University of Mount Union Sustainability Plan
Incorporating a Climate Action Plan
Updated Version
December 2011
(Refer corrections, suggestions, additions, and comments to the Sustainability Management Advisory Committee, sustainability@mountunion.edu.)
# Table of Contents

## Contents

Introduction ......................................................................................................................... 4
Sustainability Management Advisory Committee-Initial Actions ........................................ 4
The Role of STARS .............................................................................................................. 7
Acknowledgements ............................................................................................................. 8

Part One-Climate Action Plan ............................................................................................ 9
The Commitment .................................................................................................................. 9
Our Status ............................................................................................................................ 9
Target Dates ....................................................................................................................... 10
Measures ............................................................................................................................ 12
Assumptions ....................................................................................................................... 13
Approach to Neutrality ....................................................................................................... 14

Part Two-Education ............................................................................................................ 17
Co-Curricular Education .................................................................................................... 17
Curriculum ......................................................................................................................... 19
Faculty and Staff Development .......................................................................................... 20

Part Three-Operations ....................................................................................................... 23
Buildings ............................................................................................................................ 23
Energy and Climate ............................................................................................................. 25
Grounds ............................................................................................................................... 29
Materials Recycling and Waste .......................................................................................... 30
Transportation ................................................................................................................... 32
Information Technology .................................................................................................... 34
Dining Services .................................................................................................................. 35
Purchasing ......................................................................................................................... 36
Part Four – Planning, Administration, and Engagement ................................................................. 38

Planning ................................................................................................................................. 38
Investments.............................................................................................................................. 40
Sustainability Infrastructure ................................................................................................. 41
Human Resources .................................................................................................................... 43
*Diversity, Access, and Affordability...................................................................................... 44
Public Affairs .......................................................................................................................... 46
Trademark Licensing ............................................................................................................ 47
Community Relations and Partnerships ............................................................................... 48

Part Five – Plan Implementation, Revision, and Assessment ......................................................... 49

Appendix A. Definitions of Terms and Acronyms ................................................................... 50
Appendix B. Sustainability Task Force/Management Advisory Committee Members .................. 53
Appendix C. Green-Sustainability Purchasing Policy ................................................................. 55
Appendix D. Sustainability Coordinator .................................................................................. 57
Appendix E. Sustainability Marketing Plan Detail ..................................................................... 58
*Appendix F. Accomplishments of the Sustainability Management Advisory Committee ........... 61

Education .................................................................................................................................. 61
Operations ................................................................................................................................. 61
Planning, Administration, and Engagement ........................................................................... 61

*These sections have been significantly updated.
Introduction
University of Mount Union has a long tradition of preparing students to be contributing members of our society. Since 1846, the institution has combined a broad-based education in the liberal arts tradition with practical experiences designed to help students find meaningful and satisfying work. This tradition continues under the University’s current mission statement:

“University of Mount Union offers a liberal arts education grounded in the Judeo-Christian tradition. The University affirms the importance of reason, open inquiry, living faith, and individual worth. Mount Union’s mission is to prepare students for meaningful work, fulfilling lives, and responsible citizenship.”

Sustainability is important in all three aspects of our mission statement, but particularly in the realm of preparing our students for responsible citizenship.

Over the last several decades, Mount Union has worked to create a financially sound institution that is socially and environmentally responsible. Thus the institution is not new to the concepts of sustainability on campus. What is new is the need to become more proactive in the realm of sustainability while continuing to respond creatively and prudently to economic, social, and environmental needs.

We are also steered by six guiding principles for our institution. Principles numbered 1, 4, 5, and 6 are directly linked to sustainability and principles numbered 2 and 3 can be enhanced by an increased focus on sustainability. The guiding principles are:

1. Develop a curriculum for the future;
2. Foster an engaging campus community;
3. Manage strategic enrollment growth;
4. Ensure the sustainable management of resources;
5. Enhance the diversity of the campus community, and;
6. Broaden the visibility and reputation of the institution

Note: many of the terms and acronyms used in this plan are defined in Appendix A.

Sustainability Management Advisory Committee-Initial Actions
Accepting the challenge and realizing the opportunities, the University administration convened a Sustainability Task Force in spring of 2007. The task force was composed of representatives from the student body, administration, faculty, and the Alliance community. Membership is provided in Appendix B.

The first action of the Task Force was to develop the following mission statement:

“It is the goal of University of Mount Union’s Sustainability Task Force to meet the growing concern for sustainability on our campus. Through education and communication, we will encourage and facilitate awareness and action on our
campus and throughout the Alliance community. We will assist the University in its
decision making process in these aspects, and will search out opportunities that are
socially, financially, and environmentally sound in order to create a sustainable,
efficient, and healthy atmosphere for our students, faculty, and staff.”

The second major action that was undertaken was to review the American College and University
Presidents Climate Commitment (ACUPCC). After reviewing the commitment and its
implications, the Task Force recommended that President Giese sign the commitment. University of
Mount Union became a signatory institution in December 2007. Having signed the commitment we
were obligated to take some specific actions.

Our first obligations under the ACUPCC were to complete two tangible actions and complete a
campus-wide greenhouse gas inventory. We completed these interim obligations in 2008 and the
is also available in more detail from our campus website:
http://www.mountunion.edu/sustainability. We initiated three tangible actions:

1. **We established a policy that all new campus construction will be built to at least the U.S. Green Building Council’s LEED Silver standard or equivalent.**
2. **We adopted an energy-efficient appliance purchasing policy requiring purchase of ENERGY STAR certified products in all areas for which such ratings exist.**
3. **We participate in the Waste Minimization components of the national RecycleMania competition, and adopt 3 or more associated measures to reduce waste.**

We completed a campus-wide greenhouse gas inventory covering the period since 2001 and
reported the results. The public report is located at: http://acupcc.aashe.org/ghg-
report.php?id=144 and is summarized below and on our website.

**Table 1. University of Mount Union Greenhouse Gas Emissions (FY2009-2010) For definition of “scopes” see Appendix A.**

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>Gross emissions (Scopes 1 + 2)</td>
<td>15.2</td>
<td>14.6</td>
<td>7.1</td>
<td>6.7</td>
<td>14.0</td>
<td>12.5</td>
</tr>
<tr>
<td>Gross emissions (Scopes 1 + 2 + 3)</td>
<td>17.1</td>
<td>16.9</td>
<td>8.3</td>
<td>7.8</td>
<td>15.4</td>
<td>14.5</td>
</tr>
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We found that we were emitting fewer greenhouse gases per students and more greenhouse gases
per 1000 square feet of building space compared to the mean for similar institutions. This suggests
that we can make some improvements in the efficiency of our buildings.

Our next obligation was to prepare a climate action plan. After several months of discussion and
deliberation we came to the conclusion that it would be more appropriate for our institution to
develop a broad sustainability plan that incorporated a climate action plan. Our sustainability plan
would thus include all aspects of sustainability on campus: administration, operations, and
education, and would also explicitly include a climate action plan as required by our commitment to the ACUPCC. The Task Force concluded that in order to be successful, a climate action plan needs to include more than just the energy consumption of the institution; it must also consider the entire institution and its community. Only with this broader approach can we fulfill our mission “to create a sustainable, efficient, and healthy atmosphere for our students, faculty, and staff.”

Our working definition of sustainability is derived from the most common definition, the 1987 report of the UN Commission on Environment and Development, Our Common Future, which defined “sustainable development” (sustainability) as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” Embedded in that definition are two important elements:

1. A long-term view (generations)
2. A systemic or ecological sense of life

Thus, sustainability is about the interdependence of living organisms and communities (both human and nonhuman) over the long haul. Instead of seeing environmental, social, and economic needs as a collection of discrete characteristics or problems, sustainability looks at them as interdependent and connected. Each has an impact on and consequences for the others. Because this plan is necessarily long-term in nature, it focuses on principles rather than specifics. Just as a college frequently adds, deletes, and modifies courses in its curriculum in response to changes in knowledge and student and societal needs, we recognize the need for flexibility to respond to inevitable but unpredictable changes in economics and technology.

This sustainability plan is organized into five sections:

1. Climate Action
2. Education
3. Operations
4. Planning, Administration, and Engagement
5. Implementation, Revision and Assessment

Our climate action plan is the first component and will be tied into all three of the Sustainability Tracking, Assessment, and Rating System (STARS) categories which are sections two through four. The plan includes, where appropriate, short, medium, and long-term actions. It is ambitious but realistic. Above all it is intended to be a dynamic plan that allows for modification of the means of achieving our goals without compromising the goals themselves as circumstances change. We recognize that sustainability is as much a process as it is a goal and that we will always be seeking to become more sustainable. The plan serves as a recommendation to the campus. The Task Force had no policy-making authority and the successful implementation of the plan will ultimately depend upon the actions of various policymakers on campus, including the board of trustees, the administration, the faculty, and the students.

In fall 2010, University of Mount Union President Dr. Richard F. Giese created the Sustainability Management Advisory Committee (SMAC). The purpose of the SMAC is to assist the President and the President’s Council in executive-level, strategic sustainability decisions. The SMAC also
recommends directions and priorities for overall campus sustainability by spearheading the implementation of the short, medium, and long-term goals of the sustainability plan, reviewing campus projects and programs and offering comment on the sustainable aspects of each, and collecting and publicizing data relating to progress on the plan.

The Sustainability Management Advisory Committee uses eight goals to guide its work:

1. Continually review and update the strategic sustainability plan for the implementation of sustainability measure throughout the University.
2. Annually report on progress towards meeting the goals of the sustainability plan, specifically including reports to ACUPCC and AASHE STARS.
3. Review and recommend appropriate changes in the plan in response to new technologies and changing campus needs and abilities.
4. Work with public affairs to promote sustainability on campus and to our off campus constituents.
5. Participate in review of proposed campus projects and programs and provide recommendations relative to sustainability.
6. Recommend priorities for sustainability initiatives.
7. Prepare a formal update to the plan every three years to the President and President’s Council.
8. Cooperate with the Alliance Mayor’s Green Commission and other community organizations on matters of mutual interest.

The SMAC past and current membership can be found in Appendix B. Recent accomplishments of note can be found in Appendix F.

The Role of STARS
In order to assess our current level of sustainability we volunteered in 2008 to be a pilot institution for the Sustainability Tracking, Assessment, and Rating System (STARS) developed by the Association for the Advancement of Sustainability in Higher Education (AASHE). The exercise was highly beneficial to us as we learned more about our institution. We were one of about 70 institutions nationwide to participate in the STARS Pilot Program. This work helped us gather data about ourselves in order to guide this planning process. Overall, we qualified for about one third of the available points with administrative areas earning about 50% of available points, and operations and education receiving about 20% of the available points. This suggests that we are off to a good start on the road to sustainability but that many opportunities remain to be considered. The pilot data from individual schools was not release by AASHE, but summary data are available in a report from AASHE: http://www.aashe.org/files/documents/STARS/STARS_Pilot_Results.pdf. On April 27, 2011, we submitted our report for participation in the STARS Version 1.0 Program.

Again, this work helped us gather data about our entire institution, which allowed us to assess actions we have already taken while planning future endeavors. We were awarded a score of 40.28, which equated to a Bronze rating. We qualified for approximately 27% of the education and
research credits, 27% of the operations credits, and 57% of the planning, administration, and engagement credits. We have made progress since reporting our efforts in the STARS Pilot Program, and our participation in STARS Version 1.0 helps us determine where progress continued to need to be made. Our STARS reports is available online at: https://stars.aashe.org/media/secure/48/submission-61/university-of-mount-union-oh.pdf.

Acknowledgements
This plan is the product of many people working together. In addition to the Task Force members listed in Appendix B, many other members of the campus community have spent hundreds of hours collecting data, working on special tasks, and providing input. We are particularly grateful for the efforts of the Physical Plant and Business Office. Many of the ideas in this plan have been gleaned from other institutions and through various professional organizations with whom we have connections. In particular, we have borrowed heavily from the resources provided by AASHE and the STARS program at: http://www.aashe.org.
Part One-Climate Action Plan

The Commitment
University of Mount Union has committed to climate neutrality. We define climate neutrality as our institution having no net emissions of greenhouse gases. The following is excerpted from our ACUPCC commitment:

“Within two years of signing this document (for University of Mount Union the due date was May 15, 2010), develop an institutional action plan for becoming climate neutral, which will include:

1. A target date for achieving climate neutrality as soon as possible.
2. Interim targets for goals and actions that will lead to climate neutrality.
3. Actions to make climate neutrality and sustainability a part of the curriculum and other educational experiences for all students.
4. Actions to expand research or other efforts necessary to achieve climate neutrality.
5. Mechanisms for tracking progress on goals and actions.”

Our Status
We currently (2010) release a little less than 16,500 metric tonnes of carbon dioxide equivalents each year. Of that, approximately 14,600 tonnes are the direct results of campus activities (Scopes 1 and 2). Approximately 59% of the total emissions is from our electrical consumption and 29% is from burning natural gas (see Figure 1). Thus, our climate action plan must focus on those two aspects of energy use. Our 2008 energy budget was just under $2.5 million dollars or more than $1000 per student and over 6% of our annual operating budget. Our recent trends have also been upward, due to increased enrollments, more building space, and increased use of electricity. We have begun improving our energy intensity because our energy use per square foot of building space has begun to decline.
Figure 1. Our recent greenhouse gas profile calculated using Clean Air Cool Planet software.

Figure 2. Trends in greenhouse gas emissions 2001-2010. Scope 1 includes campus fleet and natural gas consumption. Scope 2 is electrical consumption, and Scope 3 is commuting, air travel, and waste disposal. The increase seen is largely due to electricity.

Target Dates
We propose to reach climate neutrality based on our Scope 1 and 2 emissions NO LATER THAN COMMENCEMENT DAY IN MAY 2046, which is the bicentennial year of our institution’s founding (35 years from now). For purposes of the ACUPCC, climate neutrality is defined as having no net
greenhouse gas (GHG) emissions, to be achieved by minimizing GHG emissions as much as possible, and using carbon offsets or other measures to mitigate the remaining emissions.

INTERIM TARGETS:

**2010-2015: Focus on conservation**

We will continue to find ways to CONSERVE energy. We will improve our monitoring capabilities and expand our educational efforts to increase energy efficiency and minimize waste. This will be our top priority for the five year period 2010-2015. Pending further study we anticipate that conservation measures could reduce our energy consumption and GHG output by 10-20%.

Conservation is the least expensive step and should actually reduce net university expenses. During this time we will continue retrofits to existing buildings, design new construction and renovations according to best practices (LEED or similar), expand our metering of individual buildings, and support expansion of sustainability education in our curriculum.

**2010-2030**

We will begin studying possibilities to improve the EFFICIENCY of energy consumption focusing primarily on buildings (HVAC, lighting, improved building envelopes). We propose that a revolving capital improvement fund be established that will provide for investments in buildings, HVAC equipment, and controls that will improve efficiency. The saving realized from initial investments would then be reinvested on future energy saving improvements, with those savings again reinvested. This procedure would continue indefinitely so long as the investments have a definable return period. This will be an ongoing process that could reduce our energy consumption by 30-40% of current levels over 30 years. This process would include both retrofits of existing buildings, construction of new buildings, and changes in all areas of our operations.

We will immediately begin investigating the possibilities of ONSITE PRODUCTION or energy collection, such as solar voltaic, solar thermal, geothermal heat pump, and small wind. The potential of these will depend on both economic and technological development. The potential for reducing GHG emissions could range from 1 to 10% or more depending on costs and efficiencies.

We will immediately being investigation of the possibility of acquiring OFFSITE ALTERNATIVE RENEWABLE ENERGY, possibly through consortia or agreements with other institutions. Our intent is to encourage the development of regional alternative energy sources such as wind, or possibly biomass, that may not be feasible on-site or locally but that would stimulate the economy in our state and region and provide great energy independence. Current Ohio law mandates that by 2025, at least 25% of all electricity sold in the state come from alternative energy resources. At least half of the standard, or 12.5% of electricity sold, must be generated by renewable sources such as wind, solar, hydropower, geothermal, or biomass. At least half of this renewable energy must be generated in-state. This law should allow us to more easily purchase renewable energy as well as to have a market for any renewable energy that we produce on campus.

We will investigate and implement measures to reduce the carbon output from commuting and transportation. We will also continue to improve our waste management and recycling practices.
These will reduce our greenhouse gas emissions that come from landfill gases. These will be described more in later sections. The costs of some of these initiatives may be quite large and will be undertaken only after a thorough examination of the short and long-term costs and benefits. An initial capital investment into efficiency related items could achieve significant savings that could go back into a revolving fund to initiate additional efficiency measures or on-site energy production.

Table 1. Summary of benchmarks expressed as reductions of GHG emissions as percent of 2008 emissions. See also Figure 3 on page 14.

<table>
<thead>
<tr>
<th>Goal</th>
<th>By</th>
<th>Principal means</th>
</tr>
</thead>
<tbody>
<tr>
<td>25%</td>
<td>2015</td>
<td>Primarily conservation and efficiency</td>
</tr>
<tr>
<td>50%</td>
<td>2025</td>
<td>Above plus renewable and onsite generation</td>
</tr>
<tr>
<td>80%</td>
<td>2035</td>
<td>Above plus some credits and local offsets if needed</td>
</tr>
<tr>
<td>100%</td>
<td>2046</td>
<td>Above plus credits as needed</td>
</tr>
</tbody>
</table>

2031-2046
During this period we will continue to monitor conservation and efficiency, but we will also need to begin considering ways to fulfill our commitment to net zero emissions. We will investigate and utilize OFFSETS and CREDITS only as a last resort to fulfill our commitment. We anticipate that the market for these items or some appropriate replacement will be well established and adequately monitored and regulated so that we can make prudent decisions as to how to offset our emissions that we are unable to eliminate through other means.

Measures
We propose to reach climate neutrality by applying the following measures. Details on how we plan to engage our faculty, staff, and students are provided in part 2, the Education section of this plan. Explanations of how we plan to modify our operations to reach these targets are found in part 3.

EDUCATIONAL COMPONENTS
We will identify existing components of our curriculum that include sustainability and will begin discussion of how we could incorporate sustainability more explicitly into our curriculum, our co-curricular activities, and in our staff training and professional development. We will also identify and implement ways to educate our community on sustainability. These are detailed later in the Education section of the plan. Two members of our sustainability Task Force participated in AASHE’s “Sustainability across the Curriculum Leadership” workshop in January 2010. The
workshop was for faculty leaders of all disciplines who wished to develop curriculum change programs around sustainability on their campuses.

RESEARCH
We will expand and improve monitoring of our energy consumption and will incorporate energy studies into classes in environmental science. We will encourage and recognize faculty and students who undertake research that has applicability to issues of sustainability at any level. These actions are described in more detail in the Operations section of the plan.

TRACKING
We have specific and measurable ways to track our progress. We will continue annual monitoring of our energy consumption and GHG emissions using the Clean Air Cool Planet software. This will provide us with an annual update on our progress towards climate neutrality. We will also continue to track our overall level of sustainability using the AASHE STARS program. We propose to conduct these assessments on an every third year basis. Beyond the basic requirements of these two tracking tools we will also continue to monitor the amount and composition of our solid waste stream, including recycling, and with more refined metering of buildings we will improve our ability to monitor building performance. We will also monitor expenses and return on investment for all sustainability projects to see how well our projected costs and savings match to reality and to better understand what the next appropriate steps should be. This will be described in the Planning, Administration, and Engagement section of the plan.

Assumptions
Federal and state energy policies are currently undergoing scrutiny and new legislation is almost certain. The form that the new policy will have is not known at present, but it seems likely that several things will occur:

1. **Renewable portfolio standards at the national level will emerge.** This is essential for large electrical generation companies so that they have a common standard across the country. The effect of this will be to increase the amount of renewable, including low or no carbon, electricity over the next 50 years. At present it is a conservative guess that these portfolio standards will require a minimum of 30-50% renewable energy by 2050.

2. **Carbon missions from electrical generation will likely be limited through some form of federal regulation such as cap and trade.** This will result in an increased cost for electrical energy and probably an increased cost in carbon offsets (which are currently going for $5-25 per metric tonne with retail climate offset providers). We anticipated that the cost of these credits will increase and that the rate of increase will depend on the nature of the carbon emissions legislation. We assume that by the time we are ready to purchase offsets, the regulatory oversight will have developed to the point that prices will stabilize. We further assume that University of Mount Union will grow from its current size of approximately 2100
students to 2400 students within the next decade and that new offerings will involve more year-round use of the campus, new ways of delivering instruction and more technology-supported instruction.

**Approach to Neutrality**

Figure 3 illustrates how we plan to reach carbon neutrality as was described in the previous section. We will begin by emphasizing conservation practices. Initially this will simply include turning off lights and computers and controlling room temperatures. Eventually it will move into more refined control systems and increased education of the campus. We believe that we can reduce GHG emissions by about 10% over the first 10 years and by an additional 0.5% per year thereafter.

We will also initiate major energy efficiency measures that will include improving building envelopes, insulation efficiency of air handlers and other HVAC equipment on campus and by replacing low efficiency machinery and appliances with higher efficiency units. We intend to reduce our energy consumption by 30% within 10 years by improving efficiency and continue to improve efficiency by about 1.5% per year thereafter.

The third measure relates to our energy portfolio. The State of Ohio currently is requiring electric utilities to increase the share of renewable energy sources in their portfolios. We will achieve significant reductions in GHG due to this change alone. We anticipate that this shift will continue throughout our planning time frame and that we will be able to purchase electricity generated from renewable resources from regional generators in the vent that the utility portfolios do not meet our expectations. Our on-site generation capacity increased greatly in 2010 with the installation of a 54kW photovoltaic roof panel that will supply up to 1% of our electrical needs. We will implement other on-site generation during the life of the plan with a goal of achieving five to six times more on-site production.
Figure 3. Projected GHG emissions during implementation of the plan. The lines show the amount of GHG remaining after the application of each type of measure.

Figure 4. A comparison of our energy use, total square feet of building, and energy use per square foot of building space. This shows that although our total square footage has increased, our energy use per square foot has actually decreased.
We do not anticipate that internal offsets will be a significant component of our plan. To date we have not included the 130 acres of forest and 100 plus acres of wetland that we own or lease. We estimate that our current holdings would create about 100 tonnes per year of offsets and that we could find ways to double that level during the course of the implementation.

Finally we may need to resort to the purchase of credits. We will begin by purchasing credits for our air travel with the intent of offsetting 100% of that within ten years. In order to focus our financial investments on efficiency measures we will delay purchasing additional credits for at least ten years until we have implemented efficiency savings that will save money. This will motivate us to seek the most cost effective and economically responsible measures to reduce our energy consumption and thereby minimize the number of credits that we will eventually have to purchase. The cost of credits will vary depending on the nature of any legislation that is passed creating and regulating credits on the national level.

According to ACUPCC, “The price of carbon offsets varies a great deal by project type, wholesale vs. retail price, offset provider, and any verification/standards processes [part of quotation excluded] Offset prices can range from as little as $2 to more than $50 per metric tonne of CO$_2$e. Some projects are cheaper to carry out than others. For example, ocean sequestration can be quite expensive, as can large wind or hydro projects, while industrial gas destruction and some energy efficiency projects can be inexpensive, but cost is not the only important consideration in choosing offset projects.” Given the above figures the current cost of purchasing credits to offset 100% of our current GHG emissions could cost between $40,000 and $850,000 per year.
Part Two-Education

(See Appendix F for an updated list of accomplishments)

Education in this context is broadly defined to include our academic curriculum, our professional development programs for faculty and staff and our community outreach programs. We have been involved in education about sustainability in all of these areas but we do not have a coherent program to support the inclusion of sustainability in all these places or to evaluate the effectiveness of our programs. Thus, our overall educational goals are to:

1. Increase all stakeholders’ (students, staff, faculty, alumni, board of trustees, and surrounding community) awareness of sustainability.
2. Increase motivation and willingness to act in a sustainable manner.
3. Encourage behavioral change in students and employees.
4. Build sustainability into the social fabric of the campus including housing, student activities, and business office.
5. Involved students in monitoring our campus by collecting data, analyzing it, and sharing it with the campus and beyond.
6. Promote the campus’ sustainability goals and offer rewards for improvements.

Our plan addresses three areas: Co-curricular Education, Curriculum, and Faculty and Staff Development.

Co-Curricular Education

Vision

This co-curricular section proposes ways that Mount Union can provide our students with sustainability learning experiences outside the formal curriculum. Engaging in sustainability through co-curricular activities allows students to deepen and apply their understandings of sustainability principles. University sponsored co-curricular sustainability offerings, possibly coordinated by the office of student affairs and student organizations, could help to integrate sustainability into the campus culture and set a positive tone for the institution.

History (Updated through September 2011)

University of Mount Union has several co-curricular activities and programs that support sustainability:

1. Two student organizations, Janus-Students for Social Responsibility, and SEA-Students for Environmental Awareness, have been active on campus and provide programs and activities for their members and others.
2. The student newspaper, “The Dynamo,” has regularly published articles on sustainability actions at the University.
3. A faculty member, with the support of the Sustainability Task Force, organized the first Stark County based component of the Ohio Solar Tour. We continue to participate in this event each year, featuring different buildings, projects, and programs.
4. The University cosponsored the first Sustainable Alliance Festival with the City of Alliance. We continue to cosponsor and participate in this event, with many
students participating in, promoting, and organizing some of the events and activities.

5. A variety of student organizations and University offices have engaged in service projects that support sustainability-related issues.

Actions
2011-2015
Our overall goal is to support student groups and campus offices to encourage sponsorship of activities and events for students and dissemination of sustainability concepts. Some details follow:

1. **We have continued our involvement in RecycleMania and we propose to continue that. Our overall recycling rates have increased, but we can increase them further. We need to begin planning earlier and get more students involved in the program as well as increase the number of activities surrounding the event.**

2. **We will work with Student Senate and seek to have a designated representative on the SMAC. We will ask Student Senate to designate a student to serve as a liaison between SMAC and the Student Senate. The student would be a full member of SMAC.**

3. **We will continue developing and attempting to implement an Eco-Reps program. Initially this will be a pilot program involving volunteers. We will analyze our results and develop the program based on input from students. As part of this program we envision some competitions for sustainable living practices among residence units. We would also work with Student Affairs to promote working sustainability principles and concepts into residence hall educational programs and activities.**

4. **We will investigate the possibility of creating a “model” residence hall room, apartment, or small house that would display sustainable living practices and green design. We would seek outside funding for this and also involve engineering majors, as well as other students, in the design and monitoring of the unit.**

5. **Work with Greek Life to create a sustainability outreach activity or event, perhaps co-sponsored by several organizations. This event could also take the form of a competition.**

6. **Revisit the possibility of a “tray less day” in the cafeteria on Earth Day or some other day.**

7. **Incorporate sustainability into Preview and Orientation by providing an obvious presence and information about our sustainability initiatives.**

8. **Work with career services to provide information on jobs and internships that are available in sustainability-related career fields.**

9. **Expand support for student organizations that are focused on different aspects of sustainability.**
2015 and beyond
The University will continue to identify and support activities and programs that support the vision of providing quality co-curricular learning experiences for all of our students. We will evaluate what we have done and revise our plans appropriately.

Curriculum
Vision
This section proposes ways that Mount Union can expand and improve our formal educational programs and courses that address sustainability. A primary function of colleges and universities is to educated students. By training and educating future leaders, scholars, workers, and professionals, higher education institution are positioned uniquely to prepare students to understand and address sustainability challenges. By offering courses and a curriculum that is relevant to sustainability issues we will help equip students to lead society to a sustainable future. This is clearly aligned with our University’s mission, “to prepare students for meaningful work, fulfilling lives, and responsible citizenship.”

History (Updated through September 2011)
Mount Union already has courses that are focused on or related to sustainability. Of 1323 courses offered for credit in the 2010-2011 academic year, nine were focused on sustainability and 37 were related to sustainability which equates to a total of 122 total credit hours. As an example, for many years the Psychology department has sponsored a Wilderness Trip to the Adirondacks that allows students to learn and reflect about the natural environment in an experiential setting. Mount Union’s Environmental Science major, which replaced a less comprehensive Environmental Biology major, contains several courses with explicit learning outcomes related to sustainability.

Sixteen of 24 departments offered courses that are related to sustainability:
Art; Biology; Chemistry; Computer Science; Criminal Justice; Economics; Education; English; Environmental Science; Foreign Language; Geology; Philosophy; Psychology; Religion; Sociology; Sports Business

We have established criteria for classification of courses as either sustainability related or sustainability focused. These can be found in Appendix A.

Two of our faculty members attended a workshop sponsored by AASHE to promote the incorporation of sustainability across the curriculum. As a result, “Project Headwaters” was launched on campus and 11 faculty engaged in a one-day workshop on developing classes that include sustainability. Most of the new or revised classes were taught during the 2010-2011 academic year.
Actions
2011-2015
We will continue to encourage faculty to identify where they are already incorporating sustainability in their courses. We suspect that sustainability is even more ingrained into our curriculum than is indicated by the statistics above. We will also propose measures that will make it easier to identify the ways that the University is addressing sustainability in its curriculum. The proposed revision of the General Education program will provide opportunities for including sustainability and much of our work will be geared towards helping faculty develop general education courses that will also include sustainability. We propose the following ideas for possible implementation:

1. We will continue researching assessment tools and conduct an assessment of students’ sustainability literacy and engagement upon entry and again at graduation. We will work with the Office of Assessment and other faculty members to develop the appropriate survey tools. We believe we could provide an initial survey during the Spring 2012 semester.
2. Obtain sustainability related course offerings from other schools (syllabi, etc.) to help our faculty and perhaps provide a useful beginning point for creating additional sustainability courses in our curriculum.
3. Work with instructors in the new general education program to support those who desire to incorporate sustainability education into their classes.
4. Develop specific courses, a concentration, or certificate program in sustainability in Environmental Science, Engineering, Liberal Studies, or in more than one.
5. Continue to support and expand sustainability focused service learning activities.
6. Utilize Physical Plant staff in teaching moments- HVAC, electricity, and water consumption.

Faculty and Staff Development
Vision
This section proposes means by which Mount Union can incorporate sustainability into our faculty and staff training and development programs. Faculty and staff members’ daily decisions impact our institution’s sustainability performance. Equipping faculty and staff with the tools, knowledge, and motivation to adopt behavior changes that promote sustainability is an essential activity of a sustainable campus.

History
While we actively support professional development and training for all employees and orientation for new faculty and staff, none of our programs currently include sustainability as an explicit component. The work of the Sustainability Management Advisory Committee was presented to the faculty at the January 2011 Faculty meeting.

In January 2010, Mount Union sent representatives to the AASHE Sustainability Across the Curriculum Workshop in Atlanta. This workshop presented ideas for small group faculty
development, such as the Ponderosa and Piedmont Projects (Faculty Development Committee, Sustainability Task Force Member). The Ponderosa Project was developed at Northern Arizona University (NAU) as an interdisciplinary faculty group effort to incorporate environmental sustainability issues into university courses with the ultimate goal of providing future citizens the education and skills necessary to achieve sustainable communities and societies. The President is currently investigating funding options for small group faculty development, such as the Ponderosa Project.

**Actions**

**2011-2015**

1. Develop, through Human Resources or other campus offices, training or information in aspects of sustainable living, much as was done with wellness related activities for all employees. Take advantage of our new wellness center to enhance educational opportunities about healthy, sustainable personal lifestyles.

2. Offer sustainability education programs to all employees at least once each year. The programs would include information on recent and proposed sustainability initiatives, policies that help the campus to be more sustainable, and opportunities to learn about and discuss sustainability on our campus.

3. Provide recognition of employees who exemplify high standards of sustainability in their jobs.

4. Work with Human Resources to provide information on campus sustainability policies and initiatives to all newly hired employees.

5. Incorporate a sustainability component into the new faculty and staff orientation processes.

6. Create a link to the course offerings posted on AASHE’s website to supplement and inform our faculty on course development.

7. Offer support for incorporating sustainability into teaching to faculty who are developing new courses in response to the new General Education program.

8. Continue support or incentives for faculty who wish to incorporate sustainability into their courses or develop a sustainability focused course.

9. Develop a resource base that includes a bibliography and a syllabus bank from both internal and external courses that include sustainability.

10. Work with the Faculty Development Committee to support faculty who want to learn more about incorporating sustainability into their classes.
Figure 5. An overview of some components of our educational plan for the next decade.

<table>
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<tr>
<th>2011-2013</th>
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<tbody>
<tr>
<td>- Prepare and administer sustainability literacy assessment</td>
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<tr>
<td>- Study sustainability course offerings at other colleges and universities</td>
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<tr>
<td>- Work with General Education Program</td>
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<tr>
<td>- Increase incorporation of sustainability into student media</td>
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<table>
<thead>
<tr>
<th>2013-2015</th>
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<tbody>
<tr>
<td>- Develop course or courses or certificate in sustainability</td>
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<tr>
<td>- Design and implement service learning options</td>
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<tr>
<td>- Seek support for a lecture series on sustainability</td>
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<tr>
<td>- Increase motivation for sustainable behaviors</td>
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<tr>
<td>- Review entire plan based on assessment data</td>
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<tr>
<th>2015-2020</th>
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<tbody>
<tr>
<td>- Develop or expand sustainability immersion experiences for students</td>
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<tr>
<td>- Develop a model “green” living unit.</td>
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<tr>
<td>- Develop courses for General Education that include Sustainability</td>
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<tr>
<td>- Have a sustainability curriculum that other schools would like to emulate</td>
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Part Three—Operations
(See Appendix F for an updated list of accomplishments)

Our operations plan is divided into eight sections: 1) Buildings, 2) Energy and Climate, 3) Grounds, 4) Materials—Recycling and Waste, 5) Transportation, 6) Information Technology, 7) Dining, and 8) Purchasing. The first five of these are largely under the purview of our Physical Plant and all are under the purview of the Office of Business Affairs.

University of Mount Union’s Physical Plant has been pursuing more sustainable practices for many years. Their mission statement highlights their commitment to the goals of sustainability:

“Physical Plant will provide a clean and comfortable environment in all buildings that will support the learning process. We will provide a safe and secure community that fosters a feeling of personal security and protects individuals and university property. The Physical Plant will provide a campus that is pleasantly landscaped, functionally designed, and environmentally responsible.”

Buildings

Vision
University of Mount Union desires to maintain and renovate existing buildings and construct new buildings that reflect the best available sustainability practices so as to create healthy environments for users of the buildings and reduce operating costs. At University of Mount Union, buildings are by far the largest users of energy and the largest source of greenhouse gas emissions on campus. Buildings also use significant amounts of potable water. University of Mount Union will therefore design, build, and maintain buildings in ways that provide a safe and healthy indoor environment for inhabitants while simultaneously mitigating the building’s impact on the outdoor environment.

History
The University has already initiated a number of measures to reduce energy and materials use in buildings:

1. University of Mount Union has an aggressive practice of maintain and improving the existing buildings on our campus. We use the guidelines and principles of LEED-EB in all of the work we do. However, we have not had any of our renovated buildings certified using the LEED-EB criteria.
2. University of Mount Union has reduced its potable water consumption per square foot from 31 gallons/sf in 2000 to 29 gallons/sf in 2010.
   a. Low flush toilets. Eighty five percent of toilets on campus are now low flush toilets that use 1.6 gallons of water per flush compared to the older toilets that take 4.5 gallons of water per flush.
   b. Low flow shower heads. One hundred% of shower heads on campus are now equipped with low flow shower valves that reduce the water used from 5 gallons per minute to 2.5 gallons per minute. This allows us to use less water and conserve energy to make hot water.
   c. Water cooled air conditioning. During the 2010-2011 academic year, the water-cooled air conditioning system in the HPCC kitchen was replaced.
We estimate this will save approximately 1.5 million gallons of water per year.

3. High efficiency furnaces have taken the place of old out dated furnaces in twenty% of university owned houses. These furnaces on average are 20% more efficient than the old ones. During the 2010-2011 academic year, the boiler in Cope music hall was retubed, the ductwork was cleaned in seven buildings, and the furnace was replaced in 742 Vincent.

4. Independent room controls for heat. Individual room sensors have been installed in McCready, Bica-Ross, and Shields residence halls and in all apartment housing. These devices help control the comfort of each room rather than having rooms controlled by a zone thermometer. Our older residence halls have entire floors on one zone thermostat, and depending on the location of that control, the entire floor could be “overheated,” causing student rooms to have their windows open during winter (Miller Hall) just to maintain a comfortable room temperature.

5. Use of recycled products. As we renovate existing buildings, we are using recycled material for bathroom partitions and carpeting.

6. Double and triple pane windows. Window replacements in renovation projects or new construction are double and triple pane products. We are also using low e (low emissivity) glass which minimizes radiative heat transfer, keeping heat in during the winter and out during the summer. Advanced glazing has now been installed in all residence halls. Advanced glazing was completed on all university-owned houses during the 2010-2011 academic year.

Actions 2011-2015

1. Based on what we learn from the initial metering experience we will expand individual building monitoring of building energy usage. Complete the metering of all dormitories and student residences (18 currently completed, 4 in process).

2. Make meter information available on our website, comparing dorms and residences.

3. Make current solar energy input information available on the website (as of 12/19/2011).

4. Review and reconsider temperature standards for working space (currently 72°F (+/- 2°) year round).

5. Develop a green cleaning policy in conformance with Green Seal certification.

6. Improve the Building Coordinator role on campus to encourage sustainable practices.

7. Implement or expand programs in residential housing to promote sustainable living practices. These could be high-efficiency lighting give-a-ways, floor competitions, vending misers on vending machines, and installing front-load washers in all laundry facilities.

8. Install individual room sensors and controllers in residence halls and other buildings as appropriate.
9. Continue to upgrade roofs, windows, and walls in existing buildings.
10. Investigate installation of waterless urinals in high-use areas.

2015 and beyond
1. Meter all sports facilities and future facilities.
2. Make meter information available on the website, comparing all buildings and facilities energy used per square foot. We would also like to include comparisons to other institutions of similar size and scope.

Energy and Climate Vision
University of Mount Union will reduce its energy consumption through conservation and efficiency, and by switching to cleaner and renewable sources of energy such as solar, wind, geothermal, and low-impact hydropower. At Mount Union, energy consumption is the largest sources of greenhouse gas emissions that contribute to climate change. In addition to accelerating climate change, energy generation from fossil fuels, especially coal, produces air pollutants such as sulfur dioxide, nitrogen oxides, mercury, dioxins, arsenic, cadmium, and lead. These pollutants contribute to acid rain as well as health problems such as heart and respiratory diseases and cancer. Coal mining and oil/gas drilling can also damage environmentally and/or culturally significant ecosystems. Nuclear power creates highly toxic and long-lasting radioactive waste. Large-scale hydropower floods habitat and disrupts fish migration.

Implementing conservation measures and switching to renewable sources of energy can help Mount Union save money and protect us from potential utility rate volatility. Renewable energy may be generated locally or regionally and allow us to support local economic development. Furthermore, we can help shape markets by creating demand for cleaner, renewable sources of energy.

History
Energy costs have been increasing over the past decade making energy conservation and efficiency more important and cost effective than ever. We have recognized this and have begun taking specific action to improve our energy intensity.

Most of our buildings were on a single electrical loop and data for individual building use of both electricity and natural gas were not available. To resolve this, we installed electrical metering in 16 of the 20 major buildings on our campus, and installed gas metering in all 20. University of Mount Union is committed to reducing our electricity consumption in all areas of the Physical Plant, especially in the HVAC system on campus. We are replacing major boiler and chiller systems to improve operating efficiency. We are also adding and upgrading our temperature control systems to use technology to help reduce energy consumption. During the 2010-2011 academic year, we replaced the cooling tower in Chapman Hall, re-tubed the boiler in Cope, upgraded the air...
conditioning in McPherson, completed ductwork cleaning in seven buildings, and replaced the furnace in one of the University owned houses.

**Actions**

**Ongoing**

Below are policies and procedures that Mount Union will continue or expand on continuously. Many of these are developed further below or in other parts of this plan.

1. **Continue to replace boilers, chillers, and air handlers with more energy efficient systems.**
2. **Replace old electric transformers.**
3. **Use renewable energy sources.**
4. **Complete individual electric metering of all buildings on campus and continue monitoring utility usage of each building.**
5. **Install times and lighting controls in all campus buildings and elsewhere, as appropriate.**
6. **Attend informational seminars to increase our knowledge of sustainable best practices.**
7. **Achieve LEED certification or equivalent in all new and renovated buildings.**
8. **Educate students, faculty, and staff on energy conservation practices.**
9. **Upgrade building temperature controls to improve operating efficiency.**
10. **Conduct energy audits, possibly at several levels (one overall audit for the campus and specific audits for energy consuming systems, like air handlers).**

**2011-2015**

1. **Initiate energy conservation policies.**
   a. **Conservation is the first priority for energy management in our plan. This will focus primarily on behaviors modification of campus members and improved monitoring and response (overlap with education/administration).**
      i. **Formalize “lights and computer off at night” policy.**
      ii. **Work with IT so that only Energy Star computers and peripherals are purchased and other energy conservation measures are initiated. Other examples include sleep modes or software on equipment, server space reduction through new server virtualization or other technology, and paper monitoring and reduction.**
      iii. **Educate students and initiate energy conservation competitions for students.**
      iv. **Initiate energy conservation competitions or incentives for campus departments.**
      v. **Maintain our emphasis on energy conservation, with periodic review and assessment of executed actions.**
2. **Increase efficiency in existing and new buildings and activities**
i. Conduction a series of energy audits focusing first on known energy consumers and then on a more general, campus-wide basis.
   1. Evaluate opportunities for waste-heat recapture.
   2. Evaluate use of ground heat pumps throughout campus.
   3. Evaluate the feasibility/sustainability of district heating or co-generation.

ii. Continue retrofitting of existing buildings by upgrading windows and lighting systems.

iii. When roofs need replaced, replace them with reflective or planted “green” roofs.

iv. Make adjustments to the existing HVAC system as recommended.

v. Install motion/light sensors in all facilities.

vi. Initiate a “green” student residence showcasing efficiency.

vii. Explore working towards meeting the Architecture 2030 Challenge. The Challenge asks the global architecture and building community to adopt the following targets:
   1. All new buildings, developments, and major renovations shall be designed to meet a fossil fuel, GHG-emitting, energy consumption performance standard of 50% of the regional (or country) average for that building type.
   2. At a minimum, an equal amount of existing building area shall be renovated annually to meet a fossil fuel, GHG-emitting energy consumption performance standards of 50% of the regional (or country) average for that building type.
   3. The fossil fuel reduction standard for all new buildings and major renovations shall be increased to:
      a. 60% in 2010
      b. 70% in 2015
      c. 80% in 2020
      d. 90% in 2025
      e. Carbon neutral in 2030 (using no fossil fuel, GHG-emitting energy to operate). These targets may be accomplished by implementing innovative sustainable design strategies, generating on-site renewable power and/or purchasing (20% maximum) renewable energy and/or certified renewable energy credits.

3. On-Site Energy Production
   a. We currently have a 1 kW photovoltaic (PV) array on the roof of the Hoover-Price Campus Center and a 54 kW thin-film PV system on the roof of the Peterson Field House.
1. Install a wind turbine at the Huston-Brumbaugh Nature Center.
2. Investigate the installation of solar-thermal for residences, the pool, and locker rooms.
3. Investigate the use of geothermal throughout campus.
4. Collect energy from exercise equipment as part of student education.

4. Off-site Alternative Energy
   1. Investigate opportunities for regional alternative energy sources.
   2. Investigate opportunities for collaborative regional facilities (i.e. wind on Lake Erie in conjunction with other institutions).
   3. Investigate options for regional biomass facilities.

5. Offset and Credits
   a. Offsets and credits will likely be a part of our portfolio, but we view them as the last resort after we have achieved a high level of energy conservation, efficiency, and local generation of renewable energy. With the exception of air travel, described in the section on transportation, we will defer purchasing credits in the short term. Some of the questions that we need to answer are:
      i. Besides air travel, what other areas will require offsets?
      ii. Do renewable energy credits make sense economically?
      iii. Will the purchase of credits change behavior?
      iv. Does the purchase of credits put people to work locally or does it eliminate local jobs?
   1. Study the availability and cost of credits.

2015-2020

1. Increase efficiency in existing and new buildings and activities.
   1. Retrofit and replace HVAC in existing buildings as recommended by the energy audit.
   2. Design new buildings to meet or exceed LEED Gold level certification for energy efficiency, and meet or exceed current or most energy-efficient energy code requirements for envelop, mechanical, and lighting.

2. On-site energy production
   1. Work with Green Energy Ohio and the Ohio Department of Energy to monitor and evaluate wind potential on campus lands.
   2. Investigate capturing waste heat from dining facilities.
   3. Investigate requiring solar thermal on all new structures.
4. Evaluate building-integrated photovoltaic for roof replacements and new structures.

3. Offsets and credits
   1. Develop projection of credits that could be required.

2020 and beyond
1. Increase efficiency in existing and new buildings and activities
   1. New facilities should ultimately be net-zero energy, or net-positive energy, in order to achieve a carbon neutral campus. The Net-Zero Energy Commercial Building Initiative in the US Department of Energy aims to achieve marketable net-zero energy commercial buildings by 2025. Net-zero energy buildings generate as much energy as they consume through efficiency technologies and on-site power generation.

2. On-site energy production
   1. New facilities will ultimately be net-zero energy, or net-positive energy through a combination of efficiency and on-site production.
   2. Investigate opportunities for fuel cell use.

3. Offsets and credits
   1. Begin acquisition of credits, being cautious and continuing to make most investments in conservation, efficiency, and alternative sources.

Grounds
Vision
University of Mount Union is proud of its beautiful and welcoming campus. We propose to continue to maintain our campus in a regionally appropriate manner that will use water wisely and minimize the use of harmful landscape chemicals.

History
Our campus is 135 acres in a small city (population approximately 22,000) setting.

University of Mount Union uses limited amounts of fertilizers and pesticides in the care and maintenance of our grounds. We responsibly manage all applications to minimize the risk of environmental damage. We plant and maintain many local species of native plants in our landscaping areas. We have an inventory of our trees, including recommendation for care. During the 2010-2011 academic year, we received Tree Campus USA certification. Our trees are part of the city-wide arboretum. When trees need to be removed, those appropriate are sent to be milled and used for on-campus furniture or sold to the mill for use in blocking containers and pallets. Those
trees not appropriate for milling are sent to a local lawn care company which makes them into mulch.

**Actions**

**2011-2015**

1. Update our tree inventory
2. Determine areas that could be shifted into lower maintenance plantings with native plants.
3. Review our grounds-related chemical use to determine ways to further reduce it.
4. Evaluate use of deicing compounds.

**2015-2020**

1. Look at ways to use landscaping to improve building heating and cooling and minimize the need for mowing and the use of chemicals and fertilizers, all as part of a campus mater planning process.
2. Investigate the possibility of utilizing water from our university ponds for any needed irrigation.
3. Create educational gardens on campus, including agricultural, native plants, and rain gardens.
4. Initiate a composting program that will utilize waste materials from our grounds and dining service for use on campus beds.

**Materials Recycling and Waste**

**Vision**

Mount Union intends to move towards zero waste by reducing, reusing, recycling, and composting. These actions mitigate the need to extract virgin materials such as trees and metals. It generally takes less energy to make a product with recycled material than with virgin resources. Reducing waste generation also reduces the flow of waste to incinerators and landfills, which produce greenhouse gas emissions, can contaminate air and groundwater supplies, and tend to have disproportionate negative impacts on low-income communities. In addition, waste reduction campaigns can engage the entire campus community in contributing to our sustainability goals.

**History**

Mount Union has undertaken a number of actions to reduce waste, including:

1. **Increased recycling through visible placement of recycling bins throughout campus and revised mechanisms for handling waste.**
2. **Decreased paper use through a print monitoring program on computers in public labs.**
3. **Decreased waste at the end of the year through a program to intercept items that students would throw away and divert them to charities or recycling.**
4. **Increased awareness of our waste generation by participating in the RecycleMania program.**
5. Achievement of a 25% diversion rate for solid waste.
6. University of Mount Union minimizes construction and demolition waste. We donate all concrete and masonry debris to a local contractor for recycling use for new road bed materials. We keep and re-use wood doors and trim, hardware and other similar building materials when renovation or demolition projects are done.
7. We currently have a recycling program for computers. Our IT department collects all old or outdated equipment. We normally donate it to local school systems. If we are not able to donate them, we contact a recycling company to handle the pickup and disposal.
8. We have a Bio Hazardous Waste Policy. All bio hazardous waste is placed in red bags then picked up and brought to the Physical Plant. We then have the bags placed in a locked cabinet. Pickups are done every two weeks by Stericycle. All chemical wastes are disposed of through EPA approved waste handling companies. Of the total chemical waste, 175 pounds were considered hazardous. Inventories are maintained in the office of our Chemical Hygiene Officer.

Actions
2011-2015
1. Continue to participate in RecycleMania or other campus-wide waste awareness and reduction activities.
2. Expand our print monitoring and paper reduction activities to faculty and staff offices.
3. Increase our marketing and awareness campaigns for campus-wide recycling.
4. Add more recycling bins and improve the accessibility of the existing bins, particularly in residence halls.
5. Pursue composting.
6. Review our purchasing policy to see if there are ways to specify purchases that are more easily recycled and to purchase recycled materials whenever possible.
7. Maintain a current waste report on the website and engage in some waste reduction competitions.
8. Plan some zero waste events for the campus.
9. Achieve a 35% diversion rate for solid waste based on our 2008 levels.

2015-2020
1. Implement a plan for moving to zero waste across campus.
2. Achieve a 50% diversion rate for solid waste.
3. Adopt a policy of diverting at least 75% of non-hazardous construction waste from landfills or incinerators.
4. Expand our e-waste program to cover the recycling and reuse of donated items, such as office machines and student computers, that are not covered under our current policy.
2020 and beyond

1. We will monitor our success at zero waste and develop new plans as technologies change with the intention of achieving overall zero waste by our target year of 2046.

Transportation

Vision
Mount Union recognizes that transportation is a major source of greenhouse gas emissions and other pollutants that contribute to health problems, including heart and respiratory diseases and cancer. Because of our relatively small size and compact campus, our fleet emissions are relatively small. We can reap benefits from implementing sustainable changes to our transportation systems. Bicycling and walking provide human health benefits and mitigate the need for large paved surfaces, which can help campuses better manage storm water. Also, we can realize cost savings that help support local economies by reducing our dependency on petroleum-based fuels for transportation.

History
University of Mount Union has not developed any programs to encourage their employees and students to bike, walk, carpool, or take mass transit to and from campus due to the fact that we are a relatively small (135 acre) residential campus. We are located in a small city and some of the more common public transit services are not available.

Air travel is an area for which no alternative to carbon-based fuels is currently available, so we will need to consider credits for air travel. The University used a general survey of air travel reimbursement requests to determine the most frequent air travel destinations. Based on an estimation of the number of trips to these destinations and others, a general estimation of air miles flown was 725,000. By entering these miles in the Clean Air Cool Planet Inventory of gas emissions, we were able to estimate that 563 tonnes of CO\(_2\) are emitted annually.

The institution is looking into purchasing new hybrid and alternative fuel vehicles for the fleet. Vehicles are generally not kept in the fleet for more than 5 years, which means that we are always running the most up-to-date vehicles available. Additionally, the institution has a full-time mechanical staff that maintains current vehicles to peak efficiency.

Mount Union has made some progress in the area of sustainable transportation:

1. More than half of our campus community (59%) walk or bike for their primary means of transportation.
2. Our GHG emissions per passenger mile are less than 0.2 pounds.
3. We have purchased hybrid vehicles for our President’s car and the campus security patrol car.
Actions

2011-2015

1. Strive to improve the use of local public transportation by working with SARTA to offer reduced price passes to students, staff, and faculty and establish a Mount Union SARTA stop.
2. Try to reduce student transportation energy use and associated emissions by establishing a “ride share” system.
3. Attempt to reduce fleet emissions further by purchasing additional hybrid or other high efficiency, low emissions vehicles.
4. Study the potential for a loaner high efficiency, low emissions car program.
5. Encourage increased use of bicycles by providing bike racks at many buildings and considering a “common” bike program, perhaps by purchasing unclaimed bikes from the Alliance Police Department. We will also work with the City of Alliance to develop a network of bike lanes through the city, including the campus.
6. Try to improve faculty and staff transportation efficiency by providing desirable, dedicated carpool parking spaces.
7. Investigate the need for and cost of parking spaces dedicated to electric only vehicles, including charging stations.
8. Evaluate parking assignment with a view towards minimizing short-range driving.
9. Continue to work with the Alliance Mayor’s Green Commission in support of “Fuel-less Fridays”
10. Get more detailed records on the nature of our air travel and calculate the emission associated with that more accurately.
11. Study alternatives for air travel offsets.
12. Analyze the budgetary implications of offsets and establish a policy for offsets related to air travel.

2015-2020

1. Implement a fully developed bike plan in conjunction with the City of Alliance.
2. Provide electric vehicle parking spaces with recharge stations.
3. Continue to replace existing campus automobiles with hybrid or electric, or the currently best available technology. Replacement of vans and trucks will depend on the available of technology. But in any case, we will consider fuel efficiency and level of emissions in selecting replacement vehicles.
4. Provide campus shuttles to the Huston-Brumbaugh Nature Center for special events.
5. Work with SARTA and the City of Alliance to develop routes to desirable locations in North Canton (airport, Strip, Belden, etc.).
2020 and beyond
1. Discourage one-passenger commuting further by implementing parking fees and offering carpool incentives.
2. Remove most parking from campus interior and utilize it for buildings or open space.
3. Provide incentives for train or bus travel rather than air travel.
4. Require the purchase of offsets for air travel.

Information Technology
Vision
Mount Union relies heavily on its information technology infrastructure for all aspects of our operations. IT activities can consume large amounts of energy and materials. The University will maintain a high-level of service while minimizing economic and environmental costs.

History
University of Mount Union is similar to many institutions in that it has seen a rapid increase in the demand for information technology services. The numbers of servers, office and laboratory computer, printers, copiers, and other technological devices have increased. Also, the number of multimedia classrooms has increased.

University of Mount Union began a pay to print policy for students several years ago. Each student is allowed 1000 pages on public printers and then was assessed a fee for additional printing. Special cases could be appealed. The result was a decrease in paper consumption.

The IT department has developed a Green IT Initiative that incorporates many of the ideas covered in this section:
1. A Green IT section is included in the IT newsletters distributed electronically to the campus community each quarter.
2. One goal of the IT department, in finding ways to reduce costs and increase environmental sustainability, is through implementing policies on campus machines to save power. This is done by setting the machines to use features that will cause the machines to go into power saving modes when not in use. The IT department is currently in the process of testing these policies on some lab and library computers. According to the software designed to save power, each computer using these settings could provide for considerable savings. Mount Union has approximately 1100 computer on campus and could therefore experience substantial monetary savings.
3. Each year the IT department liquidates unusable equipment. During the 2010-2011 academic year 4,380 pounds of equipment was recycled.
4. Conducting a study on the use of storage area networking and virtual server. Virtualization technology increases the server's efficiency by adding a section within the server called software managements. With this technology, one server can act as many servers. Mount Union currently has over fifty servers. By
implement virtual servers, we estimate a 50% reduction in energy consumption by the first year and possibly up to 90% in three years.

Actions
2011-2012
1. Review patterns and intensity of printing to determine ways to minimize superfluous printers and to provide better and more efficient service to users. This will be done using an outside consultant. We will examine options for reducing the number of desktop printers and increasing access to color printers. Our intention will be to reduce paper, ink, and toner, as well as electrical consumption.
2. The University has and will continue to improve server technology using a combination of storage area networking (SAN) and virtualization. These should reduce both electrical consumption and overall cost of maintaining large numbers of uninterrupted power supplies and servers and improving speed and efficiency of network management, file storage, and backup and user access.
3. Study and develop policies for sleep mode or other energy saving practices on campus computers.
4. Help develop sustainable purchasing policies for computers and peripherals.

2013-2020
1. The IT department will continue to monitor its activities and determine means to lower costs and improve efficiency.
2. Network Operations Center (NOC) renovations to include replacement of the current air conditioner with row cooling.
3. Management of projectors in multimedia classrooms to reduce energy usage.

Dining Services
Vision
University of Mount Union wants to provide, through its food service contractor (currently AVI), a high quality of healthy food in ways that minimize waste, support local purchasing, and include organic and fair trade certified products. We want to minimize waste in the energy required for food storage and preparation and minimize waste of food and production of solid waste.

History
University of Mount Union has contracted with AVI to provide its dining services. AVI's sustainability principles are outlined on their website, http://www.avifresh.com/sustainability.html.

We have had productive discussions with AVI management and although they are willing to work with us on sustainability in food service, we have two major obstacles. First, there is not a large demand from our student body for a more sustainable food service. Second, we are told that these
measures will substantially increase the cost of our food service. Thus, much of our effort here needs to be in education and in the development of local markets.

Food service already recycles 100% of its corrugated boxes, glass, steel, aluminum, #1 and #2 plastics, and waste vegetable oil. We have begun a study on how to use waste vegetable oil in our grounds fleet by making our own biodiesel at the Huston-Brumbaugh Nature Center. The first batch was made in August 2011, and some changes are being made in preparation for running a second batch.

We have begun studying the possibility of using a pulper to convert dining hall waste into compost that can be land applied and have had a presentation from Paglio and Associates on pulpers and processors.

Actions

2011-2015

1. Evaluate the use of pulpers in composting dining hall food waste. Pulpers could provide raw materials for a composting program near campus or at the Huston-Brumbaugh Nature Center.
2. Consider blackouts of selected parts of the dining commons.
3. Improve monitoring of dish machine use to maximize efficiency.
4. Revisit continuous dining to make it both student friendly and energy and labor efficient.
5. Revisit tray less dining.
6. Continue monitoring the biodiesel project at the Huston-Brumbaugh Nature Center.

2015 and beyond

1. Implement zero waste meals. All waste should be biodegradable and none should be going to the land fill.
2. Increase the amount of locally produced food we offer.
3. Review and increase the purchase of fair-trade and organic foods.

Purchasing

Vision

Mount union desires to use our purchasing power to help build a sustainable economy, especially focused on our own state and region. Our institution purchases millions of dollars of goods and services every year. Each purchasing delegation represents an opportunity for us to choose environmentally and socially preferable products and services and support companies with strong commitments to sustainability.

History

University of Mount Union adopted a sustainable purchasing policy in 2008. It is in Appendix C.
Actions
2011 and beyond

Most of the purchasing actions involve initial commitments and continued follow up and refinement. During the short term we want to expand our current purchasing policy to an even more sustainable purchasing policy that encompasses such things as materials and supplies, utilization of companies that promote sustainability, local suppliers (within 250 miles), recyclable shipping containers, and Minority and Women owned businesses. Two examples of

1. Increase our emphasis on the purchasing of local or regional products.
2. Continue our policy of only purchasing Energy Star appliances where such designations are available.
3. Include explicit sustainability specifications in requests for proposals.
4. Adopt an electronics purchasing policy similar to EPEAT. EPEAT is a system that helps purchasers evaluate, compare, and select electronic products based on their environmental attributes. The system currently covers desktop and laptop computers, thin clients, workstations, and computer monitors (http://www.epeat.net/default.aspx).
5. Adopt a paper purchasing policy that will lead us to purchase paper that is made from environmentally preferable materials, maximizing recycled content and using Forest Stewardship Council approved products from virgin fiber (http://fsc.org/index.html).
6. Adopt a furniture purchasing policy that will lead us to purchase furniture that is made of environmentally preferable materials.
7. Adopt a policy that will encourage use of recycled or waste-avoided materials such as paint or upholstery whenever possible.
8. Adopt a cleaning product policy similar to Green Seal. Green Seal provides science-based environmental certification standards that are credible, transparent, and essential in an increasingly educated and competitive marketplace (http://www.greenseal.org).
9. Adopt a vendor code of conduct for our major suppliers.
Part Four – Planning, Administration, and Engagement

(See Appendix F for an updated list of accomplishments)

A truly sustainable campus must have an administration that understands and supports the value of sustainability for the vitality and long-term well-being of the institution. We have that at the University of Mount Union and are open to formalizing our commitments in ways that will make the institution stronger economically and a model to our community for environmental and social responsibility. In a sense, we want to operate our institution in ways that model our mission statement. Just as it is our mission to prepare our students for “meaningful work, fulfilling lives, and responsible citizenship,” we want University of Mount Union and its constituents to feel that our work here has meaning and provides fulfillment to our employees and friends and that as an institution we behave as a responsible member of our local community and of the larger academic community.

We are well aware that sustainability in its deepest sense is about the long term. As such, it will require initial investments and policies that may have initial costs associated with them. To be truly sustainable, those investments and costs must be more than repaid in the long term.

Planning

Vision

Planning at several levels is critical to operating a successful institution and providing quality programs. Strategic and master plans guide an institution and its physical campus. These important documents establish an institution’s priorities and influence budgeting and decision-making for the institution. Incorporating sustainability into these plans is an important step in making sustainability a campus priority and may help advocates implement sustainable changes. Sustainability plans and climate action plans provide road maps for how to achieve our sustainability goals.

History

University of Mount Union has both a Master Plan and a Strategic Plan, both of which receive periodic updates. This document is itself both a sustainability plan and a climate action plan. Our goal with all of these plans is to create them in such a way that they can be informative in the larger planning scheme.

Actions

2011-2015

1. The Strategic plan for the University of Mount Union was updated and approved by the Board of Trustees in May 2011. We currently have a team assembled to review the plan and our progress, the “Imagine Mount Union” steering committee that meets monthly. The Strategic Plan includes an entire section on ensuring the sustainable management of resources. Within that section we identify key goals to make the University of Mount Union a leader in the higher education sustainability movement. Several themes are identified in the plan, such as:
a. Updating a modern campus master plan that will prioritize projects to support the plan. We have just selected a planner that will spend the 2011-2012 academic year working on the plan.
b. Partnerships with local businesses.
c. Creating and maintaining a beautiful campus.
d. Build additional buildings with LEED standards
e. Providing education and awareness on sustainable practices
f. Incorporating “green” principles into our operations, administration, and financial structure
g. Balancing our financial operational budget
h. We will continue to monitor our progress on these initiatives through the steering committee and with an annual update to the Board of Trustees.

2. The University is currently using, and will continue to use, sustainable practices to make good business decisions. Within the Physical Plant, we are consistently looking at retrofits to save energy costs, monitoring our output from geothermal and solar, and utilizing local contractors. Within food service, we are working through several sustainable practices and will continue to do so to meet the mission of the institution. A smaller and indirect sustainability project is the replacement of our payroll system that will eliminate all paper distribution of deposit receipts and W2s from the Human Resources office. In all cases, a financial benefit model will be assessed and if it is a break-even proposition, consideration for environmental issues or carbon reduction possibilities will also be considered in the final decision-making process.

3. We are currently evaluating a revolving “green project” improvement fund that will be created with seed money from the endowment. The Board of Trustees will review and approve the final form, but the idea would be to invest annual savings back into the fund to create more opportunities. In addition, we are seeking grants for electrical retrofits—including one with First Energy that will replace lighting in four academic buildings in 2011 and collectively have a 10 month payback. We have not yet set up a “green fund” for the Advancement Office to promote. That will be discussed by the Office of Advancement in the near future. That likely will also aid in the establishment of a payroll deduction for employees and an annual fund campaign.

4. Incorporate explicit references to sustainability in the University’s current revision to the Strategic Plan.
   a. Add strategies to use existing resources in a cost-effective manner, effective conservation, recycling, disposal, or renewal of physical assets in a sustainable way, and promoting environmental sustainability.
   b. Develop sustainable initiatives in and out of the classroom. For example:
      i. Tour of the boiler rooms
      ii. Scientific information on electrical, water, and natural gas consumption.
iii. Effective lighting, sustainable appliances, recycling of existing waste.
iv. Monitor compliance with progress towards the Climate Commitment.
v. Reinforce sustainability in the annual campus planning process and encourage and reward those areas that suggest, implement, and maintain sustainable initiatives.

5. Incorporate sustainable elements in our Campus Master Plan. The Campus Master Plan document is not completed at this time, but a firm has been hired to complete the process. We will encourage the planners to include the following in the Campus Master Plan:
   a. Promote sustainable design, with LEED Gold being the standards for both new construction and renovation.
   b. Parking and building infrastructure to collect water runoff and re-use it for irrigation.
   c. Use our energy audit to develop improvement plans and establish priority needs.
   d. Utilize the facilities’ audit process currently used by Physical Plan to develop a deferred maintenance plan.
   e. Assist in city infrastructure (roads, storm-water retention).
   f. Enhance planting and increase native species in landscaping plans.
   g. Develop “green” theme housing.
   h. Improve tree plantings to take advantage of natural shading.
   i. Preserve architectural integrity of historic buildings and still improve energy efficiency.
   j. Seek/promote alternative forms of transportation, including carpooling, bicycling, and walking.
   k. Create and maintain pedestrian friendly areas.
   l. Build carbon/GHG reduction goals in the planning process.
   m. Use life-cycle costing to evaluate analytically the dollar decisions being made.
   n. Establish means for tracking improvements and benchmarking against other institutions.
   o. Consider developing a University farm.

**Investments**

**Vision**
University of Mount Union can make investment decisions that promote sustainability. Most institutions invest some of their assets in order to generate income. Together, colleges and universities invest hundreds of billions of dollars. Schools with transparent and democratic investment processes promote accountability and community engagement. Furthermore,
institutions can support the development of sustainable products and services by investing in these industries. Likewise, they can support sustainability by investing in companies and funds that, in addition to providing a strong rate of return, are committed to social and environmental responsibility. Finally, campuses can engage with the businesses in which they are invested in order to promote sustainable practices.

**History**
Mount Union has developed a healthy endowment over the last few decades that contributes importantly to the success of our institution. Our Board of Trustees works together with our administration to set guidelines for investments and the investments are managed by professional investment managers. Currently our specific investments are now public knowledge.

Mount Union is affiliated with the United Methodist Church. Their guidelines list some specific social issues that should be avoided and make a more general admonition to choose investments that conform to these social principles:

1. An ecologically just world and a better quality of life for all creation
2. Social justice and the sacred worth of all persons
3. Sound fiscal policies that protect the economic life of all individuals
4. Political and governmental responsibility for protection of basic rights
5. The unity of the world community

**Actions**
**2011-2015**
1. The investment committee of the board of trustees recently reviewed several candidates for endowment consulting. One of the criteria was knowledge in socially responsible investing. We have decided to maintain the relationship with our current firm and will be studying how to implement sustainability principles into the investments at Mount Union.
2. Once the trustees have advised as to how sustainable investing fits into the overall portfolio of investments, establish a socially responsible advisory committee to oversee investments. This advisory committee would include trustees, faculty, students, and staff (up to 9). Their duties could include:
   a. Monitoring voter proxies
   b. Monitoring performance
   c. Shareholder advocacy

**Sustainability Infrastructure**

**Vision**
Mount Union has a number of offices and individuals committed to making the campus more sustainable. As we move forward in this work it will become more complex and we will need infrastructure to coordinate our activities, review our successes, and identify our challenges. We will also need to have the ability to be aware of new developments that should impact our efforts.
History
The University formally established an infrastructure for sustainability when the President’s Council created the Sustainability Task Force in 2007. This is described in the Introduction of this plan. The size of our task relating to overall sustainability is becoming increasingly apparent and the need for a position that can serve as a coordinator and clearing house for information and activities was clear. As a result, we proposed that a part-time, volunteer position of sustainability coordinator be created. This was a trial position, during which time the Sustainability Task Force and the sustainability coordinator worked together to determine the scope of work required and made recommendations for the future. Work study students are hired each year to assist with the sustainability work. The first student was hired in 2009. A complete list of sustainability work study students can be found in Appendix D. In 2010 the position of Academic Outreach Coordinator was modified to include sustainability responsibilities. The role of the sustainability coordinators is described in Appendix D. In 2010, the Assistant Director of Physical Plant, Jim Rhodes, was named as the Sustainability Coordinator for Physical Plant.

Actions
2011-2015

1. Review the position of sustainability coordinator every year and make appropriate recommendations to the President.
2. Continue hiring work study students to participate in the sustainability work, including student education and programming initiatives.
3. Seek funding for an initiate a recognition program for students and staff who are exemplars of sustainability.
4. Plan for and expand publicity about Mount Union’s sustainability actions to both internal and external audiences.
5. Work with Academic Affairs to investigate ways that a Center for Environmental Science can be developed in conjunction with the existing Brumbaugh Center for Environmental Science.
6. Consider the establishment of a Center for the Environment. This could be developed using resources from the current Brumbaugh Center but would be substantially expanded to include the full range of sustainability initiatives. Some of the activities that could be the responsibility of the Center for the Environment would be:
   a. Serving as the hub for students engaged in sustainability, including the work-study students described above
   b. Administering recognition programs
   c. Providing a liaison to Academic Affairs, Physical Plant, Food Service, Purchasing, Human Resources, Information Technology
   d. Developing inter-campus partnerships/collaboration
   e. Seeking funding possibilities
f. Utilizing student senate representatives, in addition to those from Janus or SEA, to be representatives to the Sustainability management Advisory Committee

Human Resources

Vision
University of Mount Union desires to treat and remunerate its workers responsibly and fairly. Mount Union’s people define its character and capacity to perform. Our success as an institution can only be as strong as the community that we build and maintain. Mount Union will bolster the strength of its community by making fair and responsible investments in its human capital. Such investments include offering benefits, wages, and other assistance that serve to respectfully and ethically compensate workers. Investment in human resources is integral to the achievement of a healthy and sustainable balance between human capital, natural capital, and financial capital.

History
Mount Union has worked to provide a competitive wage and benefits plan. In the recent recession, when many other institutions were cutting wages or positions, Mount Union was able to maintain pay and benefit levels and avoid laying-off any employees. Open positions are evaluated against competitive institutions and local Chamber of Commerce benchmarks. Annual increases are comparable to the Consumer Price Index (CPI). All employees are compensated above minimum wage.

Benefits are made accessible to all employees by offering various premium levels with differing benefit options. All full-time employees are eligible to receive medical and dental insurance, including health and welfare benefits. We provide family medical leave in accordance with the Family and Medical Leave Act (FMLA). University of Mount Union has granted domestic partner fringe benefits to both same sex and opposite sex domestic partners of University faculty and staff. As of January 1, 2008, domestic partner benefits became available.

We have begun to do bi-annual student satisfaction surveys through Noel-Levitz, a consultant to higher education. We are considering a similar survey for employee satisfaction using the same company or another similar employee survey.

Actions
2011 and beyond
1. The University continues to benchmark compensation (salary and benefits) against competitor institutions to analyze our competitiveness. We are currently evaluating our medical insurance offerings to provide greater coverage for faculty and staff that may also provide a cost savings for the institution. Annual review will take place and the University is also considering a merit-based model of compensation for faculty and staff.
2. The University continues to provide a wellness program for employees and offers a Weight Watchers program and state-of-the-art access for our employees to the MAAC fitness center. Many programs with the Sports Medicine/Management program exist of which employees can take advantage (personal trainers, classes, etc.).

3. We will work through our Human Resources office to educate and encourage our employees about sustainable practices at home and at work.

4. Many programs exist to provide community within the campus structure:
   a. New Staff Orientation is a year-long program to which each new staff member is invited to learn about the major areas of campus.
   b. New Faculty Orientation is similar to New Staff Orientation, but is coordinated by a faculty committee.
   c. The Annual Health Fair is an opportunity for all faculty and staff to obtain a health risk assessment and talk to local experts about areas of concern in their health. It is also an opportunity for the faculty and staff to meet and ask questions of our benefit providers.
   d. All faculty and staff are invited to dine at the campus center at the beginning of the year and end of the year, when the President and members of the President’s Council cook for and serve faculty and staff.
   e. The Service Award Dessert Reception is an annual event at which faculty and staff are acknowledged for their service to the University. Service awards are handed out at this event.

Diversity, Access, and Affordability

Vision
Mount Union desires to advance diversity, access, and affordability both on campus and in society at large. In order to build a sustainable society, diverse groups will need to be able to come together and work collaboratively to address sustainability challenges. People of color and low-income communities tend to suffer disproportionate exposure to environmental problems. This environmental injustice happens as a result of unequal and segregated communities. To achieve environmental justice, society must work to address discrimination and promote equality. Higher education opens doors to opportunities that can help create a more equitable world. The historical legacy and persistence of discrimination based on racial, gender, religious, and other differences makes a proactive approach to promoting a culture of inclusiveness an important component of creating an equitable society. In addition, a diverse student body, faculty, and staff provides rich resources for learning and collaboration.

History
University of Mount Union has a Diversity Initiatives Steering Committee (DISC) that fosters increased diversity on campus. As a subcommittee of the Faculty’s Cross Curricular Development Committee, DISC has the responsibility to recommend and propose policies concerning campus-wide efforts in the areas of:
1. Developing an inclusive curriculum
2. Tracking and evaluating diversity programs implemented at the University and assessing the campus climate for diversity
3. Supporting the efforts of appropriate offices at the University in the creation and maintenance of a diverse student body
4. Supporting the efforts of appropriate offices at the University in the creation and maintenance of a diverse faculty.

In addition, to keep diversity issues at the forefront, the Office of the Assistant to the President for Diversity was created to advocate, coordinate, support, and encourage innovation in university programs and structures that are designed to enhance diversity. Recognizing that the campus community is strengthened by its diversity, the vision of the Assistant to the President for Diversity is the establishment of a campus environment where the richness of diversity is discussed, valued, and celebrated. In sum, the Assistant to the President for Diversity is charged with providing leadership, coordination, and support to those individuals, offices, and constituents involved in the advancement of a campus community where international, national, and individual differences are explored and respected. The position is equivalent to 0.5 FTE.

We did complete an assessment of diversity attitudes in 2009 and it was analyzed by the Diversity Initiatives Steering Committee. The assessment showed students are generally satisfied with overall campus diversity, but somewhat reluctant to take a lead in diversity initiatives or enroll in diversity focused coursework. The DISC recommended a number of items to the President, including:

1. A strategic initiative be implemented that specifically aims to promote a campus message communicating the definition of diversity. The content of this message would encourage the understanding and discussion of diversity in its many aspects in the classroom.
2. ...further research on activities in and out of the classroom...that encourage ‘socialized diversity,’ the using of unstructured activities in addition to the curriculum to promote diversity.
3. A workshop be created for the faculty fall conference on how to interject issues of diversity into individual course curriculum.
4. Collaborations among faculty and staff to get each student some kind of positive, growth experience with people different from themselves.

Adapted from the Diversity Initiatives Steering Committee AY08-09 Report

We have well-developed programs to serve international student and students from groups that are underrepresented on our campus. For international students, the International Student Services Office coordinates various cultural and educational programs for University of Mount Union students. Most notable are the International Teas that given international students the opportunity to share about their home country. Presentations are generally given three times per semester and
the events include food from the specific country being discussed. The International Student Services Office also coordinates activities for International Education Week.

International students are given the opportunity to be matched with individuals in the greater Alliance community through the Community Friend Program. This program is a friendship based program and not a host program. International students and Community Friends are encouraged to communicate and share about their respective cultures. In addition, numerous cultural excursions are offered to the international student body and regularly scheduled shopping trips are arranged for students to purchased basic personal needs items from the local Wal-Mart.

The Multicultural Office of Student Affairs is involved in many activities throughout the year. There are dozens of educational, cultural, and social activities available throughout the year, including speakers, conferences, and awards.

**Actions 2011-2015**

1. **Maintain and expand our successful programs**

**Public Affairs**

**Vision**

Mount Union's image is important to us as an institution. Part of that image is now evolving to include sustainability as one of our core values. We will need to constantly cultivate this aspect of our image as we present ourselves to prospective students and our community.

**History**

Mount Union has featured sustainability in many of its recent public relations pieces. An issue of *Mount Union Magazine* was devoted to sustainability on campus, and numerous feature stories detailing the sustainability efforts of the campus community have been published in local newspapers and on the Mount Union website. There is a website dedicated to sustainability on campus as well. In addition, *The Dynamo*, the University's student newspaper, has published a number of articles on the sustainability movement on campus.

In addition to marketing the institution’s sustainability efforts, the Office of Marketing is strategic in its actions to incorporate sustainable practices in the way it markets the institution. Recently, the office took on a sustainability and economic viability versus printed materials campaign to encourage the move from print to electronic communication whenever such a change in deliver method makes sense. In addition, the office utilizes email and web-based communication sources whenever available, such as online proofing, licensing approval, supply ordering, etc., and reduces waste by using electronic means of delivering proofs of publications whenever possible.

We have implemented a Sustainability Marketing Communication Plan that guides our initial communication efforts. The full text of the plan can be found in Appendix E.
Actions
2011 and beyond

1. The Office of Marketing will complete an annual review of the Sustainability Marketing Communication Plan to determine success, make adjustments, and set a course for the next year. As a result of emerging technology and campus advancements, a number of opportunities for the future will be presenting themselves providing additional vehicles for the promotion of sustainable efforts and activities on campus. These avenues include digital display in the Hoover-Price Campus Center, mobile applications for smart phone devices, and the potential development of a weekly internal newsletter for faculty and staff.

2. Additional tactics likely to be addressed in revised plans is the promotion of a number of national recognitions garnered by Mount Union. During the 2010-2011 academic year, Mount Union received Tree Campus USA designation, a Bronze rating from AASHE, and inclusion in the Princeton Review Green Guide.

Trademark Licensing

Vision
Mount Union wants to ensure that apparel and other products bearing the institution's name and logos are made in environmentally and socially responsible ways. We can promote fair, just, and sustainable labor and manufacturing practices by proactively screening, selecting, and monitoring the factories that produce apparel that bears the Mount Union logo.

History
University of Mount Union has partnered with Licensing Resource Group (LRG). LRG is responsible for monitoring and verifying that apparel bearing the institution’s name is produced under fair conditions. This includes protecting the rights of workers who sew and make products to be sold in the United States and making sure that products related to alcohol, tobacco, weapons, and sexual products are not approved or require Mount Union approval.

In addition, a 5-year contract was committed with the LRG Licensing agency. They participate in both the Fair Labor Association (FLA) and Workers’ Rights Consortium (WRC) programs. They are responsible for making sure that all license apparel purchased by Mount Union conforms to the requirements of both organizations.

Actions
2011 and beyond

1. We will continue these partnerships and contracts and be vigilant about other opportunities to promote fair and healthy labor and manufacturing processes for items that we purchase and sell.
2. We will compile and continually update a list of licensed vendors who manufacture environmentally-friendly promotional products and post it on both the sustainability and licensing portions of the Mount Union website.

Community Relations and Partnerships

Vision

University of Mount Union has a strong tradition of positive involvement with our community. We work in many ways to give back to our community through community service, engagement, and partnerships. Volunteerism and the sense of compassion that community service helps develop are fundamental to achieving sustainability. From tutoring children to removing invasive species and volunteering at a food bank, students have made tangible contributions that address sustainability challenge through community service. In addition, community engagement can help students develop leadership skills while deepening their understandings of practical, real-world problems. Institutions can contribute to their communities by harnessing their financial and academic resources to address community needs.

History

Mount Union has an extremely active service learning arena and long tradition of activities that serve the local and the international community. We have community service staff with 2.33 FTE’s, and last year 1761 of our 2200 students participated in documented community service. Altogether, students contributed 31,149 hours for an average of 18 hours per participating student. We also provide financial incentives for students to enter public service through tuition remissions and slightly more than 1% of our graduates have taken advantage of that. Students also raised over $29,000 to fund various projects, charities, and community organizations.

In addition we are involved in our community specifically with regards to sustainability. Our president signed a cooperative agreement with the Mayor of Alliance to work together on sustainability issues and the University provides resources to the Alliance Mayor’s Green Commission, including people, meeting space, computer access, and more. The Alliance Farmers Market also receives much support from the University, specifically in the form of promotion.

Actions

2011 and beyond

1. Maintain and expand the programs above that will continue strong community relations.
2. Continue participating in the planning and implementation of the Sustainable Alliance Festival.
3. Continue involvement with the Ohio Solar Tour.
4. Continue organizing and sponsoring the end of the year Trash to Treasure sale.
5. Continue participation in the H.W. Hoover Foundation sustainability consortium.
7. Continue to keep sustainability education at the forefront of our efforts.
Part Five – Plan Implementation, Revision, and Assessment
This is a long-term plan and thus will of necessity be revised many times during its effective life.

Specifically we will need to:

1. **Provide opportunities for the campus community to respond to and contribute to the plan.**
2. **Intentionally update the plan on an annual basis and conduct a major review and modification of the plan every three years.**
3. **For each major area and task we need to develop specific assessment tools so that we can monitor our progress.**
4. **Maintain clear channels of communication about the plan both internally and externally.**
5. **Consider the use of consultants in refining and furthering the plan.**
6. **Consider the possibility of creating a more permanent infrastructure for coordinating and supporting the implementation of the plan.**

Our assessments will include a narrative, generated by the Sustainability Management Advisory Committee, in an annual report to the president and externally distributed via annual updates to our GHG inventory and every three years via our STARS submission.
Appendix A. Definitions of Terms and Acronyms

**AASHE** – Association for the Advancement of Sustainability in Higher Education. AASHE is an association of colleges and universities that are working to create a sustainable future. Their mission is to empower higher education to lead the sustainability transformation. They do this by providing resources, professional development, and a network of support to enable institutions of higher education to model and advance sustainability in everything they do, from governance and operations to education and research. AASHE defines sustainability in an inclusive way, encompassing human and ecological health, social justice, secure livelihoods, and a better world for all generations. AASHE is a member-driven, independent 501(c)(3). Membership in AASHE covers every individual at an institution. Mount Union has been a member since 2008. [http://www.aashe.org/about/about.php](http://www.aashe.org/about/about.php).

**ACUPCC** - The American College & University Presidents Climate Commitment is a high-visibility effort to address global warming by garnering institutional commitments to neutralize greenhouse gas emissions, and to accelerate the research and educational efforts of higher education to equip society to re-stabilize the earth’s climate. Mount Union became a signatory in December 2007. [http://www.presidentsclimatecommitment.org/about](http://www.presidentsclimatecommitment.org/about)

**CLEAN AIR – COOL PLANET** Software designed specifically for use in calculating carbon emissions on campuses. It is the default standard for such use and is recommended by ACUPCC. It relies on a number of well documented assumptions. For more information, see [http://www.cleanair-coolplanet.org/](http://www.cleanair-coolplanet.org/)

**CLIMATE NEUTRALITY** – Climate neutrality occurs when The University has zero net emissions of greenhouse gasses. This occurs as the result of reducing emissions, increasing uptake, and purchasing carbon credits.

**CO₂ EQUIVALENTS (Abbreviated CO₂e)** - Different gasses have different abilities to retain heat near the earth’s surface. To simplify comparisons the release of every major greenhouse gas is converted to a carbon dioxide equivalent.

**CONSERVATION** – Measures that save energy by not using it such as turning off lights and appliances and reducing travel.

**CREDITS** – When an entity reduces its GHG emissions and does not take credit for those reductions, it can sell those credits to others. For example an entrepreneur that generates electricity from wind is effectively reducing the amount of carbon dioxide released as compared to conventional fossil-fuel generation. The entrepreneur could sell these credits on a carbon exchange. See **OFFSETS**. Purchasing credits does not reduce the GHG emission of the purchaser but it can reduce the GHG emission on a global scale and support a market for renewable energy resources.

**ECO-REPS** – Students who are ambassadors or agents for positive change on campus who promote sustainable living in residence halls and through student organizations.

**EFFICIENCY** – Measures that reduce energy consumption by getting more results out of the energy that is used.

**GREENHOUSE GASES (GHG)** – Any atmospheric gases other than water vapor that trap heat in the atmosphere.
atmosphere are often called greenhouse gases. The principal gases are:

**Carbon Dioxide (CO₂):** Carbon dioxide enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.

**Methane (CH₄):** Methane is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.

**Nitrous Oxide (N₂O):** Nitrous oxide is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

**Fluorinated Gases:** Hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are synthetic, powerful greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances (i.e., CFCs, HCFCs, and halons). These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases, they are sometimes referred to as High Global Warming Potential gases ("High GWP gases").

**LEED** – The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ encourages and accelerates global adoption of sustainable green building and development practices through the creation and implementation of universally understood and accepted tools and performance criteria. There are different rating systems including new construction and existing buildings (EB).

**OFFSETS** – Measures that an institution takes to remove GHG’s from the atmosphere. In our case this would be forests and natural ecosystems that are protected. See CREDITS.

**SCOPE OF EMISSIONS** - As described by the ACUPCC in their Implementation Guide for colleges and universities:

**Scope 1 GHG** emissions are those directly occurring "from sources that are owned or controlled by the institution, including: on-campus stationary combustion of fossil fuels; mobile combustion of fossil fuels by institution owned/controlled vehicles; and "fugitive" emissions. Fugitive emissions result from intentional or unintentional releases of GHGs, including the leakage of HFCs from refrigeration and air conditioning equipment as well as the release of CH₄ from institution-owned farm animals" (ACUPCC Implementation Guide p. 11). For University of Mount Union this almost entirely natural gas used for space and water heating and laboratory use.

**Scope 2 GHG** emissions are "indirect emissions generated in the production of electricity consumed by the institution" (ACUPCC Implementation Guide p. 11).

**Scope 3 GHG** emissions are all the other indirect emissions that are "a consequence of the activities of the institution, but occur from sources not owned or controlled by the institution" such as commuting, air travel for university activities, waste disposal; embodied emissions from extraction, production, and transportation of purchased goods; outsourced activities; contractor owned- vehicles; and line loss from electricity transmission and distribution" (ACUPCC Implementation Guide p. 11-12).

**SMAC** – Sustainability Management Advisory Committee. This Committee was developed by Mount Union President Richard F. Giese in 2010 to continue and build upon the work of the Sustainability Task Force.
**STARS** - Sustainability Tracking, Assessment and Ratings System. This system was developed by AASHE to help institutions of higher education determine their current level of sustainability and to provide a means by which to assess their improvement and if they wish, to compare themselves with other institutions. Mount Union participated during the pilot phase and intends to go through the review process every three years [http://www.aashe.org/about/about.php](http://www.aashe.org/about/about.php).

**SUSTAINABILITY FOCUSED COURSES** - concentrate on the concept of sustainability.

**SUSTAINABILITY RELATED COURSES** - contain one or more components of sustainability or deal with one or more sustainability principles (social, economic or environmentally sound practices) without focusing the course on those components.

**SUSTAINABILITY RESEARCH** - the investigation of ways whose purpose is to improve or increase our understanding of material, financial or human resource utilization in ways that benefit the current generation without compromising the ability of future generations to use those same resources to meet their needs. Examples of Sustainability Research: (1) study of algae growth and potential to harvest alternative fuel bio-oils from it, (2) model the economic impact of a low cost water purification system, and (3) analyze the social risks and benefits associated with city rooftop gardens. Examples of what would not be considered sustainability research: (1) develop a new low cost synthesis of aspirin, (2) analyze the affects of commodity utilization in China, and (3) study the correlation between depression and teen suicide rates.
### Appendix B. Sustainability Task Force/Management Advisory Committee Members

Members of the Sustainability Task Force (participants in the development of the original draft plan):

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<td>Smith Alder, Angela G</td>
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<td>Tidman, Paul</td>
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<td>Walker, Ashley R</td>
<td>Student – Janus</td>
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Members of the Sustainability Management Advisory Committee during the 2010-2011 academic year:

<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Department</th>
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<tbody>
<tr>
<td>Babos, Heidi B</td>
<td>Student – Students for Environmental Awareness</td>
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<tr>
<td>Horning, Martin</td>
<td>Faculty – Economics, Accounting, &amp; Business Administration</td>
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<tr>
<td>Kee, Natalie M</td>
<td>Sustainability and Academic Outreach Coordinator</td>
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<td>Lewis, Blaine</td>
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<td>McClaugherty, Charles</td>
<td>Faculty – Bio./ Director, Brumbaugh Center for Env. Science</td>
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<td>Muga, Helen</td>
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Members of the Sustainability Management Advisory Committee during the 2011-2012 academic year:

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<tr>
<td>Kelly, Sarah</td>
<td>Student-Sustainability Assistant, Student Senate Rep.</td>
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Appendix C. Green-Sustainability Purchasing Policy

PURPOSE
Responding to the growing need for environmental stewardship and The University's commitment for the implementation of sustainable practices, University of Mount Union has adopted this Green-Sustainability Purchasing Policy. Green-Sustainability Purchasing is defined as taking into consideration the impact of products on the environment and human health when making purchasing decisions, giving preference to more environmentally friendly and energy efficient products when quality and cost are equal or superior. Green purchasing guidelines are a formal set of goals that direct The University’s implementation of green-sustainability purchasing.

PURCHASING GUIDELINES
Product specifications and requisitions for products must conform to the following guidelines:
1) To the extent such information is known, requisition originators shall identify in the purchase requisition products available with recycled content or qualified ENERGY STAR products and vendors from whom such products are available.
2) The Purchasing Department and/or Delegate has the authority to specify a minimum recycled content or approved ENERGY STAR qualified product in bid specifications.
3) Specifications and requisitions shall not require the exclusive use of products made from virgin materials, nor specifically exclude the use of recycled-content or ENERGY STAR qualified products.
4) Performance standards must be reasonable and related to function and purpose, and shall not be designed to exclude the purchase of recycle-content products or products that are ENERGY STAR qualified.

The current list of ENERGY STAR qualified products is available on-line at www.energystar.gov.

In addition, other considerations involved in requisition specifications include the ability of a product and its packaging to be reused, reconditioned or recycled through The University’s existing recycling collection program.

PURCHASING POLICIES AND GOALS
• To maintain a consistent “cradle to grave” supply chain and purchasing process which considers economic, ethical, social and environmental impacts for all contracts and purchases.
• To integrate green-sustainability purchasing concepts and products into architectural designs, final construction documents and into the final construction or renovation of University of Mount Union buildings.
• To utilize environmentally responsible biodegradable solvents and cleaning supplies whenever practicable as long as quality and performance is not compromised.
• To conduct research and procure alternative energy when practicable, from certified alternative energy suppliers.
• To evaluate the purchase of fleet vehicles that utilize alternative fuel and/or increase the average fuel efficiency of the overall fleet.
• To ensure that proper MSDS (Material Safety Data Sheets) are identified in all purchasing specifications and kept on record as required by OSHA.
• To work with suppliers in the area in the areas of reduction and reuse of packaging materials.
• To make suppliers aware of University of Mount Union’s Green Purchasing Policy, sending a clear message that University of Mount Union will favor those suppliers whose products meet the environmental objectives of The University.
• More specifically, University of Mount Union will consider utilizing to the fullest extent possible,
environmentally friendly or green products that have the following attributes or qualities:
- Durable as opposed to single use or disposable items.
- Made of recycled materials, maximizing post-consumer content.
- Non-toxic or minimally toxic, preferably biodegradable.
- Highly energy efficient in production and use.
- Recyclable, but if not, may be disposed of safely.
- Made from raw materials obtained in an environmentally sound, sustainable manner.
- Manufactured in an environmentally sound, sustainable manner by companies with good environmental track records.
- Cause minimal or no environmental damage during normal use or maintenance.
- Shipped with minimal packaging (consistent with care of product).
- Produced locally or regionally to minimize the environmental cost of shipping and the reduction of emissions during transportation.

Hence forth, University of Mount Union will give preference to environmentally superior products, where quality, function and cost are equal or superior. Whenever practicable and possible, products and packaging materials will contain a prescribed minimum postconsumer recycled content and will be minimized and/or substituted with more environmentally appropriate alternatives. All products will be chosen based on efficient use of energy, natural resources and potential for safe, non-hazardous disposal.

Whenever practicable means that the recycled products can perform the function intended at least as well as products from only virgin material, and the cost of the recycled product reasonably approximates the cost of the product produced only from virgin materials.

Appendix D. Sustainability Coordinator

Dr. Steve Kramer was appointed as the volunteer sustainability coordinator for the academic year 2009-2010. Dr. Kramer recently retired after a long career in the Psychology Department at University of Mount Union and has extensive experience working with students in the areas of social responsibility and service. In 2010, Natalie Kee was hired as the Sustainability and Academic Outreach Coordinator and works in conjunction with Dr. Kramer.

This is the description of the sustainability coordinators’ job:

The Sustainability Coordinators have the following tasks as they relate to the mission of the SMAC:

- Work with students and student affairs staff to increase student awareness of and participation in sustainability issues and to gain input from students as one of our primary stakeholders.
- Work with faculty and academic affairs staff to help faculty integrate and identify, as appropriate, sustainability concepts into the curriculum.
- Work with human resources and other administrative staff in helping to develop and provide appropriate training for current and new employees on sustainability.
- Assist the SMAC in collection, analysis and dissemination of data relating to our sustainability effort including, for example, our STARS data, GHG emissions data, recycling and waste data and data related to our progress toward our climate neutrality commitment.
- Serve as a clearinghouse for information and resources related to campus sustainability including participation in conferences and bringing relevant information back to University of Mount Union on all aspects of sustainability in higher education.
- Work with Marketing in providing current information to all of our stakeholders regarding sustainability at University of Mount Union.

It is NOT intended that these positions would replace the Sustainability Management Advisory Committee because the regular participation and input of all aspects of the community will continue to be critical as we resolve the challenges and seize the opportunities that lie ahead of us. Administratively, the position is attached to the President’s office. The Sustainability Coordinators work closely with the SMAC but serve at the discretion of the president.
Appendix E. Sustainability Marketing Plan Detail

Sustainability Marketing Communication Plan
November 30, 2009 (An updated marketing plan is currently under development)

Objective
The objective of the Sustainability Marketing Communication Plan is to communicate, primarily to the internal audience of Mount Union, the efforts the Mount Union community is undertaking in the mission to be a sustainable environment. This plan will be used to educate the internal community but will also serve as a launching pad on how to approach external communications on the efforts of the institution.

Goals
• Educate the Mount Union campus on the sustainability success stories on campus and the plans to make the campus more sustainable
• Encourage new opportunities to be shared and discovered with the campus
• Search out marketing and communications opportunities that are socially, financially and environmentally sound in order to create a sustainable, efficient and healthy atmosphere for our students, faculty and staff
• Create an educated campus community that is mindful of sustainable actions
• Keep the campus community informed about the sustainability plan and our progress towards implementation

Target Audiences
• Faculty
• Staff
• Students
• Board of Trustees
• Alumni
• Members of the Alliance and surrounding communities
• Media

Target Messages
• In an effort to be a responsible campus, it is necessary that we as a community are sustainable in our actions.
• The task force is a resource for the campus at large and can assist, through its affiliations with various organizations, in the implementation initiatives.
• Mount Union lives green.
• There are sustainability experts among the Mount Union community with extensive knowledge.
• The task force is putting together programs to encourage and assist offices and departments to strive to do more in a sustainable fashion.

Tactics
1. We will disseminate the sustainability plan and promote it among all Mount Union audiences.

(January-May 2010)
a. We will introduce the plan to the campus community. i. Introduce the plan during a faculty meeting and offer the opportunity for feedback.
   ii. Send an e-blast to faculty, staff and current students, directing them to the website where they will find the two-page summary of the plan and a link to the entire document.
   iii. Hold informational workshops for anyone who may be seeking additional information or the opportunity to ask questions.
   iv. Use Twitter and Facebook to drive them to the plan online.

b. We will introduce the plan to alumni and friends. i. Present the plan at the January Board of Trustees retreat and offer the opportunity for feedback.
   ii. Utilize the Mount Union Magazine to introduce the plan and direct alumni and friends to the website for the full plan.
   iii. Include a website link to the two-page summary and full plan in Mount Union Matters.
   iv. Use Twitter and Facebook to drive them to the plan online.

c. We will introduce the plan to the media and community at large. i. Issue a press release upon approval of the plan.
   ii. Pitch related stories that would tie back to the approval of the plan.
   iii. Tie the plan to the opening of Wilson Hall and its LEED standards to garner additional media attention.

2. We intend to further enhance our public relations efforts with respect to our sustainability plan through the utilization of all media outlets.

(January 2010 and ongoing)

- We will promote all major sustainable efforts on campus and communicate them through media channels.
  - Work continually with media outlet to pitch stories and provide expert testimony.
  - Continue to highlight sustainable efforts in the Mount Union Magazine and other publications.
  - Promote sustainability-related events on community calendars, both online and in print.
  - Hold press conference and/or tours to highlight large-scale, sustainable efforts.
  - Work with the Nature Center to provide a feature on “Mount Union’s Green Story” in its newsletter.

- We will utilize the Mount Union website to highlight accomplishments in the news section and front page slide show.
  - Provide at least one monthly story on the external website.
  - Provide monthly features on both external and internal websites on individuals succeeding in their sustainable missions.

- We will incorporate social media networks such as Twitter and Facebook, as well as e-newsletters, to further drive our constituents to web stories that feature our sustainability efforts.
  - Provide short tips that direct social networking site users to our web features.
  - Provide updates through e-newsletters such as Mount Union Matters.

3. We will continue to enhance the sustainability website’s presence as part of the larger Mount Union marketing site.

(January 2010 and ongoing)
• We will make use of Mount Union’s YouTube channel to highlight our sustainability initiatives in action and to interview individuals on campus involved in the institution’s, and perhaps their own, sustainability initiatives. o Produce one video story per quarter on the “how to” process.
  o Highlight video footage of events, speakers, etc.

• We will incorporate blogging technology on the sustainability site to keep our constituents up to date on recent progress. o Incorporate blogging technology to highlight sustainable efforts.

• We will strategically use Twitter and Facebook to drive audiences to the sustainability site by promoting the use of these new technologies. o Provide two social media messages per month featuring a “Mount Union Green tip.”
  o Focus on the recyclable project on Facebook and Twitter.

4. We will actively promote the sustainability work of the task force and successes of the campus as a whole to internal audiences – faculty, staff and current students.

(January 2010 and ongoing)

• We will strategically communicate sustainability news to faculty and staff. o Provide a monthly focus on sustainability within the new internal communication e-newsletter.
  o Utilize Faculty Digest to provide updates.
  o Create e-blasts that would direct faculty and staff to web stories, blogs, video and social networking outlets.

• We will strategically and creatively community sustainability news to current students. o Create a “green” contest for student organizations to get involved. The winning tip will be featured as the student yearly project.
  o Use “Announcement” feature on iRaider to push out monthly messages to the student body.

• Create a visual campaign on campus that will identify sustainable practices in action. o Begin the process to developing icons representing our key features of sustainable lifestyle, water, energy, electricity, etc.
  o Incorporate the use of electronic bulletin boards throughout campus to highlight organizations, activities and opportunities while cutting back on paper and poster bulletin boards.
Appendix F. Accomplishments of the Sustainability Management Advisory Committee in 2010-2011

We submitted data for our participation in STARS in April 2011. We earned a score of 40.28 which equates to a Bronze rating. We were the first school in Ohio to receive a rating.

The following are a list of accomplishments from the 2010-2011 academic year:

Education

1. Increased participation in and awareness of RecycleMania in which Mount Union placed 160th out of 288 participating schools. We also instituted a competition between residential buildings to see which building recycled the highest percentage of their waste.
2. We established specific criteria for sustainability course identification (see Appendix A).
3. We have begun developing an Eco-reps pilot program and recruiting students to serve as volunteer Eco-reps for Spring 2012.
4. We have started gathering data on Sustainability Assessment tools used at other colleges and universities to develop one for use at Mount Union.
5. We have researched sustainability courses and begun to design courses that would fit within the new curriculum and be sustainability focused.

Operations

1. All 20 major buildings have individual gas and water meters. Electric meters were installed for 16 of the 20 major buildings.
2. The solar array on the Peterson Field House produced more than 120,000 kWh since its commissioning in January 2010.
3. Participated in the First Energy Conservation program by updating lighting in Chapman, Cunningham, McCready, and Gulling for a total annual savings of $23,305.82.
4. Received Tree Campus USA status.
5. Installed astronomic timers in seven campus buildings.
6. Replaced the water cooled air conditioner in the Hoover-Price Campus Center kitchen for an estimated $15,000 and 1.5 million gallons of water savings.
7. Completed seven HVAC conservation projects including replacing the furnace in 742 Vincent, upgrading air conditioning in McPherson and the Hoiles-Peterson RD apartment, and re-tubing the boiler in Cope.
8. Replaced windows, doors, and roofs of several buildings on campus.

Planning, Administration, and Engagement

1. Updated the University Strategic Plan, which was approved by the Board of Trustees in January 2011.
2. Replaced the payroll system with one that eliminates all paper distribution of deposit receipts and W2s.
3. Significant publicity surrounding sustainability at Mount Union has been produced, including news releases, videos, and updates on social media sites.
4. Created the University Diversity Plan.