Report: Sustainability Discussion Group

Discussion group: Sustainability Chair: Joni Wilson and Melanie Szulczewski (Co-chairs)

Charge to your group:
Recommend goals, objectives, and some possible benchmarks on how UMW might articulate and act on an institutional commitment to environmental stewardship, and develop viable and meaningful sustainability and environmental initiatives.

Provide a brief rationale as to the importance and value of your area in helping define and advance UMW over the next five to eight years:

The University of Mary Washington strives for sustainable practices in all its endeavors. We recognize that every decision we make concerning the mission and management of UMW impacts our future every bit as much as our present. Our management of resources, planning for growth, and development of local, regional, national, and international relationships should be conducted in a manner that meets present social, economic, and environmental needs without compromising our ability to meet the future needs of the University, the Commonwealth of Virginia, and the earth itself. We emphasize the importance of education and communication in increasing awareness of our students, faculty, staff, and administration in the roles they play in making UMW a sustainable institution. With regard to resource use, this means awareness of material and energy flows at UMW, awareness of individual behaviors that influence those flows, and informed decision-making about contractual agreements that impact those flows. As an institution of higher learning, it is UMW's responsibility to serve as a leading example to the surrounding community of an entity that models its decisions based on environmentally and socially responsible principles.

Sustainability clearly fits into UMW's long-term goals as stated in the Strategic Plan, as it necessitates thinking not only about the type of institution we wish to be in the next five or ten years, but also the role we wish to play as an institution truly integrated and engaged with the surrounding community in coming decades. Adopting sustainable practices will increase the institution's visibility, allowing the university to recruit outstanding and diverse students, faculty, and staff. Sustainability also fits into UMW's values as a university that is guided by the principles of honor, integrity and respect. These principles will guide decision-making processes that directly influence the surrounding community and environment in both the short and long term.

List a set of broad-based goals in your area that support the larger vision/goals of the strategic plan [See attached or go to the planning website http://strategicplanning.umwblogs.org/steering-committee/vision-values-defining-ideas/]:

Recognizing sustainability as a continuum, success is measured by the achievement of goals. These goals are accomplished through the efforts and commitment of individuals and the institution. Sustainability is the result of a holistic approach that involves several key areas:

Administration and Finance, Education and Research, and Operation. The goals are organized accordingly:

I. Administration and Finance
A. Funding – commit to funding for sustainability initiatives, as feasible
B. Planning – incorporate sustainability into UMW's Strategic and Master Plans as a guide for the institution and its physical campus
C. Sustainability Infrastructure – dedicate staff and other resources to help organize, implement, and publicize sustainability initiatives
D. Community Relations and Partnerships – include sustainability initiatives in the university's engagement with the community through service and partnership
E. Policy – implement strategies that support the continued shift to a more sustainable culture at the university and in the larger community

II. Education and Research
A. Curriculum – provide formal education programs and courses that address sustainability
B. Co-Curricular Education – provide UMW students opportunities for sustainability learning experiences outside the classroom
C. Research – conduct undergraduate research projects related to or focused on sustainability

III. Operations
A. Buildings and Grounds – continue to incorporate sustainability into planning, performance, and maintenance of university buildings and grounds
B. Energy – continue to reduce UMW's energy consumption through conservation and efficiency, and by switching to cleaner and renewable sources of energy
C. Materials, Recycling, and Waste Minimization – move toward zero waste by reducing, reusing and recycling
D. Purchasing – use the VA state and UMW's purchasing power to help build a sustainable economy

Suggest a set of specific objectives for meeting those goals with recommended benchmarks, timetables, or measures and identify the office(s) and/ or position(s), and/or constituents responsible for meeting those objectives:

I. Administration and Finance
A. Create a permanent committee on sustainability by January 2010
i. The committee, consisting of a team of faculty, staff, and students, will make recommendations on sustainability issues and policy, develop strategies for implementation of sustainability initiatives, and provide a cohesive public face for UMW sustainability efforts.
ii. Because of the nature of sustainability issues, there are advantages to the committee reporting to both the Executive Vice President and the Provost.
iii. We recommend that the constituents of the initial permanent committee include interested members from the sustainability discussion group as well as representatives from all UMW campuses.
B. Establish a Sustainability Coordinator or Office reporting to the Associate Vice President of Facilities Services by July 2012

C. Investigate viability of signing the American College & University Presidents Climate Commitment, an initiative to be overseen by the committee on sustainability, recommendation delivered by July 2010
D. Compile a comprehensive report on the state of sustainability at UMW, overseen by the committee on sustainability, submitted to Senior Administrative staff by December 2010
E. Identify grants and other funding sources to finance sustainability projects and a possible revolving fund by summer 2010

II. Education and Research
A. Conduct surveys to establish current levels of sustainability in the curriculum and to assist in the development of curriculum goals by summer 2010
B. Establish an interdisciplinary Sustainability Minor housed in Earth and Environmental Sciences by spring 2010
C. Establish and maintain a Sustainability Website with an UMW homepage link by summer 2010

III. Operations
A. Conduct a carbon footprint audit of UMW's carbon dioxide emissions by Summer 2011
i. This will allow the university to prepare for expected state and federal climate change regulations.
B. Work continuously toward sustainably managing wastes and reducing energy consumption, especially regarding a shift to more paperless classes and offices university-wide.

Offer a very brief summary of where UMW is vis-a-vis your area and/or a summary of the major issues/challenges/opportunities associated with your area:

UMW has demonstrated its commitment to sustainability through programs ranging from large scale, university-wide energy conservation measures and recycling programs to independent initiatives of environmental coursework and student projects. Although individual and institutional resources have been dedicated to many successful endeavors, many opportunities and challenges remain.

At this time the university does not have a strategic, organized or integrated approach to sustainability. As a result the Sustainability Discussion Group has identified several challenges associated with the operational, academic, cultural, and philosophical advancement of sustainability:
1. Urgent need to increase university-wide awareness and communication
2. No central clearinghouse of information related to sustainability in areas including classes, data and resources
3. Need for funding for sustainability initiatives
4. Limits of state contracts and restrictions for purchasing (e.g., green cleaning products, double-sided printers, etc.)
5. No dedicated staff for sustainability issues
6. Clear support at all levels of administration and academics
7. Need sustainable/greener policies affecting areas of Operations: construction, transportation, purchasing, waste reduction

You may attach any other information you think the Steering Committee might find helpful including data, recommendations for going forward, areas of proposed further study, etc.

APPENDICES

SUSTAINABILITY IN CONTEXT

In 1989, the World Commission on Environment and Development (Brundtland Commission) articulated what has now become a widely accepted definition of sustainability: "[to meet] the needs of the present without compromising the ability of future generations to meet their own needs." Environmental, social and economic concerns are recognized as the pillars of sustainability.

The challenges of climate change, energy and water resource management, environmental health and waste management come at a time of economic strain. This is further compounded by demands of higher education to provide higher level services for a growing student population and expanding campuses. By supporting decisions that strategically and competitively balance environmental resources, economic objectives and social systems we better reflect the unique position of colleges and universities, as we operate our business. Institutions of higher learning influence generations of students whose future behaviors and decisions are shaped by what they learn from their campus experience and the actions of the University's leaders. Sustainability is no longer an option; it is now a defining value for the future of the University of Mary Washington, reflecting a balance of economic, environmental, and socially responsible values.

The University of Mary Washington commits to sustainability as the means for managing resources to meet the social, economic, and environmental needs of the present without compromising the ability to meet the needs of future generations. The very nature of sustainability promotes the values captured in the Strategic Planning Mission Statement: "expecting our students, faculty and staff to take active responsibility for what they do, what they believe, what they know, and what they do not know." Sustainability is "scholarship in action," fostering interdisciplinary studies, experiential and service learning, opportunities for research, professional development, and support of our region and beyond through partnership. Embracing sustainability as a value gives UMW the structure to support and foster intellectual curiosity, personal and social responsibility, integrity, and acceptance to individual and cultural differences.

Appendix I

UMW Sustainability Initiative Overview

Below is a list of the many initiatives implemented in recent years that reflect sustainability.
1. UMW Storm Water Master Plan
2. MS4 Permit – DCR Permit – VSMP General Permit, Stormwater Discharges from Small Municipal Separate Storm Sewer Systems – includes public outreach and education, public involvement and participation, illicit discharge detection and elimination, pollution prevention for UMW operations, inspection and maintenance
3. UMW currently collects 15 different types of recyclables, diverting over 225,899 POUNDS of

recyclables from the landfill each year; collect many non-traditional recyclables, such as yard waste for compost, motor oil, pallets, and tires, reducing our waste stream
4. UMW recycling webpage giving greater access to recycling information
5. Nutrient Management Plan (NMP) – Certified Nutrient Management Planner prepared a survey on all properties where nutrients are applied. The NMP regulates what, how, how much reduction of phosphorus, based on soil tests – UMW has received state approval for Nutrient Management Plans to reduce fertilizer runoff from both campuses. This is an important part of how the University is working with other agencies of the Commonwealth to improve the health of the Chesapeake Bay.
6. Paint Shop uses all low VOC paints, greatly reducing the environmental impact
7. Energy Management Program – NORESCO – Water, Lighting, & Energy – The Energy Performance Contract with NORESCO installed water saving devices throughout the Fredericksburg Campus in 2005-2007 resulting in over 25% water usage reduction for the campus. NORESCO also installed low energy light fixtures, occupant sensors, HVAC controls, and completed replacement of leaking condensate piping.
8. NORESCO's successful Behavior Modification Program successfully modified several student behaviors to reduce energy usage in 2007 and 2008
9. A second Behavior Modification Program has been proposed for faculty and staff aimed at energy reduction through IT best practices
10. Recyclemania participation 2009
11. CFL Exchange for students 2008 and 2009
12. Part-time Sustainability Coordinator position established fall semester 2008
13. Ecology Club involvement in sustainability programs has grown significantly
14. CGPS North Building, completed in 2007, UMW's first LEED certified construction
15. The Fredericksburg Campus (CAS) was recognized by the Virginia Association of Soil and Water Conservation in 2007 with an award for best management practices
16. The University continues to work closely with the regional bus transit service, FRED, to provide routes that serve our students and staff. UMW also provides subsidies for FRED operations.
17. Thermal energy storage systems at Trinkle Hall and Jepson Science Center reduce peak demand charges by making ice for cooling during non-peak electrical hours.
18. The Fredericksburg Central Steam (Heating) Plant has converted its backup fuel from #6 to #2 fuel oil, lowering sulfur and other particulate emissions. (Normal fuel supply is natural gas.)
19. Integrated Pest Management practices are utilized to minimize chemical usage in controlling pests.

Appendix II

NORESCO Performance Contract with UMW This project implemented eight Energy Conservation Measures, including, energy efficient lighting, water conservation, upgrades to the Energy Management Control System (EMCS), sub-metering, peak shaving strategies, and improvements to the Central Heating Distribution System. Construction began in March of 2005. Final acceptance of the project was granted February 27, 2007.

ECMs implemented in this project were as follows:
ECM-001: Energy Efficient Lighting Upgrade

ECM-002: Energy Management Control System
ECM-003: Water Conservation Measures
ECM-004: Reduction of Peak Demand / Sub Metering
ECM-005: Piping Insulation
ECM-007: Reduction of Summer Steam Pressure
ECM-008: Condensation Line Replacement
ECM-009: Seacobeck Hall Renovation

Appendix III

2008 UMW RECYCLING STATISTICS
OVER 225,899 POUNDS RECYCLED
GLASS, ALUMINUM, AND PLASTIC- 36,600 LBS.
SCRAP METAL- 17,960 LBS.
PAPER (INCLUDING MIXED PAPER, CARDBOARD, AND NEWSPRINT) – 91,280 LBS
CONFIDENTIAL PAPER- 200 LBS
MOTOR OIL- 1200 GALLONS (8,160 LBS.)
OIL FILTERS- 100
AUTOMOBILE BATTERIES- 12
ANTIFREEZE- 110 GALLONS (935 LBS)
TIRES- 50 (1,100 LBS.)
LIGHT BULBS (INCANDESCENT AND FLOURESCENT) – 1715
LEAVES- 2860 LBS
WOOD- 31.86 TONS (63,720 LBS.)
WOOD CHIPS- 352 LBS
ELECTRONIC SCRAP (MONITORS, PRINTERS, CPUS) – 2391 LBS
PAINT- 40 GALLONS (340 LBS)
PRINTER CARTRIDGES – UNKNOWN
WASTE – 1,936,640 LBS.

Appendix IV

UMW Ecology Club Activities – Fall 2006 to Spring 2009
1. Recyclemania 2009
2. CFL Exchange 2008-2009
3. Powershift Conferences (National ’07, ’09; VA State ’08)
4. Green Week 2007-2009
5. Earth Day 2007 (and cooperation in Alum Springs’ Earth Day 2007-2009
6. Sustainability Day ’08 (trash can conversion)
7. Cooperation with local Sierra Club chapter
8. Food Waste Surveys with Dining Services
9. Promotion of State and National Campaigns
a) Dominion Power
b) 1SKY
c) Mountaintop Removal

10. Green Festival Attendance 2007, 2008
11. Campus Clothing Swaps 2008-2009

Appendix V

Sustainability in Higher Education

1. The American College & University Presidents' Climate Commitment (ACUPCC) was launched on February 23, 2007. As of December 31, 2008, over 600 schools have become signatories including public and private colleges and universities of all sizes and types in 50 states representing over 30% of the higher education student population in America.

http://www.presidentsclimatecommitment.org/

2. The Association for the Advancement of Sustainability in Higher Education (AASHE) resource list includes the following Sustainability programs at member colleges and universities: 12 interdisciplinary Bachelor Degree programs, 7 interdisciplinary Master Degree programs, 2 Doctoral Degree Programs, 7 interdisciplinary minors, and 17 certificate programs.

http://www.aashe.org/

3. College Sustainability Report Card – 300 schools evaluated resulted in several key findings in the following areas; Administration, Climate Change & Energy, Endowment Transparency, Food & Recycling, Green Building, Investment Priorities, Shareholder Engagement, Student Involvement, Transportation . A brief summary of the findings:

a. Administration – More than half of the schools have full-time staff dedicated to sustainability. Nearly one in four schools has a sustainability office.

b. Climate Change & Energy – Almost half the schools have made a commitment to carbon reduction. Almost one in three schools have committed to achieving carbon neutrality in the long term by signing the American College and University Presidents Climate Commitment.

c. Endowment Transparency – One in three schools makes lists of endowment holdings available to the campus community, and in many cases, the public.

d. Food & Recycling – 82 percent of schools devote at least a portion of their food budgets to buying from local farms and/or producers, campus community gardens and farms are maintained by 29 percent of schools, food composting programs exist at 55 percent of schools, while 46 percent of schools report composting landscape waste, and biodegradable to-go containers are available at 32 percent of schools.

e. Green Building – fourteen percent of schools report having at least one green roof on a campus building, 57 percent of schools have adopted campus-wide green building policies.

f. Investment Priorities – Thirty-five percent of schools currently have endowment investments in renewable energy funds or similar investment opportunities, and one in ten schools invest part of its endowment in community development funds.

g. Shareholder Engagement – approximately one in nine schools has an advisory committee on shareholder responsibility.

h. Student Involvement -27 percent introduce sustainability in student orientation, 65 percent of schools offer paid positions for work on sustainability activities within the facilities department,

sustainability office, or other relevant campus office, and the majority of schools host a sustainability competition on campus..
i. Transportation – bicycle-sharing programs have been instituted at 31 percent of schools, car-sharing programs are available at 35 percent of schools, and hybrid or other alternative-energy vehicles are used in 66 percent of school fleets.

http://www.greenreportcard.org/

4. National Wildlife Federation Campus Ecology – programs helping individuals and campuses address sustainability and climate change since 1989. The program offers resources including a Campus Sustainability Case Study data base and an environmental performance survey, The State of the Campus Environment.

http://www.nwf.org/campusecology/index.cfm