communities is a multi-disciplinary research center based on Ambler's campus that offers the community, local government, and non-profits assistance with projects related to land use, water resources, and other planning and development concerns. The Center for Sustainable Communities consists of over 25 associated faculty, fellows, and staff, along with 10 graduate research assistants devoted to sustainable projects and research. The Center for Sustainable Communities is identified in the Sustainability Task Force Report as a key asset for advancing sustainable research on the Ambler Campus. Examples of sustainability research completed by the Center for Sustainable Communities include a Community Food Access Study, development of an Act 167 Plan for the

Pennypack Creek Watershed, and a Montgomery County Sustainability Audit, to name a few.

Although not specific to Ambler Campus, The Office of Sustainability website is the second source for research development. The website currently offers a page devoted to current research opportunities and archived research projects related to sustainability. Examples of current sustainability research opportunities include the Undergraduate Research Incentive Fund that encourages undergraduates to develop research projects throughout all disciplines to incorporate sustainability. There are also graduate and professional research grants available that focus on minority and women's research in sustainability and the environment. The Office of Sustainability's research website is an excellent resource for the environmentally-focused programs offered at Ambler Campus.

CASE STUDY: UNIVERSITY OF SOUTHERN CALIFORNIA

The University of California has developed a Center for Sustainable Cities that focuses on five different areas of sustainability. These areas include public health, industrial ecology, urban habitat, environmental justice, and climate change. Through each of these areas, faculty and students are given opportunities to participate in sustainability related research projects.

HOW TO BE A GREEN STAR.

1. List Faculty Research Projects not related to the Center for Sustainable Communities on the website.



- Implementation by the Community and Regional Planning Department and the Community Eco-Rep.

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2. Encourage collaboration between students, faculty, and staff regarding sustainability research.



- Implementation by the Center for Sustainable Communities and the new Student Campaign for Social, Economic, and Environmental Responsibility.

3. Host a Sustainability Conference to emphasize the interdisciplinary nature of sustainability.



- Implementation by the Center for Sustainable Communities and the Community Eco-Rep.



OPERATIONS (OP)

BUILDINGS

Recent discoveries in building science, technology, and operations are now available to designers, builders, operators, and owners who want to build green and maximize both economic and environmental performance. The development of land can have a serious impact upon our environment and necessitates action to reduce this impact. It is proven that sustainable operations enhance marketability, increase student productivity, and deduce potential liabilities for indoor air quality problems. Sustainable building practices can reduce or even eliminate negative impacts upon the local environment.



Source: Denison University, Green Building website,
http://www.denison.edu/academics/departments/environmental/green_building.html
Accessed April 20, 2009

HOW GREEN ARE WE?

Temple Ambler's campus consists of numerous "temporary" buildings along with old and new buildings alike. Haines House dates back to the 1700s, while the Learning Center is a brand new facility that opened in 2006. Although the Learning Center is equipped with 385 computers, wireless access throughout the building, and has extensive fully-integrated multimedia technology, only a few aspects of the building's construction are sustainable. Also on campus are a number of temporary facilities that have been in use for over thirty years. It would be difficult to upgrade these facilities and incorporate sustainability into the renovations.

Temple Ambler is aiming to expand its Adult Education program on campus. Studies show that adults have higher standards than those of younger students when it comes to the education environment they choose. Not just higher standards of their universities' facilities but also of their university's values, community involvement, stakeholder relations, and overall mission. The benefit of having such a large population of adult students is their predisposed exposure to sustainability. Many public and private organizations are establishing sustainable office programs. They are being undertaken in almost all local offices and have become a common placeholder in professional agendas. Adult students may also prove to be a valuable resource for new programs that could be introduced to the Office of Sustainability.

CASE STUDY: NORTH CAROLINA STATE UNIVERSITY

North Carolina State University developed an intuitive and resourceful website that provides data on every university-occupied building that exists on its campus. The website spells out the construction guidelines for renovations or new building projects and references the Comprehensive Plan adopted by the University that incorporates the local community's master plan and goals. It is a widely used resource at North Carolina State

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University and provides contact information to building liaisons. Students and faculty are encouraged to ask questions about sustainable activities being implemented in their buildings. They also have the ability to provide suggestions and new ideas that the building can adopt. The Building Liaisons help supervise and document the sustainable progress for each of their buildings on a semester basis.

HOW TO BE A GREEN STAR

For new and existing non-temporary buildings on the Temple Ambler Campus, the strategic plan encourages the implementation of sustainable operation and maintenance practices, specifically those items outlined in the STARS rating system. The following are best management practices suggested for implementation.

1. Build Universities' first LEED Certified Building.

★ T \$ ♻️ (1 to 5 points)

- a. Any portion of the institution's buildings are LEED-EB certified (at any level). (1 STARS point)
- b. At least 10 percent of the institution's building square footage is LEED-EB certified (at any level) and at least another 40 percent of the institution's building square footage meets the criteria for LEED-EB certification (at any level). (2 STARS points)
- c. At least 15 percent of the institution's building square footage is certified LEED-EB Silver or higher and at least another 60 percent of the institution's building square footage meets the criteria for LEED-EB Silver or higher certification. (3 STARS points)
- d. At least 20 percent of the institution's building square footage is certified LEED-EB at the Gold level or higher and at least another 70 percent of the institution's building square footage meets the criteria for LEED-EB Gold or higher certification. (4 STARS points)

- e. At least 20 percent of the institution's building square footage is LEED-EB Platinum certified, and at least another 75 percent of the institution's building square footage meets the criteria for LEED-EB Platinum certification. (5 STARS points)

- Implementation by the Office of Facilities Management, and the Office of Management and Budget..

2. Reduce potable water usage of indoor plumbing fixtures and fittings in buildings by using automatic water control systems in sinks, toilets, waterless urinals, cooling tower water management plan, etc.

★ T (1 point)

- Implementation by the Facilities Management Department.

3. Implement existing building improvement projects by identifying planned capital expenditures. Ensure that major building energy-using systems are repaired and maintained effectively to optimize performance.

★ T (1 point)

- Implementation by the Office of Management and Budget and Facilities Management Department.

4. Abide by Sustainable Purchasing Policy – Purchasing section (OP.13).

★ T \$ ♻️ (1 point)

- Implementation by the Purchasing Department/Sodexo

5. Adopt a Green Cleaning policy that offers safer alternatives to standard janitorial cleaning systems and programs. Green Seal products reduce toxicity by eliminating common industrial chemicals.¹

★ T \$ ♻️ (1 point)

- Implementation by the Facilities Management Department.

¹ Core Products Company website, *Core Green Seal Products*, Green Seal Certified, Date Accessed March 2009, <http://coreproductsc.com/index.php/greenseal>.

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6. Establish an Indoor Air Quality Management Plan which would consist of two parts: the Campus' general requirements and the Contractor's control measures. The plan would establish control measures to be undertaken such as protecting mechanical systems from dust and particulates, using low VOC materials, and prohibiting smoking within 35 feet of campus buildings.



- Implementation by the Office of Facilities Management.

7. Establish a mold prevention program to limit exposure to mold.



- Implementation by the Office of Facilities Management.

8. Removal of temporary structures not able to adopt sustainable attributes.



- Implementation by Office of Management and Budget.

9. Complete a building inventory and assessment of its existing operating systems.



- Implementation by the Office of Facilities Management.

DINING SERVICES

In order to have a sustainable campus, the food and means of preparing it need to be considered. There are many ways of reducing the impact of dining services on the environment while providing students, faculty, staff, and visitors with fresher, tastier, and healthier food. Locally grown food has many benefits including freshness and taste that is better than food that is shipped long distances. Additionally, it strengthens the local economy; it protects the environment, and reduces reliance on fossil

fuels.² Organic food is produced without using pesticides or herbicides. According to the World Fair Trade Organization:

Fair Trade is a trading partnership, based on dialogue, transparency and respect, which seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers – especially in the South.³

Additionally, providing fresh, local, and fair trade items could be very appealing to adult education students. According to STARS, "Food production often has deleterious environmental impacts." The use of pesticides and fertilizers can contaminate water and soil and impact human and animal health. As noted by STARS, the transportation of food over long distances produces greenhouse gas emissions and other pollutants.

HOW GREEN ARE WE?

Ambler campus currently contracts with Sodexo, a national catering service. They currently provide around 200 meals per day through the Dining Hall and also offer two a la carte cafes in Bright Hall and the Learning Center. Last year, Styrofoam cups were replaced with glass cups to reduce waste and energy consumption. During the week, the dining hall

² Food Routes, Date accessed: March 2, 2009
<<http://www.foodroutes.org/whycare1.jsp>>.

³ World Food Trade Organization website, Date Accessed: March 2, 2009,
<http://www.wfto.com/index.php?option=com_content&task=view&id=1&Itemid=13>.

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provides washable dishware and silverware with plastic silverware, plates, and cups used only on the weekends. Current initiatives include a new dining system called “iMye.” This system is a computer-based system where people can order through a computer kiosk and food is made to order. This helps to reduce food waste and energy used to keep prepared foods hot or cold. There are two other eateries on campus that offer prepared and pre-packaged food.

Ambler Campus began as The School of Horticulture for Women, which was established “to train young women for careers in agriculture and horticulture,” with courses in fruit and vegetable growing, soil science, farm management, beekeeping, canning, and preserving. Currently, bees are being raised on campus to honor the past history of the college.



Source: Temple University Ambler Campus, Landscape Arboretum, website, <http://www.temple.edu/ambler/arboretum/history.htm> Accessed April 28, 2009

CASE STUDY: MT. HOLYOKE COLLEGE

Mt. Holyoke College has created Environmental and Sustainable practices for its dining halls, which are run by the college. They have incorporated sustainability into their dining halls by:

- Sourcing locally grown products.
- Sourcing organically grown products.
- Sourcing responsibly grown or harvested products.
- Operating dining facilities in a way that:
 - Saves water and energy,
 - Reduces packaging, and
 - Recycles or composts everything from disposable dishware to food waste.

HOW TO BE GREEN STAR

1. Increase education and awareness of students, faculty, and staff about reducing food waste and packaging, the benefits of organic and or locally grown foods, and composting.



- Implementation by the new Student Campaign for Social, Economic, and Environmental Responsibility.

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2. Establish a program dedicated to food production on Ambler Campus. The opportunity exists to use the Horticulture and Landscape Architecture Departments to maintain a garden devoted to the production of food. This food garden could supply dining services with fresh, in season fruits and vegetables. The carbon footprint of fruits and vegetables grown on Ambler Campus would be near zero. The Ambler Campus has an orchard that is no longer in use, but the opportunity exists to bring the orchard back and to bring back a part of the campus' history. Classes could be developed to bring the orchard back into working order and to maintain it. The fruit could then be sold on campus and/or used in the dining hall.

T \$

- Implementation by Landscape/Horticulture Department and Student Outreach Eco-Rep.
3. Use fair trade-coffee at all food outlets on campus.

★ T (1 point)

- Implementation by Sodexo.
4. Increase usage of locally grown food and create a symbol to be used to indicate when a locally grown item is being offered.

★ T (1 to 3 points)

- Within 1 year increase local food expenditures to 5% of the total food budget. (1 STARS point)
 - Within 3 years increase local food expenditures to 25% of the total food budget. (3 STARS points)
 - Within 5 years increase local food expenditures to 50% of the total food budget. (3 STARS points)
- Implementation by Sodexo.
5. Research available technologies to reduce water and energy use in dining facilities.

T \$

- Implementation by Sodexo.

ENERGY AND CLIMATE

Energy and Climate are tightly linked for most institutions. Most greenhouse gas emissions for institutions are a result of the production of energy and use of energy. Greenhouse gas (GHG) emissions are leading to climate change and any effort to reduce those emissions should be undertaken. Because of the tight link between energy and GHG emissions, sound energy management is more important than ever. Sound energy management can save costs while at the same time reducing greenhouse gas emissions. This is particularly important today with the potential for rising energy prices and rising greenhouse gas levels.



Source: Market Research Bulletin, "Growth in Alternative Energy," <http://www.marketresearchbulletin.com/?p=397> Accessed April 20, 2009

ENERGY

A significant percentage of an institution's budget goes towards the cost of energy and these costs are likely to increase due to several converging factors. First, with the lull in energy demand due to the current economic crisis, energy prices, particularly oil, remain low. Once the global economy

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inevitably rebounds, demand for energy will also rebound and an increase in prices will likely follow. Another factor contributing to an eventual rise in energy prices is the decreasing supply of “easy to reach oil,” leaving the oil that is harder to extract. The more costly extraction combined with a lower supply of oil will increase oil prices and prices of other energy sources will surely follow. Yet another contributing factor is the current federal administration’s desire to pursue a carbon or CO₂ regulation to put a price on carbon emissions, either through a tax or a cap and trade system. Either way, there would be increased costs for power producers emitting CO₂. Any costs that these power companies incur due to the pricing of carbon emissions, will inevitably be passed on to the customer, thereby raising prices. Finally and perhaps of the most concern is Pennsylvania’s plan to “deregulate” electric utilities. Since 1996 electricity prices have been capped by Pennsylvania regulations. These regulated caps are set to expire in 2010, leaving utilities to base their rates on the wholesale purchase of power. Energy companies will be required to purchase power on the wholesale market and these prices are expected to be higher than current electricity rates. Deregulation in other states has led to increases in electricity rates between 20% and 70%.

With all the potential factors that could increase power rates, it is imperative that institutions adopt sound energy management strategies to reduce consumption and possibly generate their own power

HOW GREEN ARE WE?

With President Hart’s signing of the American College and University Presidents Climate Commitment, Temple University and Ambler Campus have paid more attention to energy management, both in policy and in projects. The Ambler Campus Sustainability Council approved recommendations for “Sustainable Energy” on November 27, 2007. These recommendations addressed energy conservation, alternative energy, energy audit and funding and implementation. On December 1, 2008

Temple University implemented some of these recommendations in the “Energy Conservation Policy.” This policy addresses heating and cooling, lighting, computers, purchasing, and water.

There have been several projects undertaken on Ambler Campus that have addressed sound energy management strategies. The presence and expansion of the “chilled water” loop on campus is an example of a project that efficiently uses and distributes power on campus. The excess capacity of the Learning Center’s cooling system has been connected to other buildings on campus to provide cooling to the connected buildings. Currently the Library and Widener Hall are connected to the chilled water loop and Dixon Hall will soon be connected. Another energy project on Ambler Campus in which Temple University has invested approximately \$1,000,000 is the “Ambler Electrical Distribution - High Voltage Yard Enlargement.” The project involves upgrading the existing electrical equipment and increasing the space for the new equipment. This project will improve reliability and, should there be an interruption in power supply, Ambler Campus can be powered by back-up generators located at the Learning Center.

HOW TO BE A GREEN STAR

1. Establish a baseline of energy use for Ambler Campus buildings, preferably through a campus-wide Energy Audit or at a minimum by compiling 2 years’ worth of electricity bills.

★ T \$ ♻️ (prerequisite)

- Implementation by ACSC Energy Workgroup and the Office of Facilities Management.

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2. Reduce Energy Consumption through efficiency and conservation measures recommended by the ACSC Energy Workgroup.

★ T \$ ♻️ (1 to 3 points)

- Implementation by ACSC Energy Workgroup, the Office of Facilities Management, and the Green-Challenge Eco-Rep..
- STARS points for three year downward trend (in energy “intensity”)⁴:
 - 1 point: two percent reduction
 - 2 points: more than two percent reduction
 - 3 points: more than four percent reduction

3. Conduct Renewable Energy Feasibility Study for Ambler Campus. The study should include the following:

T

- Present an understanding of Pennsylvania Alternative Energy Regulations.
- Assess wind resource for Ambler Campus.
- Assess sites for potential solar installations.
- Assess potential for geothermal “ground source heat pump.”
- Investigate “Power Purchase Agreements.”

- Implementation by ACSC Energy Workgroup and Office of Facilities Management, Department of Energy and Utilities Management, and the new the Student Campaign for Social, Economic, and Environmental Responsibility.

4. Install a renewable energy facility to reduce dependence on fossil fuels and reduce associated GHG emissions.

★ T (1 to 5 points)

- Implementation by ACSC Energy Workgroup and Office of Facilities Management, Department of Energy and Utilities Management.

CLIMATE

The American College & University Presidents Climate Commitment’s (ACUPCC) Implementation Guide offers guidance for accounting for and reducing GHG emissions. The Implementation Guide divides GHG emissions into three “scopes.” These scopes are based on where the GHG are occurring. Scope 1 refers to GHG emissions occurring under the direct control of the college or university. Scope 2 refers to indirect emissions through the production of electricity. Scope 3 refers to other indirect emissions or “those that are a consequence of the activities of the institution, but occur from sources not owned or controlled by the institution.”⁵ Any GHG inventory should focus on Scopes 1 and 2. This is consistent with the STARS requirements for a GHG inventory.

HOW GREEN ARE WE?

Reduction in greenhouse gas emissions is the ultimate goal of many of the recommendations within this plan. Without a baseline specific for Ambler Campus, it is difficult to determine the effectiveness of any effort to reduce GHG emissions. Temple University conducted a GHG inventory. This inventory did not separate Ambler Campus from its findings for the entire University. Should Ambler Campus seek to reduce GHG emissions and account for those reductions, a separate GHG inventory for Ambler Campus would be required.

⁴ “Energy intensity is calculated by dividing total energy consumption (electricity plus temperature control) by the amount of conditioned floor space.” STARS Version 0.5, page 55.

⁵ ACUPCC Implementation Guide p.11.

CASE STUDY: RUTGERS UNIVERSITY

In September 2008, Rutgers University broke ground on a 1.4 megawatt solar farm. This solar farm is located on seven acres of the Livingston Campus. The \$10 million project is financed partially through New Jersey Board of Public Utilities. The benefits are as follows:

- Will generate approximately 10% of the electricity needs for Livingston Campus.
- Will reduce greenhouse gas emissions by 1,200 tons per year.
- Will produce an estimated \$200,000 savings in the first year.

HOW TO BE A GREEN STAR

1. Conduct a Scope 1 and Scope 2 greenhouse gas emissions inventory for Ambler Campus to be used as a baseline for any future reductions.

★ T \$ ♻️ (prerequisite)

- Implementation by ACSC, CSC, Facilities Management, the new Student Campaign for Social, Economic, and Environmental Responsibility and Finance and Operations.

2. Track annual reductions in GHG emissions.

★ T \$ ♻️ (1 to 5 points)

- Implementation by ACSC, CSC, Facilities Management, the new Student Campaign for Social, Economic, and Environmental Responsibility and Finance and Operations.

GROUNDS

The management of the campus grounds provides opportunity for sustainable development on campus. Many institutions have utilized the STARS recommended measures for sustainable grounds to ensure the end results costs by reducing manpower and labor demand while improving the integrity of the local ecosystem. These strategies can later become a campus policy if found to be feasible. Feasibility is determined by weighing the cost of a particular feature of activity against its environmental value, the payback period, and/or value added for each. The campus can use any of the following strategies to operate its grounds more sustainably.

By redefining campus beauty and introducing native species into the landscape, universities can reduce their overall water consumption. Native species survive naturally in the local climate, negating the need for irrigation systems. Reducing lawn areas would also minimize the need for watering and mowing, use of agro-chemicals, and replanting. Allowing natural walkways to evolve prior to paving sidewalks is a great way to save time, money, and to minimize wasted materials. Also, storm water runoff is easier to manage when there are less impervious surfaces. Any activities involving outdoor pest management (plants, fungi, insects, and/or animals) can use best practices under an integrated pest management plan. Use of least-toxic pesticides, least risk, and most cost effective options for treatments that best protect human health and the surrounding environment can be made a campus policy. By establishing a sustainable campus grounds framework and adopting strategies, university grounds can be managed in a way that is more compatible with the natural resources of the area, the surrounding neighborhoods, and the campus' historic resources.

HOW GREEN ARE WE?

Ambler Campus has a long history of creating sustainable green spaces. Proper stewardship of these holdings is extremely important. Currently, Ambler campus offers over 187 acres of gardens and woods and is used by the Landscape Architecture and Horticulture Department as a living laboratory for creating sustainable landscaping. The various types of gardens include an herb garden, ground cover garden, native plant garden, formal gardens, rock wall, woodland garden, wetland garden, winter garden, trial garden, and large perennial borders. The sustainable wetland garden, built in 1998, uses solar energy and collects and biologically cleans roof and campus stormwater runoff. The Office of Facilities Management has also made significant steps in creating more sustainable campus grounds by committing to using native plantings for landscaping and currently works with The Arboretum to collect landscaping debris for compost.



Source: Excerpt from LA HORT Ambler Campus Master Plan

CASE STUDY: UNIVERSITY OF NEW HAMPSHIRE

The Landscape Master Plan presented by the University of New Hampshire is based on the idea that the campus landscape should be managed and not just maintained. This is addressed through three different sections of the Landscape Plan: landscape preservation, landscape restoration, and landscape enhancement. The University has adopted practices related to minimizing the impacts of construction, utility placement, topsoil preservation, and root protection zones. Measures to restore the landscape include reconnecting the fragmented landscape, stream restoration, habitat restoration, and tree and plant management. Priority is given to reintroducing native species that thrive in their natural habitat and are most sustainable.

HOW TO BE A GREEN STAR

The Office of Facilities Management will be integral in ensuring the success of creating a sustainable campus. In order to achieve these recommendations, it is imperative that Facilities works closely with the Ambler Campus Sustainability Council. These recommendations are proven methods for addressing common flooding issues, energy costs, and landscaping costs.

1. Inventory and map all campus grounds. Identify tree root zones and other key areas that should not be developed.



- Implementation by Office of Facilities Management, Ambler Arboretum and Center for Sustainable Communities, and Landscape Architecture and Horticulture Studio.

Strategic Plan for a Sustainable Ambler Campus

2. Substitute non-potable water obtained from captured rainwater in rain barrels and cisterns to meet 50% of landscaping irrigation needs.

★ T \$ ♻️ (1 point)

- Implementation by Office of Facilities Management, and the new Student Campaign for Social, Economic, and Environmental Responsibility

3. Install bioswales, trees and green space in the student parking lot to mitigate flooding and reduce parking to reflect the necessary number of parking spaces.

T ♻️

- Implementation by Office of Facilities Management, Community and Regional Planning, Landscape Architecture and Horticulture, the new Student Campaign for Social, Economic, and Environmental Responsibility and the Center for Sustainable Communities.

4. Integrate use of local materials, recycled materials, and other green alternatives for benches, bike racks, paving, parking, signage, gateways, etc.

T ♻️

- Implementation by Office of Facilities Management.

5. Use pervious pavement wherever feasible in new construction or renovations of grounds.

T

- Implementation by Office of Facilities Management.

6. Investigate alternatives to current snow and ice removal.

T

- Implementation by Office of Facilities Management.

MATERIALS, RECYCLING, AND WASTE MANAGEMENT

The reduction of waste is a simple step to reach sustainability. Recycling is the process by which waste that is generated is reused after processing to create another product. The U.S. Environmental Protection Agency (EPA) estimates that 75% of our waste is recyclable. By educating students and faculty about the importance of recycling, universities have the potential to dramatically reduce the amount of waste that goes to landfills and increase the amount of waste recycled. In order to promote this most basic tenet of sustainability, STARS outlines simple guidelines and ways to create partnerships with various groups including food services, facilities, administration, staff, and students. By creating an atmosphere where recycling is highly accessible, people will be more inclined to participate.

HOW GREEN ARE WE?

Ambler Campus participates in Temple University's recycling program. The Office of Facilities Management has completed many of the initiatives outlined in the Sustainability Task Force Report such as a move-out recycling day for on-campus students and a phasing-in of outdoor recycling containers. However, there are key recommendations that have yet to be implemented and the Strategic Plan for a Sustainable Ambler Campus and College includes these recommendations to further stress their importance.

There are particular initiatives that Ambler Campus can execute to increase recycling rates, reduce carbon emissions, and cut costs. Construction recycling is a promising area to achieve greater recycling and minimize Ambler's carbon emission. Currently, there is no over-arching policy for any Temple construction project to recycle construction materials; however, there have been small efforts made by vendors to recycle materials. Facilities Management has expressed interest in furthering this initiative. Construction recycling saves money, energy, and materials,

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which make it a priority when considering which initiatives to enact quickly. The Sustainability Task Force Report meticulously reviewed the recycling practices of all Temple Campuses. Temple currently recycles:

- Paper
- Plastic bottles
- Glass
- Aluminum
- Cardboard
- Tree limbs/leaves
- Computers
- Printer toners & ink cartridges
- Light bulbs
- Batteries
- Pallets
- Cooking Oil



Montclair University, Composting Facility
Source: Nina Morris, April 8, 2009

CASE STUDY: INSTITUTION RECYCLING NETWORK

The Institution Recycling Network (IRN) is a recycling cooperative that serves educational institutions and other organizations throughout the country. By partnering with IRN, Temple University would be able to recycle more than 75 different types of materials through a single contact and significant cost-savings could be expected due to the lower rates for recycling the items compared to the costs of disposal.

HOW TO BE A GREEN STAR

1. Establish food waste composting program to reduce waste, cut landscaping costs, and reduce carbon and methane emissions.
★ \$ ♻️ (1 point)
 - Implementation by Sodexo, Student Outreach Eco-Rep, Ambler Campus Sustainability Council.
2. Conduct building recycling audits. No efforts have been made on the Ambler campus to survey the recycling waste of buildings. This will be necessary when tracking progress of recycled materials.
T \$ ♻️
 - Implementation by the Office of Facilities Management.
3. Establish an initial University goal to increase the amount of recycled waste from approximately 26% of total waste to 40%.
★ T \$ (1 point)

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- Implementation by Ambler Campus Sustainability Council, the Green-Challenge Eco-Rep, and Office of Facilities Management.
4. Develop Construction Waste Management Guidelines for Ambler Campus Construction, Renovation, and Demolition. Institution Recycling Network has an excellent program that has recycled up 98% of construction waste and is used by colleges and university throughout the Northeast.



- Implementation by Office of Facilities Management.

PURCHASING

The provision of goods and services has a significant impact on our global environment and economy. Because institutions purchase vast resources in their operations, STARS has outlined recommendations to guide them to make environmentally responsible purchasing decisions. Purchasing choices made by institutions can have positive or adverse effects on natural resources and should be given close consideration in order to help protect these resources.

Cleaning products, janitorial paper, and trash bag products that meet Green Seal standards can be purchased with minimal or no extra cost. Buying products made with recycled content stimulates demand for recycled products and preserves resources. Through developing a fiscally responsible procurement policy for the purchase of environmentally preferable products, institutions can meet their needs while also maintaining environmental responsibility.

HOW GREEN ARE WE?

Ambler Campus has not yet adopted a green purchasing policy. Each department is currently budgeted money to purchase office supplies and furniture as needed. Because of this, the degree of green purchasing fluctuates between campuses and departments.

Temple University has committed itself to purchasing Energy Star appliances whenever possible and available. This policy has been adopted University-wide for all products available with an Energy Star Rating. STARS currently recognizes Energy Star purchases and under current criteria Temple Ambler would be eligible for one STARS credit. Another area where the University has adopted policies toward sustainability is in banning the purchase of incandescent light bulbs and in purchasing compact fluorescent light bulbs.

The University currently purchases all office supplies through a company called Alpha Staples. Alpha Staples is a subsidiary of the Staples Company and all University departments use this site to order supplies. This site does offer green-purchasing options to all users and this extends to those who purchase for Temple University. At the present time there is no requirement by Temple to order green products; it is left up to the discretion of the purchaser.

The University is currently in a Pilot Program with Alpha Staples to deliver office supplies in a more environmentally responsible manner. Currently, when office supplies are ordered they are delivered in a cardboard box, which in turn is thrown away or recycled. A new pilot program is being offered where office supplies will be delivered in plastic containers, which can be returned to Alpha Staples to be used again on another delivery. This

Strategic Plan for a Sustainable Ambler Campus

will act to eliminate a large portion of cardboard coming into the university and is far more sustainable, as a plastic bin can be reused countless times.⁶

CASE STUDY: RUTGERS UNIVERSITY

Rutgers University has adopted a comprehensive green purchasing policy. This policy includes paper purchases, furniture, and campus appliances. This policy was adopted across the university and includes many tenets that could be implemented at Temple Ambler.

HOW TO BE A GREEN STAR

1. Commit to purchasing Environmentally Preferable Paper Purchasing at all levels of administration. Environmental paper purchasing should be defined as follows:

★ T \$ ♻️ (1 point)

- 100 percent post consumer recycled content and processed chlorine free, or
- Certified by the Forest Stewardship Council (FSC) and total chlorine free, or
- 100 percent tree free material, or
- Any combination of the above such that 100 percent of the paper is comprised of environmentally preferable materials.

- Implementation by purchasing staff in all departments, Green-Challenge Eco-Rep.

2. Purchase 100% green cleaning products.

★ T \$ ♻️ (1 point)

- Implementation by purchasing staff in all departments, Green-Challenge Eco-Rep.
3. Comply with the guidelines outlined for the Electronic Product Environmental Assessment Tool (EPEAT) whenever possible. EPEAT specializes in electronic products and Temple Ambler should strive to purchase all new electronic products at the Bronze EPEAT standard.

★ T (1 point)

- Implementation by purchasing staff at all levels of the University, Green-Challenge Eco-Rep.
4. Commit to purchase furniture materials that are environmentally preferable. At least 70% of new furniture purchases meet one of the following guidelines:

★ T (1 point)

- Product contains at least 10% post consumer or 20% post industrial material, or
 - Product contains at least 70% of salvaged materials, or
 - Product contains at least 50% rapidly renewable material, or
 - Product contains at least 50% Forest Stewardship Council certified wood, or
 - Product contains at least 50% material harvested/extracted and processed within 500 miles of the institution.⁷
- Implementation by purchasing staff in all departments, Green-Challenge Eco-Rep.

⁷ Association for the Advancement of Sustainability in Higher Education, "Sustainability Tracking, Assessment & Rating System (STARS) for Colleges and Universities (pg 70-75)," 5 March 2009.

http://www.aashe.org/documents/stars/STARS_0.5.pdf

⁶ Eric Copenhaven, Telephone Interview, 12 March 2009.

TRANSPORTATION

One of the leading causes of greenhouse gas emissions on college campuses comes from transportation. In order to reduce greenhouse gas emissions, colleges and universities need to reduce single-occupancy vehicles (SOV) and encourage mass transit, carpooling, biking, and walking. Beyond the greenhouse gas emissions, the cost of providing parking for all the SOV drivers can be expensive. Reducing the size of parking lots can reduce costs for colleges and universities and reduce congestion on the local roadways in the area, making access to the college easier. Additionally, STARS states: "Institutions may realize cost savings and help support local economies by reducing their dependency on petroleum-based fuels for transportation."

HOW GREEN ARE WE?

Ambler Campus and College provides students, faculty, and staff with access to public transportation through shuttle services from Temple Main Campus, Fort Washington Campus, and the Ambler Borough SEPTA stop. The shuttle service includes a fleet of diesel school buses for the Campus shuttles and a few passenger vans for the SEPTA train stop. Current Shuttle Services offers 16 trips during the school week between 7:15 am and 10:15 PM from Ambler Campus to Main Campus. Sixteen trips are also offered from Ambler Borough's Train Station to Ambler Campus from 7:35 am to 10:05 pm. The Lansdale/Doylestown R5 runs close to hourly between the Temple Train Shuttle bus hours oftentimes do not match up, causing much delay in travel times between the Ambler train station and campus. These services are free to Temple students, faculty, and staff but, because the services are not provided during breaks, faculty and staff cannot rely on the shuttle system to get to and from work on a daily basis.

Recently implemented initiatives to reduce carbon emissions include a reduced SEPTA pass for students to encourage the use of public transportation and installation of 13 diesel oxidation catalysts by the Office

of Facilities Maintenance in order to reduce harmful particle emissions of its vehicle fleet.



Source: Temple University, Ambler Campus website, <http://www.temple.edu/ambler/about/community.htm> Accessed April 28, 2009

Two surveys have been done regarding transportation on campus. One was done only for the Ambler Campus and the other was done for Main Campus and Ambler. Neither of the surveys was conclusive, but they do give some idea of how students get to and from campus. The vast majority of students drive by themselves to campus. The Transportation Subcommittee of the Sustainability Task Force is currently working on a report regarding increasing the sustainability of the transportation system at all the campuses. This report is expected to be completed by the summer of 2009. The recommendations of the subcommittee should be taken into consideration for all potential transportation-related projects on the Ambler Campus.

CASE STUDY: NURIDE

George Washington University and George Mason University, both in the Washington, D.C., metro area, have partnered with NuRide to help promote carpooling for college commuters. NuRide is a free online carpooling website. NuRide maintains a website for commuters to find other commuters with the same destinations for daily commuting, one-

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time rideshares, or regular but not daily commuting. Commuters register with NuRide using their university email account. This allows other users to see that commuters are traveling to or from the university. Registering with university email accounts allows NuRide to keep track of the number of trips that have been taken by students or staff. By tracking the number of trips saved, the university can quantify a reduction in their carbon footprint.⁸

HOW TO BE A GREEN STAR.

1. Educate students, faculty, and staff on reducing greenhouse gas emissions by reducing the number of SOV trips and using transit, carpooling, walking, and biking.



- Implementation by the Office of Student Life.

2. Create a no idling policy on campus stating, “All vehicles should be tuned off when not in use or when the driver leaves the vehicle for any length of time.”



- Implementation by Facilities Management.

3. Make shuttle information more accessible.



- Implementation by the Office of Student Life.

5. Assist NuRide in coming into the Philadelphia area by helping to promote and link NuRide to sponsor organizations.



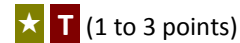
- Implementation by the Ambler Campus Sustainability Council.

6. Create a bike share program on campus. Starting with 10 bikes, create a checkout point in the main parking lot allowing students to borrow a bike for the day and return it when they are done with the bike.



- Implementation by the Ambler Campus Sustainability Council and Facilities Management.

7. Create a structured parking facility and transit hub near the Learning Center. Increase parking cost for students who wish to park in this location. Use this parking lot for special programs and events at the Learning Center as well. Create a transit hub including café, locker rooms with showers, bike parking spots, and outdoor space. Reduce the size of the current parking lot and create rain gardens for stormwater run-off. The increased fees can help to pay for the parking structure. Space in this parking facility should be made available to students who are carpooling as an incentive to carpool to campus instead of driving by themselves.



- Within 1 year, 25% of the students, staff, and faculty use non-SOV transportation options. (1 STARS point)
- Within 5 years, 50% of the students, staff, and faculty use non-SOV transportation options. (2 STARS points)
- Within 10 years, 95% of the students, staff, and faculty use non-SOV transportation options. (3 STARS points)
- Implementation by the Ambler Campus Sustainability Council, Facilities Management, Community and Regional Planning Department, Landscape and Horticulture Department, and Office of the Dean.

8. Create bike paths that link Ambler Campus to the Borough of Ambler and the Ft. Washington Train Station.



- Implementation by the Ambler Campus Sustainability Council in partnership with the Borough of Ambler.

⁸ NuRide Website “News and Information”- “Results and Facts”
http://www.nuride.com/nuride/public/p_news_results.jsp

*ADMINISTRATION
AND
COMMUNITY
RELATIONS*

ADMINISTRATION & COMMUNITY RELATIONS (AC)

INVESTMENT

This section in the STARS criteria recognizes institutions that manage their endowment to promote sustainability. Today, Temple University's endowment is in the neighborhood of \$250 million. Ambler Campus does not have an endowment of its own; rather it has a portion of Temple's pooled endowment. Therefore, this section does not directly apply to Ambler Campus. However, the role of Ambler Campus should be to advocate for Temple University to invest responsibly.

HOW GREEN ARE WE

The Sustainable Endowments Institute (SEI) is a non-profit organization "engaged in research and education to advance sustainability in campus operations and endowment practices."¹ The SEI evaluates colleges and universities across the country using their "College Sustainability Report Card." In 2009, Temple University received an overall grade of a "C." In the section that relates to endowments and investments, Temple University received two "F"s and a "C." Below is an excerpt from the 2009 College Sustainability Report Card:

"Endowment Transparency = F. The university has no known policy of disclosure of endowment holdings or its shareholder voting record.

Investment Priorities = C. The university aims to optimize investment return and has not made any public statements about

¹ <http://www.endowmentinstitute.org/> Accessed April 2009

investigating or investing in renewable energy funds or community development loan funds.

Shareholder Engagement = F. The university has not made any public statements about active ownership or a proxy voting policy."²

Judging from the grades received, Temple University has room for improvement in managing its endowment in a sustainable manner. The grades for the endowment section of the report card are based on multiple choice surveys sent via email to a school official. The survey had a response rate of 70% after follow up emails.³

CASE STUDY: DICKINSON COLLEGE

In the 2009 College Sustainability Report Card Dickinson College's "endowment" scores are among the highest in the country. Below are the scores:

*"Endowment Transparency = B
Investment Priorities = A
Shareholder Engagement = A"⁴*

² <http://www.greenreportcard.org/report-card-2009/schools/temple-university> Accessed April 2009.

³ <http://www.greenreportcard.org/report-card-2009/schools/temple-university> Accessed April 2009.

⁴ <http://www.greenreportcard.org/report-card-2009/schools/dickinson-college> Accessed April 2009.

HOW TO BE A GREEN STAR

1. Advocate for Temple Main Campus to make investment decisions that are more transparent, more responsible, screened for negative investments, that promote sustainability, and that engage shareholders.

★ T \$ (1 to 8 points)

- Implementation by Finance and Operations, ACSC, and the new Student Campaign for Social, Economic, and Environmental Responsibility.

PLANNING

University-level strategic planning adhering to the principles of sustainability can change the impact that universities have on ecosystems, on communities, and on their own long-term economic viability. University settings, like large corporations, are unique in that they can provide for systematic adaptation and progress that a town of comparable size would not find feasible. If university decision-makers provide vision, guidance, and financial backing, adaptation can occur at a remarkably quick pace, which can provide both short and long term fiscal benefits to administrators. STARS recognizes these factors that make universities and colleges unique institutions to implement sustainability.

Strategic master planning and policy directives are important for forming a vision and for demonstrating that a long-term thought process is required. With the structure and organization that plans provide, best management practices can be proposed, cost-savings can be demonstrated, and potential responsible parties can be highlighted. Ultimately, changes depend on the unity of those committed to creating them. However, the importance of planning cannot be underestimated. Action plans and organizational frameworks provide forethought to action during urgent or even dire circumstances.

HOW GREEN ARE WE?

Temple University Ambler currently has a strategic plan for the Ambler Campus. At the current time the strategic plan is not shared with all Ambler Staff and not available for review by Ambler students.

The Sustainability Task Force Report that was developed for Temple University was developed using an open and inclusive planning process. The Sustainability Task Force Report was developed with a focus on including many people from many different departments and it is recommended that Temple Ambler apply this principle to all planning efforts undertaken at the University.

CASE STUDY-HARVARD UNIVERSITY

Harvard University has developed planning principles that are inclusive and developed through a collaborative effort of many individuals at all levels of the University. The principles outlined by Harvard University have produced a sustainability strategic plan that can be implemented at all levels of the University.

HOW TO BE A GREEN STAR

1. Strive for inclusion of staff, administration, and students at all levels of university planning. An institution must recognize that all levels of the university, from faculty to staff to students, play an integral role in the planning process and bring various resources and knowledge to the table.

T \$

- Implementation by the Dean of Ambler Campus and College and the Provost.

Strategic Plan for a Sustainable Ambler Campus

2. Implement a policy that all planning efforts at the University should consist of a committee that includes faculty, staff and student representation.



- Implementation by the Dean of Ambler Campus and College and the Provost

SUSTAINABILITY INFRASTRUCTURE

In order to make widespread changes within the structure of a large university, councils, offices, taskforces, committees, and other entities are needed to enable a culture of sustainable principles, to insert policies where applicable, and to engage stakeholders through the promotion of best management practices. Integrating sustainable choices into the decision-making process is an important component of the sustainable measures a school can take. Sustainability Infrastructure refers to an operational structure applying sustainable concepts and to staff within the University who are dedicated to promoting sustainable initiatives and other resources that are reserved by the University for this purpose. STARS recognizes the importance of a sustainability infrastructure because dedicated staff and resources are essential to publicize, organize, and implement initiatives on campus that will decidedly create lasting changes to the institution.

HOW GREEN ARE WE?

The Office of Sustainability staffed with a Director of Sustainability was created at Temple Main after this measure was recommended by the Sustainability Task Force; however, there is no counterpart at Temple Ambler. The Ambler Campus Sustainability Council, which meets monthly, has a chairperson and committees committed to advancing policy at Ambler. Although Temple University's Office of Sustainability on Main Campus has a website signaling its practices and efforts, the only webpage

detailing the efforts of Ambler Campus is Ambler Campus Sustainability Council's website, which details the Council's past, current, and future initiatives.

Ambler recently changed the printed publication for alumni and friends from the name *Rambler* to *Thrive*, signifying the campus' shift towards sustainability, and the winter 2009 edition was dedicated to sustainable initiatives at the Campus.

CASE STUDIES: YALE UNIVERSITY

Yale University has conducted a "Green Cup" since 1991 among its different residential colleges. This is a recognition program for the best recycling performance between residential colleges. Scores are kept and tallied and cash prizes are awarded on a weekly basis to winners. At the end of the year, a local artist blows a glass "trophy" out of bottles that were collected from recycle bins on campus. A pizza party is also awarded to the dorm that recycles the most material.⁵

HOW TO BE A GREEN STAR

1. Create a sustainability officer or director position at Ambler Campus as a full-time paid position with academic and operational purview who reports directly to the Dean to be used as a resource, to foster collaboration, and to coordinate outreach projects (3 STARS points). Alternatively, employ a full-time paid sustainability officer (2 STARS points) or give duties to another staff person as long as these job duties are worked into his or her job description (1 STARS point). Create eco-rep positions, to implement many initiatives.⁶

⁵ <http://www.yale.edu/recycling/greencup/>, accessed April 2009.

⁶ See Appendix 5 for task descriptions associated with each position.

Strategic Plan for a Sustainable Ambler Campus

★ T \$ ♻️ (1 to 3 points)

- Implementation by the Office of Student Life
2. Create a sustainability recognition program that highlights outstanding acts of sustainability and grants “eco-awards” on at least an annual basis. Awards and recognitions can be granted to an individual, a department, a building, an office, an organization (or other) within the campus community. An “eco-awards” ceremony could coincide with the existing “Annual Student Leadership Awards Ceremony,” which recognizes student participation in co-curricular activities which promote leadership development skills.

★ T \$ ♻️ (1 point)

- Implementation by the Green-Challenge Eco-Rep.
3. Create website for the “Student Campaign for Social, Economic, and Environmental Responsibility,” which would be a student-run site devoted to sustainability.

T \$ ♻️

- Implementation by the Communications Eco-Rep.
4. Build and document partnerships with other colleges and universities that foster institutional sustainability or promote research or advocacy on sustainable topics.

★ T \$ ♻️ (1 point)

- Implementation by the Community Eco-Rep
5. Integrate one or multiple student government positions into the activities of the “Student Campaign for Social, Economic, and Environmental Responsibility.” This could be accomplished by having a student government representative serve simultaneously as an “eco-rep.”

T \$ ♻️

- Implementation by the Office of Student Life and the Student Government Association.

6. Integrate “sustainability” theme into every edition of the publication *Thrive*, which is meant for alumni and friends of Temple Ambler. Nurture an alumni sustainability network and create method for alumni and friends to donate to sustainable causes, such as green energy on campus.

T \$ ♻️

- Implementation by the Communications Eco-Rep, Green-Challenge Eco-Rep.

COMMUNITY RELATIONSHIPS AND PARTNERSHIPS

Institutions of higher education can work to engage the public including local organizations, businesses, or government, in sustainable actions through resource-sharing. There are numerous opportunities for student involvement in the community through volunteer service and also through mutually benefiting partnerships, so that students become personally and professionally engaged in the real-life problems. Because institutions of higher education can act as catalysts for the advancement of sustainability in main stream society, outreach and partnerships are integral to a campus sustainability plan. STARS provides recognition to institutions that devote financial and academic resources to the community through service, engagement, and partnerships in order to combat problems outside of the classroom.

HOW GREEN ARE WE?

Temple Ambler’s Office of Student Life coordinates community service activities and has full-time staff devoted to the purpose of organizing students for service opportunities. The Office of Student Life works to serve community needs and organizes students to work at the Mattie Dixon Community Cupboard, St. Mary’s Villa, and Habitat for Humanity, for example. Temple freshmen complete 10 hours of community service in

Strategic Plan for a Sustainable Ambler Campus

their first semester through the program FRESHSERVE. Service-oriented student organizations such as the campus sororities and fraternities participate in community service activities year-round.

Ambler Campus Administration works with the Ambler Main Street Committee to incorporate local Ambler businesses into campus events, and to arrange for student participation and service in the Borough. Ambler has also started to offer non-credit classes with a sustainability theme aimed to attract adult learners. In fall 2008, *Xeriscaping*, *Making Compost Make Sense*, and *Creating a Business Case for Green Meetings and Events* were offered.

CASE STUDY: BEREA COLLEGE

Berea College's Gear Up Partnership works to advise disadvantaged youth about enrollment in higher education. The Partnership "provides direct student services, including mentoring and tutoring, college and career awareness activities, summer programs and enrichment, and individual counseling, and professional development opportunities."⁷

HOW TO BE A GREEN STAR

1. Expand community service opportunities beyond what is currently required for FRESHSERVE. Encourage service hours throughout each semester to obtain "sustainability service star" certificates and recognition at "eco-cup" awards (which can coincide with existing Annual Leadership Awards Ceremony). Require a two-page paper at the end of the service experience explaining how the service corresponded to the principles of sustainability.

⁷ <https://www.berea.edu/sacs/3-4-2.asp>, accessed April 2009.

Engage student body in institution-organized or coordinated, unpaid community service activities including, but not limited to, service that earns academic credit.⁸

★ T \$ ♻️ (1 to 6 points)

- Within 1 year, between 25 and 50 percent of the student body participates in 1 to 5 hours of community service per full time student per year (2 STARS points)
- Within 3 years, between 50 to 90 percent of the student body participates in 5 to 10 hours of community service per full time student per year (4 STARS points)
- Within 5 years, over 90 percent of the student body participates in more than 10 hours of community service per full time student per year (6 STARS points)
- Implementation by The Office of Student Life.

⁸ These credits are a combination of AF Credit 14: Student Participation in Community Service (1-3 credits), and AF Credit 15: Student Hours Contributed in Community Service (1-3 credits).

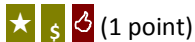
Strategic Plan for a Sustainable Ambler Campus

2. Strengthen outreach activities in the surrounding community through involvement in local businesses' marketing strategies, revitalization efforts in downtown Ambler Borough, or community education initiatives. Compile online database of existing campus/community partnerships and of potential partnerships for professors and students in business, marketing, education, social work, planning, economics, and other programs. Build outreach initiative to contact and prepare local businesses and organizations for the data or information that would be needed by students for individual or class projects.



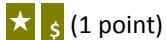
- Implementation by the Community Eco-Rep.

3. Meet the Carnegie Foundation for the Advancement of Teaching's "Outreach & Partnerships" Elective Classification.⁹



- Implementation by the Office of Student Life.

4. Advocate for sustainable public policies (issues, bills, ordinances) on the federal, state and local levels that further sustainability in general, and/or on campuses.



(1 point)

⁹The Carnegie Foundation for the Advancement of Teaching's "Outreach & Partnerships" is defined as a designation given to "institutions that provided compelling evidence of one or both of two approaches to community engagement. *Outreach* focuses on the application and provision of institutional resources for community use with benefits to both campus and community. *Partnerships* focus on collaborative interactions with community and related scholarship for the mutually beneficial exchange, exploration, and application of knowledge, information, and resources (research, capacity building, economic development, etc.).

- Implementation by the Student Campaign for Social, Economic, and Environmental Responsibility.
5. Organize and publicize community events such as farmers market, flea markets, and bake sales while using proceeds for causes such as an Ambler Green Fund for new turbine, solar panels, or renovations for Gilbert House.



- Implementation by all Eco-Reps.

DIVERSITY, ACCESS AND AFFORDABILITY

Creating a sustainable campus requires a university to reflect the diversity of the world in which it exists. STARS stresses the importance of diversity within a student body because it creates a healthier, more sustainable campus environment. Diversity in the student body, faculty, and staff will generate a greater variety of ideas and enrich the social fabric of the university. Furthermore, requiring universities to reach out to under-represented communities ensures that all people have the opportunity to advance themselves and their communities, regardless of race, class, gender, age, disability or creed and provides greater collaboration and produces greater results. Universities can encourage diversity by creating scholarships and providing support networks to ensure students, faculty, and staff are welcomed and encouraged.

HOW GREEN ARE WE?

Temple has a Non-Discrimination Policy that has been enacted since 1982. Temple Main Campus has an impressively high diversity rate and is continually ranked as one of the most diverse schools in the United States. However, Ambler campus' diversity rates are considerably lower than that of Temple Main, although the tuition and fees are the same.

CASE STUDY: RUTGERS UNIVERSITY

As the most diverse university in the United States, Rutgers demonstrates its commitment to diversity through their one-stop website that connects all aspects related to diversity on campus - university policy statements on equal opportunity, a letter from the President, curriculum focused on diversity, and grant opportunities geared toward advancing diversity.

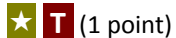
HOW TO BE A GREEN STAR

1. Create a website that offers students information about diversity policy, student groups, scholarships and grants, and other diversity initiatives so that diversity at Temple continues to be supported and encouraged.



- Implementation by Admissions and Marketing and the Communications Eco-Rep.

2. Develop a Diversity Plan that other campuses can model after. This plan would emphasize Ambler's specific goals to achieve greater diversity and better reflect the surrounding areas. It will provide specific, measurable goals to achieving greater diversity.



- Implementation by the Office of Student Life and the new Student Campaign for Social, Economic, and Environmental Responsibility.

3. Identify through GIS mapping of surrounding counties ethnic groups to attract from within the surrounding counties.



- Implementation by Admissions and Marketing and CSC.

HUMAN RESOURCES

The value of human capital is just as important to institutions of higher education as it is to corporate enterprises. Fair and just policies, benefits, and wages positively affect employees by boosting morale, health, and productivity. STARS provides recognition to institutions that remunerate and treat their employees responsibly, which is another important aspect of sustainability.

HOW GREEN ARE WE?

Temple Ambler's employees are under similar contract guidelines as employees at Main Campus. All full-time Temple employees receive full health care coverage, and part-time workers get health care coverage depending on their job level and union affiliation. About 80% of graduate departments provide student employees with 100% coverage on health care premiums, while the remaining 20% of departments pay for between 25-100% of premium costs. Lowest paid workers' salaries are annually updated based on market-rate surveys and Temple works to ensure that they pay their employees competitively.

Temple University grants parental leave to all employees who have worked at least 1,250 hours and have been employed at least 12 months, in accordance with the Family and Medical Leave Act of 1993 (FMLA). Eligible employees can take 12 weeks of paid or un-paid leave to care for a newborn or a newly adopted or foster child within 1 month of placement of the child in one's home. FMLA guidelines require any employer with more than 50 employees to provide eligible employees with 12 weeks of leave, which would go unpaid only if a person's contract does not account for the accrual of sick days, vacation time, or personal time to comprise these days taken off within a 12-week period. Graduate student employees are eligible for short term leave but it is subject to approval by the employee's department.

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Temple University also extends equal benefits to domestic partners as to employees' spouses. In addition, Temple provides the benefit of tuition remission for certain employees, spouses, and dependent children. Other Temple benefits include an employee home ownership program, which provides full-time employees with forgivable loans on single family houses in zip-codes surrounding Main Campus and the Health Sciences Campus in Philadelphia.

In 2008, Temple participated in its first ever university-wide employee satisfaction survey. The school took part in the Chronicle of Higher Education's "Great Colleges to Work For" Survey to measure over 2,000 employees' satisfaction or dissatisfaction with their benefits, wages, facilities, career development, and more. Temple Human Resources is working to address suggestions for improvement as results for each of the colleges are revealed.

HOW TO BE A GREEN STAR

1. Create a sustainable compensation methodology to periodically evaluate and, when necessary, update employee wages and benefits to ensure that employees with lower-range salaries obtain compensation for their work that allows them to meet their basic needs.

★ T (1 point)

- Implementation by Human Resources Compensation Staff.

2. Expand full health care coverage to all employees working at least half of what is considered full-time employment, regardless of job classification and bargaining unit.

★ T (3 points)

- Implementation by Human Resources Benefits Staff.

3. Expand all departments' coverage of graduate student employees' health care premiums beyond 75% (1 STARS point) or to 100% (2 STARS points).

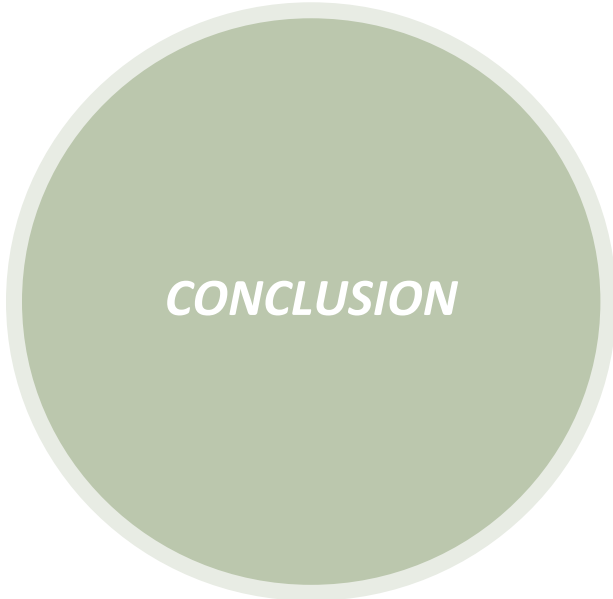
★ T (1 to 2 points)

- Implementation by Human Resources Benefits Staff.

4. Conduct an employee satisfaction survey at least once every 3 years. This survey can be institution-wide or can be conducted separately in each department.

★ T (1 point)

- Implementation by the Department of Human Resources' Learning & Development Division.



CONCLUSION

CONCLUSION

The recommendations presented, if implemented, would at a minimum achieve 85 points towards STARS certification. The following tables show the STARS credits this plan’s recommendations would achieve.

TEMPLE UNIVERSITY, AMBLER CAMPUS: STARS POINTS		
EDUCATION & RESEARCH (ER)		24
OPERATIONS (OP)		37
ADMINISTRATION AND FINANCE (AF)		24
TOTAL POINTS		85



Source: Temple University, Ambler Campus website
<http://www.temple.edu/ambler/about/index.htm> Accessed April 29, 2009



Source: Temple University, Ambler Campus website
<http://www.temple.edu/ambler/about/facilities.htm> Accessed April 29, 2009

The following is a more detailed breakdown of achievable STARS credits:

Cherry Text = “already achieved” credits from the Introduction
Black Text = Achievable if recommendations are implemented

EDUCATION & RESEARCH (ER)		PTS
Co-Curricular Education		
ER-1	Student Sustainability Outreach Program	1
ER-2	Sustainability-Related Competition	1
ER-3	Sustainability in New Student Orientation	1
Curriculum		
ER-4	Sustainability Course Identification	1
ER-5	Sustainability-Focused Academic Courses	6
ER-6	Sustainability-Related Academic Courses	6
ER-7	Sustainability Course by Academic Department	3
ER-9	Sustainability-Focused Undergraduate Academic Program	2
ER-11	Sustainability-Focused graduate Academic Program	2
Faculty and Staff Development and Training		
ER-18	Sustainability in New Employee Orientation	1
SUBTOTAL		24

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	OPERATIONS (OP)	PTS
	Buildings	
OP-1	New, Construction, Renovations, and Commercial Interiors	4
	Dining Services	
OP-5	Local Food	3
OP-7	Fair Trade Coffee	1
	Energy and Climate	
OP-8	Energy Intensity Trend	3
OP-9	Renewable Energy	5
OP-10	On-Site Combustion with Renewable Fuel	3
OP-11	Greenhouse Gas Emissions Reductions	5
	Grounds	
OP-13	Irrigation Water Consumption	2
	Materials, Recycling, and Waste Minimization	
OP-15	Waste Diversion	3
OP-16	Construction and Demolition Waste Diversion	1
	Purchasing	
OP-19	Energy Star Purchasing	1
	Transportation	
OP-25	Fleet Greenhouse Gas Emissions	3
OP-27	Commute Modal Split	3
	SUBTOTAL	37

	ADMINISTRATION AND FINANCE (AF)	PTS
	Sustainability Infrastructure	
AF-10	Sustainability Officer	3
AF-11	Sustainability Recognition Program	1
AF-12	Inter-Campus Collaboration on Sustainability	1
	Community Relations and Partnerships	
AF-13	Community Service Infrastructure	1
AF-14	Student Participation in Community Service	3
AF-15	Student Hours Contributed in Community Service	3
AF-17	Outreach & Partnerships Carnegie Designation	1
AF-18	Public Policy Engagement	1
	Diversity, Access and Affordability	
AF-21	Non-Discrimination Policy	1
AF-22	Diversity Plan	1
	Human Resources	
AF-27	Sustainable Compensation for Faculty and Staff	1
AF-28	Faculty and Staff Benefits	2
AF-29	Graduate Student Employee Benefits	2
AF-30	Parental Leave	1
AF-31	Domestic Partner Benefits	1
AF-32	Employee Satisfaction Survey	1
	SUBTOTAL	24

Should Temple University and/or Ambler Campus pursue STARS certification, it is important to understand the time needed to achieve some of the credits. Many of the credits receive points for demonstrating a 2-3 year downward trend. For example, OP-11: Greenhouse Gas Emissions Reductions receives points only after reductions goals are met. At a minimum, two years are required to achieve this credit, one to establish a baseline and the next to demonstrate any reductions.



Source: Temple University, Ambler Campus website
http://www.temple.edu/ambler/about/images/LC7_000.jpg Accessed April 29, 2009

This plan documents the steps needed to help Temple Ambler become a sustainable campus. By adding to the existing framework the campus has developed to become more sustainable and by implementing the previously mentioned recommendations, Temple Ambler could become a role model for other universities and for the neighboring community. Given the College's history in landscaping and horticulture as well as its natural setting, it is uniquely posed to become a case study for other

suburban institutions and can act as a testing ground for projects that may later be adopted and implemented in more urban campus settings.

The recommendations provided in this strategic plan will attract students of all ages and will create a forward-thinking campus environment. The sustainability efforts will help differentiate Temple Ambler from other institutions and will make the school even more competitive. A list of potential funding sources has been provided in Appendix 3. Funding applications require planning strategies that this document may assist in providing. It is important that Temple Ambler's commitment to sustainability is formalized and institutionalized. This strategic plan is a valuable resource to help guide the leaders of this school in transforming Temple Ambler into the "THE GREEN CAMPUS."



Source: Temple University, Ambler Campus Sustainability Council website
<http://www.temple.edu/ambler/acsc/index.html> Accessed April 29, 2009



APPENDICES

APPENDIX 1: STARS CREDITS

CATEGORY 1: Education and Research (ER)					
	Co-Curricular Education:	POINTS	ER-14	Sustainability-Focused Non-Academic Certificate Program	2
ER-1	Student Sustainability Outreach Program	1	ER-15	Curricular Engagement	1
ER-2	Sustainability-Related Competition	1	ER-16	Sustainability Literacy Assessment	2
ER-3	Sustainability in New Student Orientation	1		Faculty and Staff Development and Training	POINTS
	Curriculum		ER-17	Incentives for Developing Sustainability Courses	1
ER-4	Sustainability Course Identification	1	ER-18	Sustainability in New Employee Orientation	1
ER-5	Sustainability-Focused Academic Courses	6	ER-19	Employee Sustainability Outreach Program	1
ER-6	Sustainability-Related Academic Courses	6		Research	
ER-7	Sustainability Course by Academic Department	3	ER-20	Research Inventory	1
ER-8	Academic Sustainability Courses by Credit hours	6	ER-21	Research Incentives	1
ER-9	Sustainability-Focused Undergraduate Academic Program	2	ER-22	Faculty Involved in Sustainability Research	3
ER-10	Sustainability Graduation Requirement	5	ER-23	Departments Involved in Sustainability Research	5
ER-11	Sustainability-Focused graduate Academic Program	2	ER-24	Internal Research Expenditures	5
ER-12	Sustainability Study Abroad Program	1	ER-25	External Research Expenditures	4
ER-13	Non-Credit Sustainability Courses	3	ER-26	Interdisciplinary Research	1

Category 2: Operations (OP)					
Pre-1	Recycling Program			Materials, Recycling, and Waste Minimization	POINTS
	Buildings	POINTS	OP-14	Waste Minimization	1
OP-1	New, Construction, Renovations, and Commercial Interiors	4	OP-15	Waste Diversion	3
OP-2	Building Operations and Maintenance	5	OP-16	Construction and Demolition Waste Diversion	1
OP-3	Potable Non-Irrigation Water Consumption Reduction	3	OP-17	Electronic waste Recycling Program	1
OP-4	Green Cleaning Service	1	OP-18	Hazardous Waste Minimization	1
	Dining Services			Purchasing	
OP-5	Local Food	3	OP-19	Energy Star Purchasing	1
OP-6	Food Alliance and Organic Certified Food	3	OP-20	EPEAT Purchasing	1
OP-7	Fair trade Coffee	1	OP-21	Purchasing Green Cleaning Products	1
	Energy and Climate		OP-22	Environmentally Preferable Paper Purchasing	1
OP-8	Energy Intensity Trend	3	OP-23	Environmentally Preferable Furniture Purchasing	1
OP-9	Renewable Energy	5	OP-24	Vendor Code of Conduct	1
OP-10	On-Site Combustion with Renewable Fuel	3		Transportation	
OP-11	Greenhouse Gas Emissions Reductions	5	OP-25	Fleet Greenhouse Gas Emissions	2
	Grounds		OP-26	Commute Modal Split	3
OP-12	Organic Campus	1	OP-27	Commuter Options	1
OP-13	Irrigation Water Consumption	2	OP-28	Air Travel	1

Category 3: Administration and Finance (Community Relations) (AF)					
Pre-1	Sustainability Committee		AF-17	Outreach & Partnerships Carnegie Designation	1
	Investment	POINTS	AF-18	Public Policy Engagement	1
AF-1	Investment Transparency	1		Diversity, Access and Affordability	
AF-2	Committee on Investor Relations	1	AF-19	Diversity Committee	1
AF-3	Screening for Negative Investments	1	AF-20	Diversity Officer	1
AF-4	Positive Sustainability Investments	4	AF-21	Non-Discrimination Policy	1
AF-5	Shareholder Engagement	1	AF-22	Diversity Plan	1
	Planning		AF-23	Recruiting for Student Diversity	1
AF-6	Strategic Plan	1	AF-24	Support Programs for Under-represented Groups	1
AF-7	Master Plan	1	AF-25	Support Programs for Under-represented Ph. D Candidates	1
AF-8	Sustainability Plan	1	AF-26	Affordability and Access Programs	1
AF-9	Climate Plan	1		Human Resources	
	Sustainability Infrastructure		AF-27	Sustainable Compensation for Faculty and Staff	1
AF-10	Sustainability Officer	3	AF-28	Faculty and Staff Benefits	3
AF-11	Sustainability Recognition Program	1	AF-29	Graduate Student Employee Benefits	2
AF-12	Inter-Campus Collaboration on Sustainability	1	AF-30	Parental Leave	1
	Community Relations and Partnerships		AF-31	Domestic Partner Benefits	1
AF-13	Community Service Infrastructure	1	AF-32	Employee Satisfaction Survey	1
AF-14	Student Participation in Community Service	3		Trademark Licensing	
AF-15	Student Hours Contributed in Community Service	3	AF-33	Independent Monitoring of Logo Apparel	3
AF-16	Financial Incentives for Public Service Careers	3	AF-34	Designated Suppliers Program	1

APPENDIX 2: EXPANDED CASE STUDIES

FACULTY AND STAF DEVELOPMENT AND TRAINING:
UNIVERSITY OF VERMONT/DICKINSON COLLEGE

The University of Vermont and Dickinson College are both implementing programs that will enhance knowledge of sustainability at both the faculty and staff levels. At both the University of Vermont and Dickinson College, orientations are held for new employees and both schools have incorporated the principles of sustainability into their orientations. Dickinson College approaches their introduction to sustainability as a function of employee orientation. At the orientation, new staff are introduced to the concept of sustainability and the expectations of the college. The University of Vermont approaches orientation differently but still effectively. At the University of Vermont, all new staff are given a walking tour of campus. Along this tour, sustainability is highlighted through various projects taking place on campus. Sustainability is never specifically addressed but new staff understand that sustainability is built into the daily life on campus. Each method has possibilities at Ambler Campus.

Another way sustainability is encouraged among the staff at Dickinson College is through a small Environmental Grants Program. This fund is created to provide money for faculty development, curriculum development, and faculty-student research projects that enhance sustainability learning on campus. Dickinson College has also created a study group of faculty members in order to develop new courses with a focus on sustainability and to modify existing courses that can incorporate more sustainability content. Dickinson College’s Center for Environmental and Sustainability Education has also sponsored meetings with faculty to discuss interdisciplinary teaching. These discussions focus on how to incorporate environmental and sustainable education across courses and departments.

One of the largest goals at Temple Ambler is the integration of sustainability to all levels of staff. The University of Vermont’s Office of Sustainability acts as the source for all things sustainable at the University for all levels of staff. By proactively educating and forming working relationships with all levels of staff, the Office of Sustainability has become the primary guidance for many departments on campus. During the sustainability integration period, departments were approached to discuss the topic of sustainability. A working partnership was formed with various departments and now the departments approach the Office of Sustainability with questions when projects arise.

In addition to these working relationships, the University of Vermont has developed a group called the Environmental Forum. This group meets about once a month to discuss greening efforts around campus. At these meetings, students, faculty, and staff work side by side to discuss topics and goals for the sustainability of the University of Vermont’s Campus.¹²

DINING SERVICES CASE STUDY: MT. HOLYOKE COLLEGE

Mt. Holyoke Dining Services has worked with their produce company to start using locally grown produce whenever possible. They have created a symbol that is used to indicate what produce is locally grown so that students can easily identify it. Additionally, they have created a schedule of when certain locally grown foods will be available in the dining halls. Their schedule is as follows:

September	Corn & Tomatoes
October	Peppers & Broccoli

¹Mieko A. Ozeki, Sustainability Projects Coordinator, University of Vermont, telephone interview, 18 March 2009.

²Neil Leary, Dickinson College, email correspondence, 20 March 2009.

November	Winter Squash & Cranberries
December	Potatoes
January	Carrots
February	Apples
March	Cabbage
April	Blueberries

Mt. Holyoke also uses certified fair trade and organic coffee in all their dining halls. Dining Services also does both pre- and post-consumer composting. In the kitchens, all food waste is placed in a bin for composting. For students, there is a clear bin labeled “compost” at all of the dish room windows for students to empty their food waste into before returning their dishes and one for excess liquids, labeled “liquids.” Napkins can also be composted as they are made of 100% bleach free post-consumer recycled materials. Dale Hennessey, Director of Dining Services at Mt. Holyoke, explained that by reducing energy and water usage they have been able to offset the costs for purchasing fair-trade coffee and local and organic produce.³ Educating students has also helped to reduce costs while creating a more sustainable food system. All students are given wide-mouth cups at the beginning of the school year to use instead of disposable cups. Additionally, education campaigns have been undertaken to make students, staff, and faculty more aware of using to go packaging when possible and to take only the amount of food they will eat and only the number of napkins they need. Mt. Holyoke was able to cut their napkin usage by 30% by using new dispensers that only dispense one napkin at a time, instead of ones where people could take a handful at a time.⁴

³ Mt. Holyoke College website, Offices, Date Accessed: March 6, 2009, <<http://www.mtholyoke.edu/offices/dining/environment.shtml>>.

⁴ Personal Communication, March 24, 2009.

ENERGY AND CLIMATE: RUTGERS UNIVERSITY

In September 2008, Rutgers University broke ground on a 1.4 mega-watt solar farm. This solar farm is located on seven acres of the Livingston Campus. The benefits include:

- Will generate approximately 10% of the electricity needs for Livingston Campus.
- Will reduce greenhouse gas emissions by 1,200 tons per year.
- Will produce an estimated \$200,000 savings in the first year.
- \$10 million project is financed partially through New Jersey Board of Public Utilities.

The solar farm will be sited on a parcel of land at the northeast corner of the Livingston Campus in Piscataway, bordered by Berrue Circle, Road 2, and Suttons Lane. It is expected to be in operation in the spring of 2009.⁵

In addition to the above data, a 1.4 mega-watt solar system at Rutgers' latitude would generate approximately 1.89 mega-watt hours of electricity a year and 1,890 Solar Renewable Energy Certificates (SRECs). SRECs are currently being sold for roughly \$650 each; this translates into an income of roughly \$1.2 million. It should be noted that the value of SRECs in New Jersey will decrease over the next seven years. When the income generated from the sale of SRECs is added to the power generated savings, the result is a first year “net income” of \$1.6 million. This translates into a seven to nine year payback.

⁵ <http://news.rutgers.edu/medrel/news-releases/2008/09/rutgers-university-b-20080923/?searchterm=solar%20farm>

GROUNDS CASE STUDY: UNIVERSITY OF NEW HAMPSHIRE

Examples of New Hampshire's key principles in grounds sustainability is found below.

- Construction Envelopes - Defining the area of a construction project and minimizing impact to that envelope.
- Minimizing Utility Impacts - Avoiding placement of new utility lines near plant root zones.
- Topsoil Preservation - Moving topsoil during the construction process to an offsite location to avoid contamination and returning soil after construction.
- Plants Suitable for Protection - Protect as many trees as possible during construction to maintain a cohesive landscape.
- Root Protection Zone – Mark an area around trees where construction activity is prohibited.
- Reconnecting Fragmented Landscapes - Restoring landscapes that have been degraded over the years.
- Stream Restoration - Restoring streams to their natural state.

Habitat Restoration - Restoring habitat by introducing native species and animals.

MATERIALS, RECYCLING AND WASTE MANAGEMENT CASE STUDY: INSTITUTION RECYCLING NETWORK

The Institution Recycling Network (IRN) is a recycling cooperative that serves educational institutions and other organizations throughout the country. The purposes of IRN are to simplify the management of recycling by providing a single point of service for all of the commodities that the organization generates and to improve the economics of recycling by pooling the collective strength of dozens of organizations. The three core services provided by IRN are marketing recycled commodities, logistics and transportation, and Group Purchasing.

Since its inception, IRN has recycled nearly 100 different types of commodities. The most common areas include fibers, electronics, universal waste, metals, containers, surplus property, construction and demolition wastes and many other items. When a member organization wishes to recycle an item IRN hasn't dealt with before, IRN will find a way for it to happen.

By partnering with IRN, Temple University would be able to recycle more than 75 different types of materials through a single contact and significant cost-savings could be expected due to the lower rates for recycling the items compared to the costs of disposal. Additional savings would also be achieved due to the group purchasing power of IRN for recycling equipment and supplies.

PURCHASING CASE STUDY: RUTGERS UNIVERSITY

The purpose of implementing a green purchasing policy is to minimize the harmful effects of materials and their final disposition on the environment. Rutgers University developed the "Rutgers Green Purchasing Policy and Guidelines" that contain guidelines and procedures supporting expectations of the policy.

The first step in drafting their purchasing policy was determining the goals. Rutgers wanted the green purchasing concepts to be integrated into all administrative units with delegated purchasing authority. Policies such as purchasing recycled content paper, using alternative energy, and procuring recycled office supplies, recyclable light bulbs and batteries were proposed. In order to implement these policies, the team realized they would need to provide action recommendations to help regulate the proposed plan. A few examples of actions suggested in the policy included reviewing contracts and specifications for goods and services, working with

the University community to identify new environmentally friendly products, and purchasing from suppliers who carry eco-friendly products.⁶

Next, the policy outlined a checklist for those responsible for purchasing material and included questions to ask suppliers. Rutgers launched a pilot project to determine whether or not the measurable goals were met. The pilot program turned out to be a success and the policy only needed minor adjustments. The amendments included the addition of a tracking system to help financially justify greening the policy. It also included an incentive awards program for faculty and students.

A well-developed purchasing policy such as Rutgers' may be welcomed at Temple Ambler. If the proper guidance and resources are provided to the administrative units responsible for purchasing goods and services, a similar policy would likely prove to be a success for our suburban campus.⁷

TRANSPORTATION CASE STUDY: NURIDE

Users of NuRide also earn points for each recorded "greener" trip. "Greener Trips" include either carpooling, public transportation, walking, biking or telecommuting. NuRide then keeps tally of the amount of money saved, emissions prevented, and the number of NuRide points earned. NuRide points can then be redeemed at partner organizations for rewards including restaurant coupons and retailer discounts.

⁶ Magna Comeau, Telephone Interview, 13 March 2009.

⁷ Rutgers University, "Rutgers Green Purchasing Policy and Guidelines," 3 March 2009, <http://purchasing.rutgers.edu/green/images/Rutgers%20Green%20Purchasing%20Policy.pdf>

For the Washington, D.C., metro area the following statistics are available for all "NuRiders" since NuRide became available. This data reflects all NuRiders and not just University members.

Region: Washington DC metro
Time period: March 2004 - present
NuRiders: 7,650
Reduced car trips: 439,273
Miles not driven: 12,450,465
Tons of emissions prevented: 5,423
Gallons of gas saved: 551,732
Money saved by NuRiders: \$2,765,097
Rewards redeemed by NuRiders: \$301,155
Average one-way trip (miles): 27.4
Demographics: 49% female, 51% male, 37.9 years old

INVESTMENT CASE STUDY: DICKINSON COLLEGE

Dickinson College, located in Carlisle, Pennsylvania, recently embraced the concept of "Socially Responsible Investment" (SRI). SRI is a "broad term that covers a range of investment strategies, from divestment to proxy voting to screening stock options. Generally, investors who practice SRI favor companies that promote human rights, environmental stewardship, and consumer protection and avoid those with questionable ethical or moral practices and industries involved with military spending, abortion, alcohol, and gambling."⁸ In late 2007, the college formed an SRI Committee to manage and oversee that Dickinson College endowment was managed in a socially responsible manner.

⁸http://www.dickinson.edu/finops/investments/sri/index.aspx?id=256&ekmense=c580fa7b_44_0_256_1

In the Sustainable Endowments Institute's, 2009 College Sustainability Report Card, Dickinson College was one of fifteen schools to receive an "A-." Below is an excerpt of the report card related to endowments:

"Endowment Transparency = B. The college makes its shareholder voting records and information on investment strategy, policies, and holdings available to the public on a new website.

Investment Priorities = A. The college aims to optimize investment returns and currently invests in socially screened funds, green funds, and direct investment community development funds.

*Shareholder Engagement = A. Four students, four faculty members, one alumnus, and two administrators serve on the Socially Responsible Investment Discussion Group, which makes recommendations on proxy voting and studies socially responsible and sustainable investment alongside the college's current policies and portfolio."*⁹

PLANNING CASE STUDY: HARVARD UNIVERSITY

Harvard University has demonstrated exemplary actions to integrate sustainability into their planning efforts on the campus. Harvard recognizes that strategic plans are only as useful as the ability to implement them. As such, many Universities and Colleges have developed plans but remain relatively ineffective at implementing the initiatives outlined in the plans. Harvard University has taken a hard look at truly integrating sustainability into the campus culture, not as single projects and initiatives throughout campus, but as a culture that permeates throughout all aspects of the campus, faculty, administration, and students.

Harvard begins the planning process by acknowledging that the University is divided into three distinct subcultures: faculty, administration, and students. Each of these subcultures has a significant role in the campus culture and each has specific barriers to overcome in efforts to work toward sustainability. In recognizing that student organizations usually have short-term related goals, Universities must work with students to encourage efforts that result in long-term systematic change. Student groups many times lack the knowledge to understand how the University organizationally functions. This limits the students' ability to navigate the University bureaucracy and make the long term, systematic change that can affect University policy for years to come.

Harvard recognized faculty as the second subculture that exists on the campus and many times are not involved in sustainability efforts. Harvard realized that the faculty mentality was largely that they were there for teaching and researching and that campus administration was the entity responsible for managing the campus. This mentality resulted in the detachment of the faculty from participating in campus initiatives. Harvard has undertaken initiatives to break down the wall between the core mission of faculty, which is research and teaching, to becoming active members of the University community to effect change.

The third and final subculture is the administrative staff. The administrative staff brings a unique knowledge to the table that many times the faculty and students lack. Their unique knowledge of the organization of the University gives the administration the ability to understand the realistic changes needed to systematically change the operations of the University to implement sustainability. Through initiatives such as student internship programs with various administrative departments and partnerships with faculty to support sustainability projects on campus, the administration can play an integral role in implementing sustainability at Harvard University.

⁹ <http://www.greenreportcard.org/report-card-2009/schools/dickinson-college>

Harvard has also implemented planning principles that warrant discussion and contribute to the long term viability of sustainability plans. A list of these principles is found below:

- Management Support
- Effective Coordination
- Maximize Face to Face Communication
- Build both Informal and Formal Support
- Partnerships
- Ideas and the Path of Least Resistance
- Integrated Planning and Integrated Design
- Trial, Review, Expand
- Continuous Improvement, Conscious development of a learning organization
- The right Management Framework
- Risk Tolerant Management Staff
- Student Partnerships
- Continuity
- Forums
- Information Systems

By integrating the above principles into the planning process, in combination with inclusion of the students, faculty, and staff, adopted plans will easily be integrated into all levels of the University.¹⁰

¹⁰ Harvard University, “Green Campuses: The Road from Little Victories to Systematic Transformation” Leith Sharp, 14 March 2009. http://www.greencampus.harvard.edu/about/documents/green_universities.pdf

RESEARCH CASE STUDY: UNIVERSITY OF SOUTHERN CALIFORNIA

The University of Southern California Center for Sustainable Cities is the research Center located at the University, which has a multifaceted approach to studying sustainability in urban centers, with a focus on Los Angeles. The center was formed in 1998 by University faculty from a variety of disciplines, all with the goal of increasing sustainability in cities. These disciplines include engineering, natural and social sciences, urban planning, and environmental health sciences. The first grant received by the Center for Sustainable Cities was through the Integrated Graduate Research Education and Training Program. Through this grant the Center was able to fund graduate and undergraduate research relating cities and sustainability.

Since the Center for Sustainable Cities was formed in 1998 it has been working to expand the areas of research that are undertaken. Currently the center has research focuses in five different areas including Public Health and Metropolitan Growth, Industrial Ecology and Business Sustainability, Urban Habitat Protection and Watershed Health, Environmental Justice/Community Engagement/and Sustainable Livelihoods, and Cities and Climate Change. Under each of these categories are different projects, which contribute to the research efforts of the Center for Sustainable Cities. In addition to varying projects, many of the research projects are funded separately by funding agencies with specific goals related to sustainability.

In addition to research related to sustainability, the Center for Sustainable Cities also manages a business outreach program. Through the business outreach program the Center guides the Sustainable Enterprise Executive Roundtable (SEER). This roundtable consists of business leaders from the Southern California Area and brings them together to discuss and promote sustainability in their businesses. Each company must pay a program fee of

\$10,000 and as a participating corporation the University provides conferences, presentations, peer networking, and follow-up coaching by the University to provide guidance for sustainability related projects. Current large name participants include Volvo, the Port of Los Angeles, and Mattel. The Center also provides a Business Sustainability Program for smaller companies interested in learning how to incorporate sustainability into their business practices.

The Funding to provide all of these services and research projects is a combination of private investment, foundations, and program fees. In addition to the above mentioned funding, the University of Southern California also partners with neighboring higher education institutions to work together to accomplish research goals. With the infrastructure already in place at Temple Ambler and the many neighboring higher education institutions Temple University Ambler could implement similar research projects.¹¹

DIVERSITY, ACCESS AND AFFORDABILITY CASE STUDY: RUTGERS UNIVERSITY

According to US News¹², Rutgers University ranks as the most diverse university in the United States. Rutgers' commitment to creating a diverse community is exemplified through their infrastructure for supporting a diverse student and faculty body. Rutgers University provides their students with a one-stop website that connects all aspects related to diversity on campus - university policy statements on equal opportunity, a

letter from the President, curriculum focused on diversity, and grant opportunities geared toward advancing diversity.

The Committee To Advance Our Common Purpose was created in 1987 to foster diversity and understanding among the student body. The Committee reports to the Vice President for Student Affairs, which provides significant insight in ways to minimize bias and prejudice among the student body. The Committee consists of students, faculty, staff, and community members in order to create an open dialogue both within Rutgers as well as the surrounding community.

The Human Dignity Award is offered yearly to three individuals or groups who work to promote diversity within the university community and beyond. The award is funded through the Office of the President and furthers Rutgers' commitment to continually advancing diversity and the benefits of creating a community that embraces diversity as an invaluable resource.

¹¹ University of Southern California. 2 April 2009.

<http://college.usc.edu/geography/ESPE/index.html>

¹² Morse, Robert. "Rutgers Leads the Way in Ethnic Diversity." U.S. News and World Report 9 Sept. 2008. Mar. 2009

<<http://www.usnews.com/blogs/college-rankings-blog/2008/9/9/rutgers-leads-the-way-in-ethnic-diversity.html>>

APPENDIX 3: FUNDING OPPORTUNITIES

NATIONAL WILDLIFE FEDERATION \$2000 GRANTS

The National Wildlife Federation provides grants to undergraduate and graduate students working with faculty and staff to reduce global warming on college campuses. <http://www.nwf.org/campusecology/>

ANDREW W. MELLON FOUNDATION

The Andrew W. Mellon Foundation provides a variety of academic grants to students in a variety of academic areas including projects relating to smart growth and sustainability. <http://www.mellon.org/>

ENVIRONMENTAL PROTECTION AGENCY

The United States Environmental Protection Agency provides a list of funding sources available for grants, tax credits and loans for promoting green building at the local, state, national levels and nonprofit sector. <http://epa.gov/greenbuilding/tools/funding.htm#national2>

U.S. DEPARTMENT OF AGRICULTURE'S COOPERATIVE STATE RESEARCH, EDUCATION AND EXTENSION SERVICE (CSREES).

The Cooperative State Research, Education and Extension Service provides numerous grants for local agriculture and food projects. <http://www.csrees.usda.gov/>

OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY

The United States Department of Energy, Office of Energy Efficiency and Renewable Energy provides grants for research projects with a focus on

renewable energy and energy efficiency.

http://www1.eere.energy.gov/financing/types_assistance.html

THE FUNDERS' NETWORK FOR SMART GROWTH AND LIVABLE COMMUNITIES

The Funders' Network provides funding in a variety of areas related to smart growth development and implementation.

http://www.fundersnetwork.org/info-url_nocat2778/info-url_nocat_list.htm?attrib_id=12181

THE KRESGE FOUNDATION

The Kresge Foundation provides grants to institutions to implement projects in historic preservation, renovation, and LEED certification.

<http://www.kresge.org/content/displaycontent.aspx?CID=59>

GUIDESTAR

Guidestar is a clearinghouse for grants available to institutions with many having a focus on sustainability. www.guidestar.org

FOUNDATION CENTER

The Foundation Center is a national nonprofit service organization that maintains the most comprehensive database on U.S. grantmakers and their grants. <http://foundationcenter.org/>

THE COMPTON FOUNDATION

This foundation provides internships in ecological design to support student ecological design projects. <http://www.comptonfoundation.org/>

DELAWARE VALLEY REGIONAL PLANNING COMMISSION

The Delaware Valley Regional Planning Commission has created a comprehensive list of funding sources. These sources include projects related to all aspects of planning with many relating to sustainability.

<http://www.dvrpc.org/asp/MCDResource/index.asp>

SUSTAINABLE ENERGY FUND

“Sustainable Energy Fund (SEF) is a private non-profit organization that promotes energy efficiency, renewable energy and education initiatives in the Commonwealth of Pennsylvania.” <http://www.theseef.org/index.php>

Strategic Plan for a Sustainable Ambler Campus. Appendix 4: Synergy Matrix

Recommendations	Priority Rating	Sections																
		Co-Curricular Education	Curriculum	Faculty and Staff Development	Buildings	Dining Services	Energy and Climate	Grounds	Materials, Recycling & Waste Management	Purchasing	Transportation	Investment	Research	Planning	Human Resources	Sustainability Infrastructure	Community Relations and Partnerships	Diversity Access & Affordability
Create a peer-to-peer outreach program, tentatively called the “Student Campaign for Social, Economic, and Environmental Responsibility” to house student groups, eco-reps, and a sustainability officer/director.	★ T s e	✗		✓												✓	✓	
Launch fun and educational sustainability-related competitions to cut energy, reduce waste, and promote sustainability in various ways.	★ s e	✗		✓			✓											
Begin student-run organic garden on campus and utilize produce in dining facilities.	T s e	✗		✓		✓	✓					✓						
Dedicate a section in the student-led publication, <i>The Temple Column</i> , to sustainability initiatives.	T s e	✗		✓														
Host major sustainability-themed conferences and symposia on Ambler Campus.	T	✗		✓								✓					✓	
Start new green “themed housing” or “model dorm” initiative.	T	✗		✓	✓				✓									
Introduce “sustainability-focused” courses with curriculum concentrating on sustainability including its social, economic, and environmental dimensions.	★ T s e		✗	✓														
Offer <u>campus-based learning</u> . The existing buildings, both historic and new, in addition to the campus grounds would act as laboratory and as teaching tools.	T s e	✓	✗	✓								✓						
Create a task force for Sustainable Curriculum. The member of the Task Force can be faculty and students.	T s e	✓	✗	✓								✓				✓		
Develop curriculum modules with supplemental course syllabi, teaching notes, online resources, and sample assignments. Department faculty meetings could include sustainability as an agenda item and provide time for faculty discussions and suggestions.	T s e		✗	✓												✓		

✗ = Section Recommendation is described in.

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★ - STARS points T - applicability to Temple University s - low relative cost to implement e - ease of implementation.

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Sustainability Officer from the CSC would meet with the department chairs on a regular basis to provide support and help further develop their sustainability modules	T s e		✗	✓										✓				
Integrate Sustainability into New Employee Orientation.	★ T s e			✗											✓			
Hold one campus wide sustainability event per semester.	T s e	✓		✗	✓									✓			✓	
Provide Staff and faculty with funding assistance to bring sustainability related training programs to the Ambler Campus.	T s e	✓		✗										✓				
Build Universities' first LEED certified Building	★ T s e				✗		✓		✓	✓				✓		✓		
Reduce potable water usage of indoor plumbing fixtures and fittings in buildings by using automatic water control systems in sinks, toilets, waterless urinals, cooling tower water management plan, etc.	★ T				✗		✓	✓						✓				
Implement existing building improvement projects by identifying planned capital expenditures. Ensure that major building energy-using systems are repaired and maintained effectively to optimize performance	★ T				✗				✓					✓		✓		
Abide by Sustainable Purchasing Policy	★ T s e				✗					✓								
Adopt a Green Cleaning policy that offers safer alternatives to standard janitorial cleaning systems and programs. Green Seal products reduce toxicity by eliminating common industrial chemicals	★ T s e				✗					✓								

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Establish an Indoor Air Quality Management Plan which would consist of two parts: the Campus' general requirements and the Contractor's control measures.	T s e				✗													
Complete a building inventory and assessment of its existing operating systems	T s e				✗		✓	✓				✓						
Removal of temporary structures not able to adopt sustainable attributes	T				✗													
Establish a mold prevention program to limit exposure to mold.	T s e				✗													
Increase education and awareness of students, faculty, and staff about reducing food waste and packaging, the benefits of organic and/or locally grown foods, and composting.	T s e	✓				✗	✓		✓	✓			✓					
Establish a program dedicated to food production on Ambler Campus.	T s	✓	✓			✗		✓	✓				✓					
Use fair trade-coffee at all food outlets on campus.	★ T					✗				✓							✓	
Increase usage of locally grown food.	★ T					✗	✓											
Research available technologies to reduce water and energy use in dining facilities.	T s					✗	✓		✓									
Establish a baseline of energy use for Ambler Campus buildings. Preferably through a campus wide Energy Audit or at a minimum by compiling 2 years worth of electric bills	T s				✓			✗										
Reduce Energy Consumption through efficiency and conservation measures recommended by the ACSC Energy Workgroup.	★ T s e	✓			✓			✗					✓					

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Conduct Renewable Energy Feasibility Study for Ambler College.	T						✗						✓					
Install a renewable energy facility to reduce dependence on fossil fuels and reduce associated GHG emissions.	★ T		✓		✓		✗	✓					✓					
Conduct a Scope 1 and Scope 2 greenhouse gas emissions inventory for Ambler College to be used as a baseline for any future reductions	★ T				✓		✗						✓					
Inventory and map all campus grounds. Identify tree root zones and other key areas that should not be developed.	T s e				✓			✗					✓					
Substitute non-potable water obtained from captured rainwater in rain barrels and cisterns to meet 50% of landscaping irrigation needs.	★ T							✗					✓					
Install bioswales, trees and green space in the student parking lot to mitigate flooding and reduce parking to reflect the necessary number of parking spaces.	T e							✗	✓	✓								
Integrate use of local materials, recycled materials and other green alternatives for benches, bike racks, paving, parking, signage, gateways, etc.	T e				✓			✗	✓	✓			✓					
Use pervious pavement wherever feasible in new construction or renovations of grounds.	T				✓			✗	✓				✓					
Investigate alternatives to current snow and ice removal.	T							✗					✓					
Establish food waste composting program to reduce waste, cut landscaping costs, carbon and methane emissions.	★ T s e					✓	✓	✓	✗	✓			✓					
Conduct building recycling audits.	T s e				✓				✗				✓					

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Establish an initial University goal to increase the amount of recycled waste from approximately 26% of total waste to 40%.	★ T s						✓		✗									
Develop Construction Waste Management Guidelines for Ambler Campus Construction, Renovation and Demolition.	★ T								✗									
Commit to purchasing Environmentally Preferable Paper Purchasing at all levels of administration.	★ T s e								✓	✗								
Purchase 100% green cleaning products.	★ T s e				✓				✓	✗								
Comply with the guidelines outlined for the Electronic Product Environmental Assessment Tool (EPEAT) whenever possible.	★ T									✗								
Commit to purchase furniture materials that are environmentally preferable.	★ T				✓					✗								
Educate students, faculty, and staff on reducing greenhouse gas emissions by reducing the number of SOV trips.	T s e	✓		✓			✓					✗	✓					
Create a no idling policy on campus.	T s e						✓					✗						
Make shuttle information more accessible.	T s e						✓					✗						
Create a bike share program on campus.	T s e						✓					✗						
Reduce greenhouse gas emission for Temple Ambler's motorized feet.	★ T											✗						

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Recommendations	Priority Rating	Sections															
		Co-Curricular Education	Curriculum	Faculty and Staff Development	Buildings	Dining Services	Energy and Climate	Grounds	Materials, Recycling & Waste Management	Purchasing	Transportation	Investment	Research	Planning	Human Resources	Sustainability Infrastructure	Community Relations and Partnerships
Create a structured parking facility and transit hub near the Learning Center.	★ T						✓	✓			✗	✓	✓				
Create bike paths that link Ambler Campus to the Borough of Ambler and the Ft. Washington Train Station.	T						✓				✗	✓					
Advocate Temple Main Campus to make investment decisions that are more transparent, more responsible, screened for negative investments, promote sustainability, and engage shareholders.	★ T §										✗		✓				
List Faculty Research Projects not related to the Center for Sustainable Communities on the website.	T § ☺	✓	✓	✓								✗					
Encourage collaboration between students, faculty, and staff regarding sustainability research.	T § ☺	✓	✓	✓								✗			✓	✓	
Host a Sustainability Conference to emphasize the interdisciplinary nature of sustainability.	T	✓		✓								✗			✓	✓	
Strive for inclusion of staff, administration and students at all levels of university planning.	T § ☺	✓		✓									✗				✓
Implement a policy that all planning efforts at the University should consist of a committee that includes a representative from all levels of University operation, including students, staff, and faculty.	T § ☺												✗		✓		✓
Create a sustainable compensation methodology to ensure that employees with lower-range salaries obtain compensation for their work that allows them to meet their basic needs.	★ T													✗			✓
Expand full health care coverage to all employees working at least half of what is considered full-time	★ T													✗			✓

✗ = Section Recommendation is described in.

✓ = Other sections this recommendation relates to

★ - STARS points T - applicability to Temple University § - low relative cost to implement ☺ - ease of implementation.

Strategic Plan for a Sustainable Ambler Campus. Appendix 4: Synergy Matrix

Recommendations	Priority Rating	Sections																
		Co-Curricular Education	Curriculum	Faculty and Staff Development	Buildings	Dining Services	Energy and Climate	Grounds	Materials, Recycling & Waste Management	Purchasing	Transportation	Investment	Research	Planning	Human Resources	Sustainability Infrastructure	Community Relations and Partnerships	Diversity Access & Affordability
employment.																		
Expand all graduate student employees' health care premiums to 100% coverage.	★ T														✗			✓
Conduct an employee satisfaction survey at least once every 3 years.	★ T														✗			
Create sustainability officer/ director position and eco-rep positions at Ambler.	★ T \$ ↻	✓														✗		
Create a recognition program (eco-awards) to highlight outstanding acts of sustainability.	★ T \$ ↻	✓														✗		
Create a student-run website devoted to sustainability.	T \$ ↻	✓														✗		
Build and document partnerships with other colleges and universities that foster institutional sustainability or promote research or advocacy on sustainable topics.	★ T \$ ↻	✓		✓												✗	✓	
Create a student government position focused on sustainability.	T \$ ↻	✓														✗		
Integrate "sustainability" theme into every edition of the publication <i>Thrive</i> , nurture an alumni sustainability network and fund.	T \$ ↻	✓														✗		
Increase student participation and hours contributed to community service.	★ T \$ ↻	✓															✗	
Strengthen school departments' liaisons with local businesses, government, non-profits, schools or other by keeping database of current and potential partnerships, plus data or info required for class work or independent study.	T \$	✓		✓												✓	✗	
Meet the Carnegie Foundation for the Advancement of Teaching's "Outreach & Partnerships" Elective	★ \$ ↻			✓												✓	✗	

✗ = Section Recommendation is described in.

✓ = Other sections this recommendation relates to

★ - STARS points T - applicability to Temple University \$ - low relative cost to implement ↻ - ease of implementation.

Strategic Plan for a Sustainable Ambler Campus. Appendix 4: Synergy Matrix

Recommendations	Priority Rating	Sections																
		Co-Curricular Education	Curriculum	Faculty and Staff Development	Buildings	Dining Services	Energy and Climate	Grounds	Materials, Recycling & Waste Management	Purchasing	Transportation	Investment	Research	Planning	Human Resources	Sustainability Infrastructure	Community Relations and Partnerships	Diversity Access & Affordability
Classification.																		
Advocate for sustainable public policies on the federal, state and local levels that further sustainability in general, and/or on campuses.	★ S	✓											✓				✗	
Organize and publicize community events and use proceeds for cause, such as an Ambler green fund for new turbine, solar panels, or renovations for Gilbert House.	T S	✓					✓										✗	
Create a website that offers students information about diversity policy, student groups, scholarships and grants and other diversity initiatives so that diversity at Temple continues to be supported and encouraged.	T S ↻	✓															✓	✗
Develop a Diversity Plan that other campuses can model after.	★ T																	✗
Identify through GIS mapping of surrounding counties ethnic groups to attract from within the surrounding counties.	T ↻												✓				✓	✗

✗ = Section Recommendation is described in.

✓ = Other sections this recommendation relates to

★ - STARS points T - applicability to Temple University S - low relative cost to implement ↻ - ease of implementation.

APPENDIX 5: STUDENT CAMPAIGN & POSITIONS

“STUDENT CAMPAIGN FOR SOCIAL, ECONOMIC, AND ENVIRONMENTAL RESPONSIBILITY”

A new “Student Campaign for Social, Economic, and Environmental Responsibility,” could house student groups associated with sustainability, a “Sustainability Officer/Director” and “Eco-Reps” (for individual tasks tagged with each worker, please see below). This campaign could bring together sustainability-themed student groups, such as a new chapter of the “Fox Students for Responsible Business” for Ambler and Fort Washington students, a new outdoor program, a new chapter of “Students for Environmental Action,” the “Ambler Food Committee,” student government representatives, and representatives from the Temple Planning Student Organization.

The campaign and its initiatives can quickly and easily be implemented since existing resources and programs can be leveraged to achieve goals. There is a great opportunity to engage student workers in the Office of Student Life and Admissions in activities related to sustainability at Ambler in order to realize the dream of the “Green Campus.” These student workers can fill the “eco-rep” positions. The idea is to maximize the time and responsibilities of student workers on campus to strategically advance the sustainability agenda. Much of the legwork is picked up by the students themselves, who would take on responsibilities according to their outlined tasks to accomplish. Therefore, sustainable activities will advance on campus at little additional cost to the school.

Bright Hall would be a good location to house the campaign office because of the space that is already dedicated to student activities. The Sustainability Officer/ Director position should follow the recommendation

that is outlined in the “Sustainability Infrastructure” section of this paper, which is based on STARS accreditation.

CAMPAIGN POSITIONS

Sustainability Officer/ Director

- Manage campaign, programs.
- Serve as school liaison for AASHE and other associations promoting sustainability in higher education.
- Serve as sustainability liaison for faculty and staff, campus offices, administration, facility services, dining services, and more.

Green-Challenge Eco-Rep

- Run “Hall Energy Reduction Competition” to inform, encourage, and reward students for reducing their consumption of heat, air-conditioning, water, and general electricity in the dorms or elsewhere.
- Run “Waste Watch Challenge Competition” to inform, encourage, and reward students for recycling, residential “move-out” donations, light-bulb or computer monitor swaps, the elimination of “energy hogging” and more.
- Create “challenge” to raise money from alumni and friends of Temple University Ambler for a carbon offsetting fund or for a specific green energy project to be located at Ambler Campus.
- Set-up green-themed housing initiative or “model” dorm room project (work with “Office of Student Housing”).

Communications Eco-Rep

- Create website for the “Student Campaign for Social, Economic, and Environmental Responsibility,” a student-run site devoted to sustainability. Create strong link between the Ambler Campus Sustainability Council website, the Office of Sustainability at Main Campus, and build up web- rapport with the Association for Advancement of Sustainability in Higher Education (AASHE). Build

a section dedicated to energy on campus, where before and after energy use and savings are documented and are publicized.

- Expand the Spot-light Series to feature topics on sustainability. Target the series to the public and to faculty, staff, and students and use the opportunity for exchange and training.
- Write or enlist students to write articles for “sustainability” section in *The Temple Column*, Ambler’s student paper, or re-orient paper to cover sustainability at Ambler. Use student papers as tools for communication, list service projects that are open to the student body, and work with career development to include green internships and jobs.
- Share Campaign initiatives with *Thrive* magazine editors and contribute material (work with the Office of Development and Alumni Affairs).

Marketing Eco-Rep

- Help focus Ambler’s marketing outreach initiatives to popular program-specific destinations, especially ones geared towards the sustainability movement (work with Marketing and Special Events Coordinator).
- Publicize Ambler Campus workshops, certificates, degrees and sustainable initiatives in Ambler community, to the larger community, and on the web (work with Marketing and Special Events Coordinator).
- Video production of competitions, service, and events to post on website.
- Make marketing materials (eco-map) for sustainable local businesses and off-campus residential living with a focus on pedestrian-friendly Ambler Borough.

Student Outreach Eco-Rep

- Develop orientation activities for in-coming freshman by helping target an in-house speaker on the topic of sustainability and by introducing campaigns and competitions to incoming students.
- Help plan for the recognition program, otherwise known as the eco-awards (work with the Office of Student Life)
- Develop and organize workshops led by faculty such as grant writing basics, green job workshops, invasive species identification series, stormwater management construction projects (ex. bio-retention garden), or campus trail building.
- Organize manpower and logistics for service on campus including composting, organic gardening, or work in the orchard or on trails (work with Arboretum staff).
- Guide food preparation guidelines for meals using on-campus produce (work with the Ambler Food Committee, and Dining Services).

Community Eco-Rep

- Create an online database that covers sustainable initiatives within departments, programs, centers, and offices on campus and also of existing relationships with partner universities, foundations, organizations, and businesses. Create database of potential partnerships with local businesses or organizations that could be a useful networking tool for students and faculty in business, marketing, education, social work, planning, economics, and other programs.
- Build outreach initiative to contact and prepare local businesses and organizations for the data or information that would be needed by students and faculty for individual or class projects.
- Arrange for local speakers from community to come speak at Ambler and arrange for Temple Ambler to be host of symposia and conferences.
- Work to engage public in campus events, projects, and workshops. Advocate for more non-credit course offerings or

workshops open to the public. Bring in disadvantaged youth to participate in workshops, training programs, or professional “mentoring” program.

- Work with Upper Dublin Township and Ambler Borough to develop a community trail system to promote walking and biking back and forth from campus to Ft. Washington train station or Ambler Borough.
- Establish a system to donate used textbooks to local schools or group. Also arrange for dorm furnishings and other materials to go to charity during move-out week.

APPENDIX 5: STUDENT BIOS

Anna Boisnic holds her B.A. in French from the University of Mary Washington in Virginia. After living in France for a few years, she moved to Philadelphia, started her Master's degree and began her job as a Research Assistant at The Center for Sustainable Communities, where she worked from 2007-2009. Her work at CSC included the profiling of regional stormwater best management practices on the Temple-Villanova Sustainable Stormwater Initiative website. For her final Master's project, she developed a community plan for sustainable development in a village in southwestern Ecuador. Anna enjoys the outdoors and travel in her spare time.

Kerrin Donnelly received a B.A. in Business Management and a B.S. in Political Science; both from the University of Pittsburgh. She completed the Construction Management program at Drexel University and is currently working as a Project Manager for a private commercial real estate developer in Philadelphia, PA.

Matthew Harris has a Bachelors Degree in Sociology with a Concentration in Law and Society from the University of Delaware. His professional experience includes work as a paralegal, social worker, and planner. Matthew currently works in land use planning with a focus on comprehensive development planning. He resides in Wilmington, DE.

David Manhardt received his Bachelors Degree in Geography from the University of Delaware. He currently works as a Geographic Information Systems Specialist for Sparta Township, New Jersey. He works in all aspects of municipal government, mainly through the Planning and Engineering Departments. Lately, his focus has been on developing renewable energy installations for Sparta Township to save money and reduce greenhouse gas emissions.

Nina Morris holds two bachelor of arts degrees from Virginia Commonwealth University. She currently works with The Center for Sustainable Communities as a Research Assistant and interns with Philadelphia Industrial Development Corporation. As the Sustainability Intern for The Philadelphia Navy Yard, Nina has researched and developed the Green Initiatives Plan which incorporates sustainable best management practices for the redevelopment of The Navy Yard, including infrastructure, buildings, transportation, green marketing, education, open space and stormwater management. Nina's master project incorporates her passion for brownfield redevelopment, community development and sustainability through assessing the role of sustainability in the planning process of the redevelopment of urban navy yards. She currently resides in Philadelphia.

Gina Tartamosa has a Bachelors Degree in Ecological Economics, Values, and Policy from Rensselaer Polytechnic Institute. She has over 8 years of experience as an environmental planner with A.D. Marble & Company. She has worked on numerous projects as Project Manager and has worked extensively on various levels of NEPA Documentation. Outside of work, Gina is on the Board of Directors of Lower Merion Affordable Housing and Lower Merion Development Corporation and enjoys traveling and spending time outside.