# University of Wisconsin-Stout

## Climate Action Plan, 2010

Wisconsin's **Polytechnic** University

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### Climate Action Plan, 2009

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## Acknowledgements

The *2009 University of Wisconsin-Stout Climate Action Plan* has been produced by the UW-Stout Environmental Sustainability Office with guidance from the Environmental Sustainability Steering Committee (ESSC).

This report represents countless ongoing efforts of campus faculty, staff and students, from all corners of the university. The authors would like to extend great appreciation toward everyone who has dedicated their time and skill to putting UW-Stout on a path to continually improving environmental performance.

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# Introduction

The UW-Stout Climate Action Plan provides the framework for the development of initiatives as UW-Stout moves toward the goal of campus climate neutrality. It provides a general guide for action, not a rigid prescription. The plan will utilize a rolling action plan with near-term and long-term initiatives, budget allocation reviews, and progress tracking. The purpose of the plan is to:

- Identify priority areas of interest, concern or opportunity in terms of achieving campus climate neutrality and overall sustainability;
- Set objectives and targets for action;
- Develop initiatives and estimated time frames to achieve targets;
- Allocate responsibilities and identify the necessary resources to enable realization of the plan;
- Establish mechanisms to monitor, evaluate, and report progress.

The following document provides a brief account of the background and context serving as the impetus for the plan, its guiding principles, scope and structure. The remainder of the report includes:

- A review of the 2009 Greenhouse Gas (GHG) Emissions Inventory reporting methodologies and results.
- A review of the 2009 Sustainability Focus Groups initiative and the resulting comments and identified priority areas of concern.
- A summary of recent and ongoing achievements and efforts in campus environmental sustainability.
- The identification of campus-wide Climate Action Initiatives.
- Prioritization of the 2action items and initiatives.
- A review of existing and potential funding scenarios for campus sustainability.
- A suggestion for methods of monitoring and evaluating progress, and means of ensuring continual improvement.

## Background and Context

**American College & University President's Climate Commitment (ACUPCC)**
The American College & University President's 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.

Presidents signing the Commitment are pledging to eliminate their campuses' greenhouse gas emissions over time. This involves the development of a comprehensive plan to achieve climate neutrality as soon as possible:

- Within *two months* of signing this document, create institutional structures to guide the development and implementation of the plan.  This wascompleted on November 15, 2007.
- Within *one year* of signing this document, complete a comprehensive inventory of all greenhouse gas emissions (including emissions from electricity, heating, commuting, and air travel) and update the inventory every other year thereafter.This was completed on November 15, 2008.
- Within *two years* of signing this document, develop an institutional **Climate Action Plan** for becoming climate neutral, which will include:
    - A target date for achieving climate neutrality as soon as possible.
    - Interim targets for goals and actions that will lead to climate neutrality.
    - Actions to make climate neutrality and sustainability a part of the curriculum and other educational experience for all students.
    - Actions to expand research or other efforts necessary to achieve climate neutrality.

- Mechanisms for tracking progress on goals and actions.

This was completed on September 15, 2009.

On September 12th, 2007 UW-Stout became a Charter Signatory of the American College and Universities President's Climate Commitment. Chancellor Charles W. Sorensen signed the climate commitment indicating that UW-Stout agrees to reduce its greenhouse gas emissions on campus, with the eventual goal of leaving a neutral carbon footprint while at the same time providing education to students who will, in turn, help society to do the same.

**Clean Energy Wisconsin - A Plan for Energy Independence**

In addition to the ACUPCC commitment, UW-Stout, as a member of the state-wide University of Wisconsin System, has been working to achieve aggressive energy reduction targets set by Governor Jim Doyle's energy independence plan. The *Clean Energy Wisconsin* plan is a comprehensive strategy to strengthen Wisconsin's energy future. Primary initiatives of the plan include:

- *25 by 25* - Generate 25 percent of our electricity and 25 percent of our transportation fuel from renewable fuels by 2025. This goal will be accomplished through increasing production of renewable fuels and power, and improving the deployment of energy-efficient technologies.
- *10 percent of Renewables Market* - Capture 10 percent of the market share for the production of renewable energy and bioproducts.
- *Research Leadership* - Become a national leader in groundbreaking research that will make alternative energies more affordable and available to all – and to turn those discoveries into new, high-paying jobs for Wisconsin workers.

Executive orders derived from these initiatives have resulted in a reduction in energy consumption by state agencies and universities of 7.2 percent per square foot between 2005 and 2007. The state is expected to meet Governor Doyle's initiative of 10 percent less energy use by 2008, and is making progress toward a 20 percent reduction by 2010. For a detailed explanation of the plan, please refer to http://cleanenergy.wi.gov/.

According to the "Energy Use in State-Owned Facilities" report released annually through Wisconsin's Department of Administration, UW-Stout is the most energy efficient campus of all thirteen four-year campuses in the University of Wisconsin system.  All UW campus's energy consumption is monitored through monthly utility bills and fuel consumption reports and converted to units of energy, or BTUs, per square foot, per year. This calculation makes campuses of different sizes comparable.

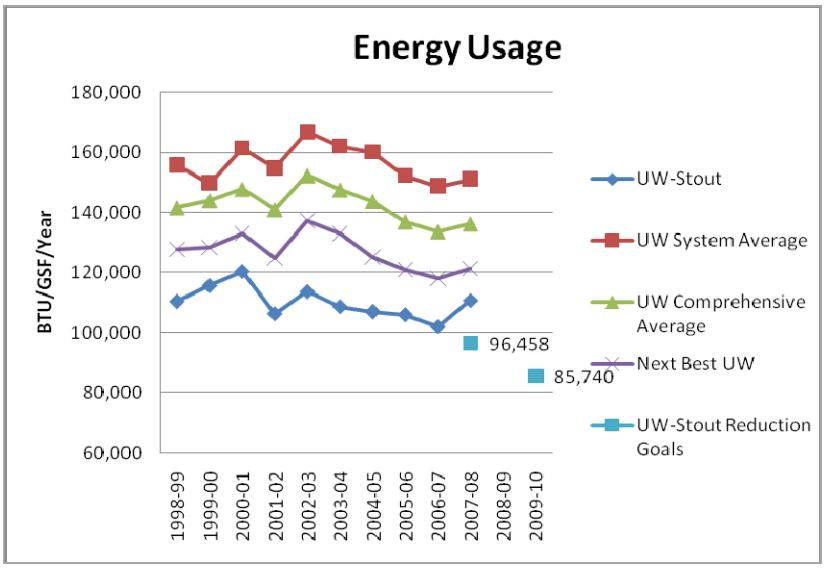



*Chart in BTU's per square feet. UW-Stout statistics featured on the bottom line, with projected 10 and 20 percent reduction targets shown below.*

UW-Stout has been the leader in UW System energy efficiency over the past decade.

## Guiding Principles

**Mission**

The University of Wisconsin-Stout is a career-focused, comprehensive polytechnic university where diverse students, faculty and staff integrate applied learning, scientific theory, humanistic understanding, creativity and research to solve real-world problems, grow the economy and serve a global society.

**Vision**

The University of Wisconsin-Stout will build on its position as a distinguished polytechnic institution and as an international leader in higher education. We prepare lifelong learners, ethical leaders and responsible citizens through collaborative programs that integrate applied learning, theory and research with business, education, industry, arts and government.

**Values**

- The advancement of academic excellence;
- The nobility of spirit, a diversity of people, respect and inclusion for all;
- The pursuit of innovation, technology and sustainability with a constant eye to the future;
- The ideals of collaboration, competence and continuous improvement;
- The commitment to education as a means to illuminate the lives of all.

In addition, our 2007 designation as Wisconsin's sole polytechnic university commits UW-Stout to three distinct tenets:

- *Career Focus*: A polytechnic university offers a comprehensive curriculum that prepares graduates for professional careers.
- *Applied Learning*: A polytechnic university blends theory with practice to produce innovative solutions to real world problems.
- *Collaboration*: A polytechnic university works closely with business, industry and other educational institutions to benefit students and grow the economy.

In 2008, UW-Stout began a process of strategic planning to reflect our polytechnic designation and the realities of an ever-changing world. The effort, referred to as FOCUS 2015, has resulted in the development of 4 draft five-year goal statements for the university:

1. Advance diversity knowledge, skill sets, and dispositions in students, faculty and staff.
2. Expand early and ongoing experiential learning opportunities including undergraduate applied research and entrepreneurship
3. Further develop and execute integrated enrollment management
4. Focus on sustainability: President's Climate Commitment and Classroom Initiatives

These updated strategies and goals will help guide the Implementation of UW-Stout's Climate Action Plan.

## Scope and Priorities

The scope of the Climate Action Plan addresses environmental aspects and impacts over which UW-Stout has direct control, and also those over which UW-Stout can exert influence as a consumer of goods and services. The plan will focus attention on the following functional topics:

**Administration**

1. ***Management systems*:** Systems required for the administration of the university's operational activities.

2. ***Planning, design, and development*:** The planning, design and development of the university's buildings and infrastructure.

3. ***Pollution prevention*:** Planning and management activities which minimize air and water pollution and contamination of land resulting from university activities.

**Education**

4. ***Knowledge systems*:** Processes, such as teaching, research, and training, which build knowledge on environmental issues and sustainable behaviors.

**Infrastructure**

5. ***Energy management*:** The energy-related aspects of the university's facilities - primarily heating, cooling, and lighting.

6. ***Water management*:** Aspects of supply, usage and disposal of water in the university's facilities.

7. ***Materials management*:** Services and activities which support the avoidance, recycling, and environmentally responsible disposal of waste materials.

8. ***Transport*:** Programs which promote and support walking, cycling, and public transport to work and other university-related travel.

9. ***Biodiversity:*** Management and maintenance activities which support conservation and enhancement of biodiversity and use of open space.

## Structure of Plan

The UW-Stout Climate Action Plan has been categorized into the three functional areas shown above, broken down further into the nine topics. This approach is intended to provide concentrated action items, while recognizing the interconnected relationships among the categories leading to improved overall campus environmental performance and sustainability.

The plan will identify objectives and targets based on appropriate performance indicators within each Topic. These targets will be incorporated into an annual rolling action plan providing the means for practical execution of the objectives.

# GHG Inventory

## Greenhouse Gas Emissions (GHG) Inventory Background

The completion of a campus-wide greenhouse gas inventory is one of the core components of the American College & University President's Climate Commitment. In its first year of reporting, UW-Stout undertook its inventory activities from May through October 2008, investing over 600 hours in data collection and analysis. The inaugural report was submitted to the Association for the Advancement of Sustainability in Higher Education (AASHE) on November 15, 2008. A second report was submitted in 2009 and ubsequent reports will be submitted on an annual basis to ease in data tracking and strategic planning.

The emissions inventory was conducted with the use of the Clean Air-Cool Planet (CA-CP) Greenhouse Gas (GHG) emissions inventory calculator, designed for specific use by universities. The calculator includes all six major greenhouse gasses: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), HCF-13A, HCF-404A, and sulfur hexaflouride (SF6), converting each into a common unit of measure - metric tons of carbon dioxide equivalent (MTCO2e). Emissions were recorded into three main categories:

- **Scope I** - Direct Emissions: natural gas, campus fleet, fugitive emissions from coolants
- **Scope II** - Indirect Emissions (electricity): purchased electricity, purchased steam
- **Scope III** - Indirect Emissions (other): business air travel, student commute, faculty/staff commute, solid waste, water consumption.

## 2008 and 2009 GHG Inventories

The primary purpose of the greenhouse gas inventory is to allow UW-Stout to internally trend its progress, using the baseline data established in the 2008 report. Due to differences in reporting methodology and scoping assumptions among universities, it is *not* meant to represent a benchmark to be used in external comparisons. Results of both the 2008 and 2009 inventories are shown below.

### 2008 GHG Inventory Results

**Table 1.1 – 2008 Summary Statistics**

| | Total | Per Full-Time Enrollment | Per 1000 sq. ft. | % Offset |
|---|---|---|---|---|
| Gross Emissions (I, II) | 26,312 MTCO2e | 3.1 MTCO2e | 10.6 MTCO2e | 0% |
| Gross Emissions (I, II, III) | 37,532 MTCO2e | 4.4 MTCO2e | 15.2 MTCO2e | 0% |
| **Net Emissions** | **37,532 MTCO2e** | **4.4 MTCO2e** | **15.2 MTCO2e** | **N/A** |

**Table 1.2 – 2008 Emissions Data**

| **Scope I Emissions** | |
|---|---|
| Stationary Combustion | 12,128 MTCO2e |
| Mobile Combustion | 181 MTCO2e |
| Process Emissions | 0 MTCO2e |
| Fugitive Emissions | 16 MTCO2e |
| **Total Scope I Emissions** | **12,325 MTCO2e** |

| **Scope II Emissions** | |
|---|---|
| Purchased Electricity | 13,987 MTCO2e |
| Purchased Heating | 0 MTCO2e |
| Purchased Cooling | 0 MTCO2e |
| Purchased Steam | 0 MTCO2e |
| **Total Scope II Emissions** | **13,987 MTCO2e** |

| **Scope III Emissions** | |
|---|---|
| Commuting | 9,998 MTCO2e |
| Air Travel | 903 MTCO2e |
| Solid Waste | 319 MTCO2e |
| **Total Scope III Emissions** | **11,220 MTCO2e** |

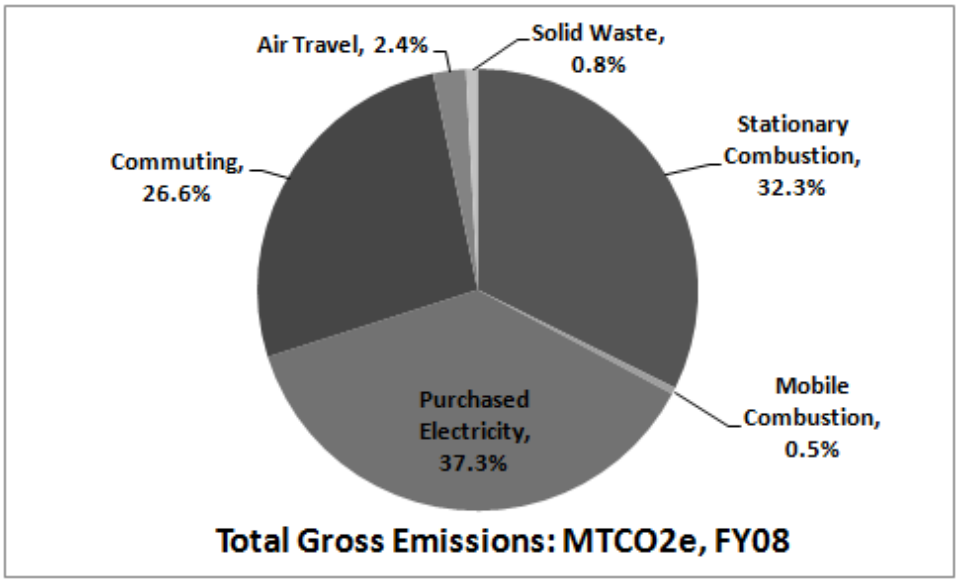
| **Biogenic Emissions** | |
|---|---|
| Biogenic Emissions from Stationary Combustion | N/A |
| Biogenic Emissions from Mobile Combustion | N/A |

In fiscal year 2008, there were three primary sources of C02 emissions (see Figure below).

- The largest source of C02 emissions was from purchased electricity, which accounted for 37% of the total gross emissions.
- Stationary combustion – burning of coal, natural gas, and/or #2 distillate oil – accounted for 32% of total gross emissions
- Personal commuting activities accounted for another 27% of the total gross emissions.
    - Student commuting was 15% of the total gross emissions
    - Faculty and staff commuting was 12% of total gross emissions
- These three sources had the top three carbon emissions percentages throughout the data collection period of fiscal year 2001 to fiscal year 2008.

Mobile combustion – fleet vehicles – accounted for less than 1% of total CO2 emissions in 2008.

UW-Stout had no carbon offsets in 2008.




## 2009 GHG Inventory Results

**Table 2.1 – 2009 Summary Statistics**

| | Total | Per Full-Time Enrollment | Per 1000 sq. ft. | % Offset |
|---|---|---|---|---|
| Gross Emissions (I, II) | 30,229 metric tons of CO2e | 3.4 metric tons of CO2e | 12.2 metric tons of CO2e | 0% |
| Gross Emissions (I, II, III) | 38,027 metric tons of CO2e | 4.3 metric tons of CO2e | 15.4 metric tons of CO2e | 0% |
| **Net Emissions** | 38,027 metric tons of CO2e | 4.3 metric tons of CO2e | 15.4 metric tons of CO2e | **N/A** |

**Table 2.2 – 2009 Emissions Data**

| **Scope I Emissions** | |
|---|---|
| Stationary Combustion | 11,870.0 metric tons of CO2e |
| Mobile Combustion | 188.0 metric tons of CO2e |
| Process Emissions | 0 MTCO2e |
| Fugitive Emissions | 8.0 metric tons of CO2e |
| **Total Scope I Emissions** | **12,066.0 metric tons of CO2e** |

| **Scope II Emissions** | |
|---|---|
| Purchased Electricity | 18,163.0 metric tons of CO2e |
| Purchased Heating | 0 MTCO2e |
| Purchased Cooling | 0 MTCO2e |
| Purchased Steam | 0 MTCO2e |
| **Total Scope II Emissions** | **18,163.0 metric tons of CO2e** |

| **Scope III Emissions** | |
|---|---|
| Commuting | 6,081.0 metric tons of CO2e |
| Air Travel | 1,351.0 metric tons of CO2e |
| Solid Waste | 366.0 metric tons of CO2e |
| **Total Scope III Emissions** | **7,798.0 metric tons of CO2e** |

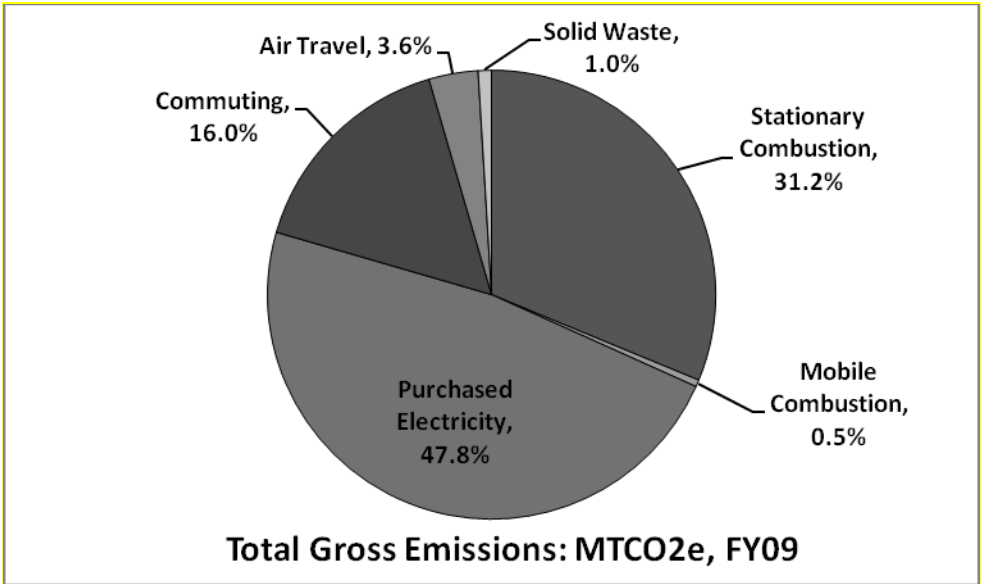
| **Biogenic Emissions** | |
|---|---|
| Biogenic Emissions from Stationary Combustion | N/A |
| Biogenic Emissions from Mobile Combustion | N/A |

In fiscal year 2009, there were three primary sources of C02 emissions (see Figure below).

- The largest source of C02 emissions was from purchased electricity, which accounted for 48% of the total gross emissions.
- Stationary combustion – burning of coal, natural gas, and/or #2 distillate oil – accounted for 31% of total gross emissions
- Personal commuting activities accounted for another 16% of the total gross emissions.

Mobile combustion – fleet vehicles – accounted for less than 1% of total CO2 emissions in 2009.

UW-Stout had no carbon offsets in 2009.




# Sustainability Focus Groups

## Environmental Sustainability Focus Group Report

In an effort to obtain campus-wide input for the creation of UW-Stout's Climate Action Plan, a series of Environmental Sustainability Focus Groups were held during the spring semester of 2009. Eight groups were held, and 53 faculty, staff and students participated in the groups. Of the participants, 17 were 'experts' in fields related to sustainability (referring to their current involvement and knowledge in the area), 29 were students, and 9 were other faculty/staff. The full Environmental Sustainability Focus Group report can be found online at http://www.uwstout.edu/bpa/ir/surveyresults/sustain09.pdf

The purpose of the focus groups was to specifically identify actions that can be taken as a campus to begin moving toward carbon neutrality - the requirement of the American Colleges & Universities President's Climate Commitment. In the past, broader public forums were held to identify major areas of concern, while these sessions were meant to move the university toward measurable actions -those the campus would be most willing/able to support.

Participants were provided with a handout explaining the nine topical areas that UW-Stout's Climate Action Plan will address. They were initially asked to discuss their thoughts about all nine topics. Each person then voted on their top

three topics, and the three topics that received the most votes across all group members were discussed in detail during the remainder of the focus groups.

The authors believe the data support the following conclusions:

Two types of sub-themes were identified, overall themes that cut across multiple topics, and themes associated with seven of the nine topics that participants were asked to discuss.

**Overall Themes**
Six “overall” sub-themes were identified. The two that were discussed in all eight focus groups and each had more than 50 comments were:

*Communication/Visibility*

- Need to increase awareness of sustainability-related topics; more publicity and an attempt to reach the average person; utilize multiple communication methods including word of mouth, website, blog, newsletters, news releases, discussions in classes, committees and student organizations.

*Senior Level Buy-In*

- Provide appropriate resources and incentives; implement university-wide policies related to sustainability; hold people accountable; fill the sustainability coordinator position; serve as a role model; identify sustainability as a priority.

**Themes associated with topics**
The topic with the largest number of comments was ***Transport***. Transport was selected as a top three priority in five of the eight focus groups. The largest number of comments fell into the sub-theme of Parking Issues. Comments about parking were split into two main areas: 1) participants who said that there were not enough parking spaces, or were otherwise dissatisfied with parking, and 2) participants who said that we should make it harder for people to park their cars so that UW-Stout can encourage other modes of transportation.

*“We shouldn’t make it more difficult for students with cars, but we should reward them for not having them.”*

The topic with the second largest number of comments was ***Energy Management***. Energy Management was selected as one of the top three priorities in five of the eight focus groups. The two sub-themes with the largest number of comments were:

- Individual Behaviors: eliminate or reduce coffee machines, refrigerators, microwaves, space heaters and fans; shut lights off and unplug appliances; feeling of general apathy.
- Campus-wide Energy Usage: UW-Stout is #1 in energy efficiency; make energy efficiency a priority; funding barriers at the campus and state level.

*“Temperature differentials need to be more closely monitored. For people who teach in the evenings it is very cold.”*

The topic with the third largest number of comments was ***Knowledge Systems***. Knowledge Systems was selected as one of the top three priorities in six of the eight focus groups. The three sub-themes with the largest number of comments were:

- Initiatives to Increase Knowledge: provide education; increase awareness
- Integrate Sustainability into Courses: integrate sustainability topics across all courses; communicate that sustainability is a priority

- Classes in Sustainability: implement sustainability majors, sub-majors, courses

*"I'm an avid cyclist. I am getting rid of my car and was thinking it would be a good idea to have classes on how to live car free - there is a huge educational opportunity."*

The topic with the fourth largest number of comments was ***Materials Management***. Materials Management was selected as one of the top three priorities in three of the eight focus groups. The two sub-themes with the largest number of comments were:

- Recycle Bins-Waste Receptacles: need more bins; fine offenders; make trash cans smaller; implement student initiatives to encourage recycling
- Reusable Materials: need for washable or reusable dinnerware

*"More planning needs to be done within dorms. No one wants to walk down four flights of stairs to properly dispose of their recyclables."*

The topics with the least number of comments were *Management Systems* (28 comments), *Planning, Design and Development* (16 comments), and *Water Management* (5 comments). Management Systems and Planning, Design and Development were each selected as a top priority in two of the focus groups, and Water Management was not selected as a top priority in any of the focus groups. The sub-themes within these topics that had the largest number of comments were: Networking Outside of UW-Stout, Purchasing Contracts, Green Space, Retrofitting, and Use of Sensors.

Two topics, *Biodiversity* and *Pollution Prevention*, were not identified as themes. Biodiversity was not selected as a top priority in any of the groups, and Pollution Prevention was only selected once.

# Climate Action Initiatives

## Climate Neutrality

Achieving climate neutrality is the ultimate goal of the American College & University President's Climate Commitment. As a university, UW-Stout is actively in the process of managing ongoing sustainability initiatives, measuring and tracking our current impacts, and planning future strategies for environmental performance improvement.

Given UW-Stout's status as a member of the University of Wisconsin System and the UW System as an agency of the State of Wisconsin, GHG reduction efforts can be dependent upon larger system-level and state-level partnerships and authorizations. The University of Wisconsin-Stout is committing itself to the following reductions in year 2008 GHG emissions by **2015** (commitment Phase 1):

1. **Scope I - 1-3% reduction** in emissions derived from direct stationary and mobile sources (fleet vehicles).
2. **Scope II - 10-20% reduction** in emissions through energy conservation and renewable energy source purchasing.
3. **Scope III - 3-5% reduction** in emissions through non-energy generation university initiatives (transport, waste, water, etc)

At that time, an evaluation of activities and results will take place, influencing the initiatives for our second commitment phase from 2015-2025. It is hoped for and expected that full climate neutrality can be achieved during this second phase.

## Current Initiatives

UW-Stout is currently engaged in a wide variety of sustainability-related initiatives. With the 2008 GHG Emissions baseline calculation being established and subsequent GHG inventories being performed, these ongoing initiatives will dove-tail into our emerging Climate Action Plan to quickly make an impact.

Table 3 outlines our implemented initiatives, categorized to reflect the feedback and approach used during the Sustainability Focus Groups (see above). This is meant to aid in organization and communication, with the understanding that complex energy and environmental initiatives of this nature are never limited to narrow groupings or topic headings. Each initiative includes a brief description of its involved activities, responsibility lead, proposed deadline, and current status level.

**Administration**

This refers to those initiatives most closely dependent upon or guided by top-level management and administration. They include the topic areas of:

1. Management Systems
2. Planning, Design, and Development
3. Pollution Prevention

**Education**

All academic teaching, learning, curriculum development and outreach initiatives are categorized here. It includes the topic area of:

4. Knowledge Systems

**Infrastructure**

This is the 'nuts-and-bolts' of campus sustainability activity - initiatives that generally require technical expertise or other special scientific applications. They include the topic areas of:

5. Energy Management
6. Water Management
7. Materials Management
8. Transport
9. Biodiversity

**Table 3 - Implemented Sustainability Initiatives**

| Administration | | | | | |
|---|---|---|---|---|---|
| **Initiative** | **Topic** | **Action Item** | **Responsible** | **Deadline** | **Status** |
| CA-CP Greenhouse Gas Emissions Inventory | Management Systems | Annual data collection and calculation. | Applied Research Center | 9/15/2009 and each year following | Ongoing |
| Green Roof Installation – Newly Constructed | Planning, Design, Dev. | | Physical Plant | | Implemented |

| | | | | | |
|---|---|---|---|---|---|
| Science Building | | | | | |
| Energy Efficient Planning | Planning, Design, Dev. | Planning for more energy efficient lighting including motion sensors and LED lights and more efficient heating in all building projects. | Physical Plant | | Ongoing |
| Parking Lot Design | Planning, Design, Dev. | All parking lots are being designed with aggressive storm water management. | Health and Safety | | Ongoing |
| LEED Silver | Planning, Design, Dev. | Utilize LEED Silver guidelines for new construction and major renovations. | Physical Plant | | Ongoing |
| Construction Commissioning and Recycling | Planning, Design, Dev. | State projects require commissioning (verifying systems) on all projects and recycling of construction materials (asphalt, metals, mercury, concrete) | Physical Plant | | Ongoing |
| Red Cedar Hall Energy Efficiencies | Planning, Design, Dev. | The new Red Cedar Hall was designed and built with energy saving devices. | University Housing | | Implemented |
| Pollution Prevention – Parking | Pollution Prevention | Submit the proposed pollution prevention program/implement project. | | 9/19/2009 3/19/2010 | Ongoing |
| Pollution Prevention – Grounds | Pollution Prevention | Submit the proposed pollution prevention program/implement project. | | 9/19/2009 3/19/2010 | Ongoing |
| Sustainability Policy Development | Management Systems | Propose at least two policies for review and recommendation. | Environmental Sustainability Steering Committee | | Ongoing |
| **Education** | | | | | |
| **Initiative** | **Topic** | **Action Item** | **Responsible** | **Deadline** | **Status** |
| Recycling Education | Knowledge Systems | Offer recycling training and education in the residence halls. | University Housing | | |
| Stout Sustainable Technology and Energy Center (STEC) | Knowledge Systems | Professional outreach – various ongoing efforts. | | | Ongoing |
| The Green Learning Community | Knowledge Systems | Green Learning community was established in the residence halls. | University Housing | | Ongoing |
| Sustainable Management Degree | Knowledge Systems | Launch – Fall semester, 2009. | | | Complete |
| Minor in Sustainable Design and Development | Knowledge Systems | Launch – Fall semester, 2008. | | | Complete |
| Storm Water Management – Public Outreach | Knowledge Systems | Submit the proposed public education and outreach program/implement project. | | 4/19/2009 | Ongoing |

| | | | | | |
|---|---|---|---|---|---|
| Educational Campaign | Knowledge Systems | Educational Campaign in the Residence Halls. | University Housing | | Ongoing |
| Campus Clean Up | Knowledge Systems | Campus clean-up activity by student athletes. | Athletics | | Ongoing |
| Energy Conservation Poster Series | Knowledge Systems | Students created a set of 4 posters that were posted in the residence hall. | University Housing | | Implemented |
| Research Site | Knowledge Systems | Served as a site for undergraduate research on sustainability and recycling. | University Housing | | Implemented |
| Recycling Education | Knowledge Systems | Trained all new freshmen on recycling process as part of new student orientation. | University Housing | | Ongoing |
| Sustainability in the Curriculum | Knowledge Systems | Host sustainability in the curriculum events for UW-Stout instructors. | Sustainability in the Curriculum Ad Hoc Committee | | Ongoing |
| Community Garden | Knowledge Systems | Collaborate with interested parties on campus and in the community to develop a community garden program with a focus on reducing community hunger issues. | Student Life Services | | Ongoing |
| Regional Sustainability Initiatives | Management Systems | Become part of regional initiatives promoting sustainability. | Environmental Sustainability Coordinator | | Ongoing |
| **Infrastructure** | | | | | |
| **Initiative** | **Topic** | **Action Item** | **Responsible** | **Deadline** | **Status** |
| Energy Star Certified Products – New Purchasing | Energy Management | Ensure all new energy related equipment is energy star rated. | Procurement and Materials Management | | Ongoing |
| Xcel Energy Saver Switch Program | Energy Management | | Physical Plant | | Ongoing |
| Stage Lighting | Energy Management | Installed 20 LED stage lights. | University Centers | | Implemented |
| Artwork Lighting Testing | Energy Management | Serving as a test site for LED artwork lights. | University Centers | | Implemented |
| Microfridge Replacement | Energy Management | Replaced over 500 of Microfridges with more energy efficient models. | University Housing | | Implemented |
| Air Conditioner | Energy | Limit the size and type of air conditioners to more energy efficient | University | | Implemented |

| | | | | | |
|---|---|---|---|---|---|
| Limitations | Management | models. | Housing | | |
| Reduced Heat During Breaks | Energy Management | Reduced heat in residence halls during breaks. | University Housing | | Implemented |
| Heat Radiator Controls | Energy Management | Installed new heat radiator controls in several halls. | University Housing | | implemented |
| Drying Rack Pilot | Energy Management | Pilot the use of drying racks in residence halls. | University Housing | | Implemented |
| Variable Speed Drives | Energy Management | Install variable speed drives in Forced Draft (FD) fans. | Physical Plant | | Implemented |
| Residence Hall Desk Lights | Energy Management | Replace residence hall student desk lights with LED lights. | University Housing | | Implemented |
| Natural Gas | Energy Management | Switched to natural gas. | Physical Plant | | Implemented |
| Pool Cover | Energy Management | Use a thermal pool cover. | University Recreation | | Implemented |
| Door Sweepers | Energy Management | Added door sweepers to doors in the Memorial Student Center. | Student Center | | Implemented |
| Window Replacement | Energy Management | Replace windows from single pane to thermal pane and replace window seals with building projects. | Physical Plant | | Implemented |
| Roof Replacement | Energy Management | Replace roofs on Heating Plant and Administration Building with energy efficient insulation. | Physical Plant | | Ongoing |
| Hobart Dishmachine | Energy Management | Installed Hobart Dishmachine. | Dining Services | | Implemented |
| Heating Controls | Energy Management | Convert heating controls to digital control. | Physical Plant | | Ongoing |
| Equipment Off | Energy Management | Post start-up times on equipment so machinery draws energy only when it is needed during operations. | Dining Services | | Implemented |
| Tray Accumulator | Energy Management | Installed tray accumulator in Price Commons. | Dining Services | | Implemented |
| Leave Lights Off | Energy Management | Employees trained to leave lights off in certain areas until needed for use. | University Recreation | | Implemented |
| Free CFL Bulb Program | Energy Management | Each freshman in the residence hall was provided a free 20 watt CFL bulb to use in their desk lamp. | University Housing | | Implemented |
| Energy Wars | Energy Management | Residence Hall energy wars competition was held. Reduced electricity by almost 6% across | University Housing | | Implemented |

| | | | | | |
|---|---|---|---|---|---|
| | | Residence Hall System. | | | |
| Light Sensors | Energy Management | Renovated offices with light sensors. | Athletics | | Implemented |
| Lighting Projects | Energy Management | Lighting and lighting control system replacements in the Sports and Fitness Center Building and Memorial Student Center. | Physical Plant | 2010 | Implemented |
| Energy | Energy Management | Label equipment for appropriate pre-heat times.<br>Market savings in water and energy with new equipment. | Dining Services | 2010 | Energy |
| Storm Water Quality Management | Water Management | AYERS – firm hired to develop SWM plan. Complete the elevation of flood control structures and assessment of compliance and submit the results. | | 9/19/2009 | Onoing |
| Storm Water Management – Annual Report | Water Management | Submit annual report. | | 3/31/2010 | Implemented |
| Limit Hot Water Washers | Water Management | Limited hot water washers to one per building. | University Housing | | Implemented |
| Front Loading Washers | Water Management | Laundry rooms only have front-loading washers. | University Housing | | Implemented |
| Rain Garden | Water Management | Rain garden installation at Red Cedar Residence Hall | | | |
| Sweeping of Parking Lots | Water Management | Parking lots are swept twice a year. | | | |
| Purchase Local Food | Materials Management | 37% of the 1.58 million annual food budget goes to Wisconsin food production companies. | Dining Services | | Ongoing |
| Recycled Content Copier Paper | Materials Management | 100% of copier paper made from recycled content (30% post consumer fiber/waste) Green Seal Certified/Sustainable Forestry Initiative. | Procurement and Materials Management | | Ongoing |
| Donation Drive | Materials Management | Drive is held to collect reusable items. | University Housing | | Ongoing |
| RecycleMania Program | Materials Management | Participate in national recycling competition to reduce waste and promote recycling. | Physical Plant | | Ongoing |
| Recycling Containers | Materials Management | Increased number of recycling containers and put them at point of use. | University Centers | | Implemented |

| | | | | | |
|---|---|---|---|---|---|
| Ecolab's "green" Chemicals for Manual and Machine Washing | Materials Management | Moved to Ecolab's "green" chemicals. | Dining Services | | Implemented |
| Waste Oil/Grease Recycled | Materials Management | Recycled locally by small entity for bio-diesel fuel | Dining Services | | Implemented |
| Convenience Copier Program | Materials Management | Utilize the convenience copier program to eliminate desktop printers and consolidate to copiers to save money and use less energy. | Procurement and Materials Management | | Ongoing |
| Reduction of Paper Consumption | Materials Management | Distribute NCAA and WIAA rule books via email rather than paper copies. | Athletics | | Implemented |
| Reduction in Frequency of Mowing | Materials Management | Requested less frequent mowing of athletic fields. | Athletics | | Implemented |
| Reduction of Paper Consumption | Materials Management | Reduce paper consumption: Migrate paper surveys to online, No longer provide paper handouts at listening sessions, stop paper scanning reports, and using digital signatures and electronic routing for the Budget Transfer and Space Request processes. Lab mod process administered electronically only. | Budget, Planning and Analysis | | Ongoing |
| Cleaning | Materials Management | Replace scrubbers with new ECH20 units to allow for cleaning without the use of chemicals | Physical Plant | | Ongoing |
| Bookstore Products | Materials Management | Offer fair trade and recycled products in the bookstore. | Student Life Services | | Ongoing |
| Reduce Use of Disposable Eating Utensils and Trays | Materials Management | Terrace Café began offering permanent service ware. | Dining Services | | Implemented |
| Recycling Waste Oils/Grease | Materials Management | Waste oils/grease are recycled for bio-diesel fuel. | Dining Services | | Implemented |
| Researching Alternative Packaging | Materials Management | Dining Services is researching ways to eliminate the use of plastic/polystyrene packaging. | Dining Services | | Ongoing |
| Recycled Material Advertising | Materials Management | Printed advertising printed on recycled paper. | University Recreation | | Ongoing |
| Organic T-shirts | Materials Management | Purchased organic t-shirts for events. | University Recreation | | Ongoing |
| Green Chemicals | Materials Management | Switched to green cleaning chemicals. | University Recreation | | Implemented |
| Bring Your Own | Materials | Encouraged bring your own utensils at | University | | Ongoing |

| | | | | | |
|---|---|---|---|---|---|
| Utensils | Management | U-Rec social gatherings. | Recreation | | |
| Carbon Emissions Offset | Materials Management | Asked participants to donate to carbonfund.org to offset travel. | University Recreation | | Implemented |
| Customer Generated Waste Reduction | Materials Management | Plate waste studies done annually – market results.<br>Marketing to encourage “clean plate” to reduce average plate waste.<br>Marketing to encourage when eating light to skip the tray. | Dining Services | 2010 | Ongoing |
| Chemical Use | Materials Management | Moving to all “green” chemicals of Ecolab for warewashing and put on the Apex system which includes monitoring system to help assess usage of chemicals, utilities and water.<br>Moved to green chemical for floor care. | Dining Services | 2010 | Ongoing |
| “To Go” Packaging | Materials Management | Promote refillable beverage containers with discount – expanded options in bookstore | Dining Services | 2010 | Ongoing |
| Locally Produced Foods | Materials Management | Participate in local coalition as appropriate. | Dining Services | 2010 | Ongoing |
| Composting Program | Materials Management | Implement campus food-waste composting program | Dining Services | 2010 | Ongoing |
| Green Commuter Pledge | Transport | | | | Ongoing |
| Commuter Rideshare Board | Transport | Offer an online commuter rideshare board. | Stout Student Association | | Implemented |
| Zero-Emissions No Noise Vehicle (ZENN) | Transport | Purchased a ZENN fully featured electric car. | | | Implemented |
| Fleet Vehicles | Transport | Reduced fleet by four vehicles. | Physical Plant | | Complete |
| WIAC Cost Reduction | Transport | Reduced travel to meetings and reduced travel region. | Athletics | | Implemented |
| Shuttle | Transport | Offer a shuttle to Walmart and North Menomonie. | Vice Chancellor for ASLS | 2009 | Implemented for 2009-2010 |

## FOCUS 2015 Initiatives

Items from the Inventory of Potential New and Long-Term Initiatives list were used in the creation of FOCUS 2015 Initiatives. These initiatives will be used as a sub-set of the university's Climate Action Plan and will contain key initiatives to be accomplished in the immediate and near-term. These will include potential 'low-hanging-fruit', high-impact and high-demand initiatives.

**Table 4 - FOCUS 2015 Sustainability Initiatives**

| 2009-2011 University Initiatives | | | | |
|---|---|---|---|---|
| **Initiative** | **Topic** | **Action Item** | **Responsible** | **Deadline** |
| Sustainability in the Curriculum | Knowledge Systems | Recommend a definition of "Infusing Sustainability into Curriculum" using the work of the Faculty Senate Sub-Committee – Curriculum and Program Framework | Environmental Sustainability Steering Committee | November 19, 2010 |
| Sustainability in the Curriculum | Knowledge Systems | Provide campus with a list of potential classroom projects which were formulated from the energy conservation & waste reduction policies (i.e., student research, capstone projects, etc.) | Environmental Sustainability Steering Committee | December 31, 2010 |
| Sustainability in the Curriculum | Knowledge Systems | Make available to campus a summary of action plans from the 'Infusing Sustainability into Curriculum' conference. A group from the 'Infusing Sustainability into Curriculum' conference would make recommendations to the Chancellor for campus wide academic initiatives. | Environmental Sustainability Steering Committee | December 31, 2010 |
| Sustainability Policies | Management Systems | Review and evaluate environmental cost benefit analysis methodologies and recommend one that will be used to assess the proposed and actual impact of policy changes | Environmental Sustainability Steering Committee | December 30, 2010 |
| Sustainability Policies | Management Systems | Categorize or rank the components of each policy from near-term to long-term implementation | Environmental Sustainability Steering Committee | December 30, 2011 |
| Sustainability Policies | Management Systems | Propose the policies incorporating the feedback from the campus. | Environmental Sustainability Steering Committee | December 30, 2011 |

| 2009-2011 Departmental Initiatives | | | | |
|---|---|---|---|---|
| Initiative | Topic | Action Item | Responsible | Deadline |
| Electronic Medical Records | Materials Management | Convert to electronic medical records to save paper and space. | Student Health Services | 2011 |
| Student Organization | Knowledge Systems | Establish the first student chapter of the Sustainable Agriculture in Education Association. | Collaborative | 2010-2011 |
| Alternative Transportation | Transportation | Promote transportation alternatives (StoutBikes, Dunn County Transit Bus Service, and UW-Stout RideBoard) to students, faculty, and staff. | Collaborative | 2010-2011 |
| Bike Share Program | Transportation | Implement the StoutBikes bike share program. | Collaborative | 2010-2011 |
| Bottled Water Consumption | Materials Management | Implement an “I Love Tap Water” campaign to reduce bottled water consumption on campus. | Environmental Sustainability Office | 2010-2011 |
| Energy Conservation | Energy Management | Implement the “Biggest Reducer” Energy Conservation Campaign to reduce energy consumption and waste on campus. | Environmental Sustainability Office | 2010-2011 |
| Locally Produced Foods | Materials Management | Work with Producers & Buyers Cooperative to purchase more local food. | Dining Services | 2011 |

# Funding for Environmental Sustainability

| Budget | | | |
|---|---|---|---|
| Environmental Sustainability Coordination Funding | | | |
| Classified @ $20/hr | | | $41,760 |
| Fringe @ 40.89% | | | $17,087 |
| Student Help | | | $500 |
| Service & Supplies | | | $9,554 |
| Travel | | | $1,500 |
| Additional Funding | | | |
| Graduation Assistant (.25 FTE) | | | $5,129 |
| Sustainability in the Curriculum World Café Event | | | $1,000 |
| **TOTAL** | | | **$76,530** |

# Tracking Progress

Monitoring and tracking the progress of the University of Wisconsin Stout's move toward carbon neutrality will be a continuous and shared effort from the entire campus community. As a top-level University Action Plan, progress reporting will occur through 6-month and 1-year report cycles as part of the university's strategic planning model http://www.uwstout.edu/bpa/planning/stratplan/stratplanmod.pdf

# Appendix A: New and Long-Term Initiatives

## Inventory of Potential New and Long-Term Initiatives

On June 10, 2009, select UW-Stout operation managers met for an Environmental Sustainability Action Plan Retreat. The purpose of the retreat was to inventory potential new and long-term sustainability initiatives. Long-term initiatives were again classified into the topic area categories mentioned above.

**Table 5 - Inventory of Potential New and Long-term Initiatives**

| Initiative | Topic |
|---|---|
| ***Develop a personal behavior policy** | ***Management Systems** |
| ***Explore a 4-day work week policy** | ***Management Systems** |
| ***Enforce the thermostat policy** | ***Management Systems** |
| ***Establish green meeting guidelines and checklist** | ***Management Systems** |
| Eliminate all paper and pencil surveys | Management Systems |
| Convert paper forms to electronic processing via ImageNow | Management Systems |
| Propose a segregated fee to fund initiatives | Management Systems |
| Provide incentives for faculty and staff to develop sustainability initiative | Management Systems |
| Offset projects with Stout Tech Park | Management Systems |
| Establishment of University environmentally preferred policy | Management Systems |
| UW-Stout Environmental Leadership Awards | Management Systems |
| Create constant awareness campaign for campus sustainability activities | Management Systems |
| Continuously integrate sustainability criteria into senior-level planning and decision-making | Management Systems |
| Continuously measure and communicate campus carbon footprint data | Management Systems |
| Achieve benchmark level of satisfaction for UW-Stout office and teaching spaces | Planning, Design, and Dev. |

***Indicates potential initiatives to accomplish by 2015.***

| | |
|---|---|
| Increase level of campus greenspace by 10% by 2015 | Planning, Design, and Dev. |
| Conduct energy audits of all campus buildings | Planning, Design, and Dev. |
| Implement use of faculty, staff and student “Design Charrette” to provide feedback to new construction and upgrade proposals | Planning, Design, and Dev. |
| Maintain full compliance with all environmental legislative and regulatory requirements | Pollution Prevention |
| ***Improve communication methods by:***<br>• ***Communicating where foods come from***<br>• ***Communicating via paperless methods***<br>• ***Establish a central point of contact for communication***<br>• ***Use social networking tools for communication***<br>• ***Create an energy dashboard*** | ***Knowledge Systems*** |
| ***Hold educational seminars and events that include the surrounding community such as:***<br>• ***Sustainability training***<br>• ***Signage in public use areas***<br>• ***Sustainability checklists***<br>• ***Awareness campaigns*** | ***Knowledge Systems*** |
| Achieve sustainability training delivery to 50% current student body and 100% incoming student body | Knowledge Systems |
| Achieve sustainability training delivery to 50% of current faculty and staff and 100% of incoming faculty and staff | Knowledge Systems |
| Sustainable Construction Program | Knowledge Systems |
| General Education requirement in Sustainability | Knowledge Systems |
| Establishment of University Wellness Center | Knowledge Systems |
| ***Pilot a solar hot water heater*** | ***Energy Management*** |
| ***Sub-meter all buildings and engage residents in energy efficiency using a “stoplight” or energy dashboard*** | ***Energy Management*** |

***Indicates potential initiatives to accomplish by 2015.***

| | |
|---|---|
| ***Retrofit existing lighting to more energy efficient lighting (natural light, LED, compact bulbs, motion sensors) including parking lots*** | ***Energy Management*** |
| ***Inventory and install steam blanket/insulation in all buildings*** | ***Energy Management*** |
| ***Burn less coal*** | ***Energy Management*** |
| ***Provide smart strips to encourage shut down of equipment when not in use*** | ***Energy Management*** |
| Hot water heat for pool using solar panels | Energy Management |
| Replace sidewalk lights with solar lights | Energy Management |
| Install and replace windows with more efficient windows | Energy Management |
| Utilize window film to reduce solar gain | Energy Management |
| Partner with Xcel Energy, UW-River Falls, and UW-Eau Claire to jointly build a wind turbine | Energy Management |
| Residence Hall Renewal Plan includes all new windows, heating systems, lighting and plumbing | Energy Management |
| Change out air handling equipment to more energy efficient equipment | Energy Management |
| Replace motor controls with new and more efficient system | Energy Management |
| Replace #2 and #3 FD fan drives with variable drive systems | Energy Management |
| Re-insulate boilers #2 and 3 to reduce heat and improve efficiency | Energy Management |
| Install sustainable roofs | Energy Management |
| Convert to trayless food service | Energy Management |
| Participate in UW System energy credit trading | Energy Management |
| Work with Focus on energy to receive incentives and rebates | Energy Management |
| Progressively rely on renewable energy sources | Energy Management |
| Reduce on-campus demand-side energy use by 5% each year | Energy Management |

***Indicates potential initiatives to accomplish by 2015.***

| | |
|---|---|
| Increasingly rely on remote monitoring and maintenance of campus heating, cooling and energy use | Energy Management |
| Install rain water tanks | Water Management |
| Re-grade landscapes for storm water management | Water Management |
| Installation of water saving equipment and fixtures in all on-campus restroom facilities | Water Management |
| Reduce number of hot water taps by 50% across campus | Water Management |
| Reduce on-campus demand-side water use by 5% per year | Water Management |
| ***Develop and implement a regional/community composting program** | ***Materials Management*** |
| ***Develop a more aggressive recycling program:***<br>• ***Recycling incentives – deposits***<br>• ***More recycling bins outside***<br>• ***Place a recycling bin with each garbage can***<br>• ***Traffic study to help determine where to place recycling bins***<br>• ***Eliminate or reduce garbage cans*** | ***Materials Management*** |
| Review the use of food containers that are not compostable | Materials Management |
| Use only low VOC paint for campus projects | Materials Management |
| Require all vendors to provide their sustainability action plan (ISO 140001) | Materials Management |
| Achieve continuous reduction in municipal solid waste to landfill | Materials Management |
| Increase number of recycling bins by 10% | Materials Management |
| Increase ease, visibility and consistency of recycling bins across campus | Materials Management |
| ***Review campus and community non-motorized ability factors. Make recommendations including bike racks, moped parking and bike lanes.** | ***Transport*** |
| Coordinate travel to Madison or same destination trips | Transport |
| Issue bikes to freshmen (Ripon College) Ban Cars on campus for freshmen | Transport |

***Indicates potential initiatives to accomplish by 2015.***

| | |
|---|---|
| Get ethanol from local plant to use in flex-fuel fleet vehicles | Transport |
| Purchase electric or hybrid vehicles for on-campus use | Transport |
| Partner with WDOT or local transport company to start a rideshare van program | Transport |
| Maintain current level of parking space through 2025 | Transport |
| Create incentive systems for walking, biking, and carpooling to campus | Transport |
| Convert 100% of fleet vehicles to use alternative fuels | Transport |
| Offset 100% of faculty travel and 75% of student travel | Transport |
| ***Sell recyclable supplies in the bookstore.** | ***Biodiversity*** |
| ***Create a community garden.** | ***Biodiversity*** |
| Purchase more land for greenspace | Biodiversity |
| Install more permeable surfaces | Biodiversity |
| Return on-campus plantings to native species | Biodiversity |

***Indicates potential initiatives to accomplish by 2015.***