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**Mount Holyoke College
South Hadley, Massachusetts
Spring 2008, Climate Action Plan**

BACKGROUND

Campus Profile

Located in the beautiful Connecticut River Valley of western Massachusetts, Mount Holyoke College was the first of the “Seven Sisters,” the female equivalent of the once predominantly male Ivy League. The college is committed to educating a diverse community of women at the highest level of academic excellence and to fostering the alliance of liberal arts education with purposeful engagement in the world. Founded in 1837 by chemist and educator Mary Lyons, Mount Holyoke continues to be inspired by its founder’s words: “Go where no one else will go, do what no one else will do.”

Mount Holyoke is actively working to strengthen its already strong commitment to on-campus environmental stewardship and to global environmental awareness and action. The college is nearing completion of a new residence hall that will be its third building certified by the Leadership in Energy and Environmental Design (LEED) program. Scheduled to open in the fall of 2008, the residence hall joins Blanchard Campus Center and Kendade Hall (a science center) as LEED-certified buildings.

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GOALS AND ACCOMPLISHMENTS

Goals

President Joanne V. Creighton has signed Mount Holyoke on to the Cool Air, Clean Planet goals of reducing campus greenhouse gas emissions to 1990 levels by 2010 and further reducing them to 10 percent below 1990 levels by 2020. In signing this agreement, the college committed to a target for greenhouse gas reductions consistent with those established by the 2001 *Regional Climate Action Plan* adopted by the governors of the six New England states and the premiers of the five eastern Canadian provinces. An Environmental Management Systems (EMS) committee meets regularly to evaluate progress toward these goals and to develop programs and projects designed to meet them.

Mount Holyoke is also committed to reducing its broader environmental footprint. The EMS committee also develops programs and projects to increase recycling, reduce materials use, improve land-use and to generally improve on-campus stewardship. The Mount Holyoke College (MHC) Board of Trustees receives periodic updates on a suite of campus environmental indicators, including energy use per square foot, greenhouse gas emissions, recycling, land use, and stormwater management, which helps ensure that progress on many environmental fronts remains a high priority. (See <http://www.mtholyoke.edu/offices/es/17610.shtml>)

Accomplishments

Focus the Campus: This initiative carries forward the work and ideas inspired by MHC's participation in Focus the Nation, the nationwide teach-in on global warming solutions held on January 31, 2008. Spearheaded by the Office of Environmental Health and Safety, with support from the Center for the Environment and other campus groups, Focus the Campus aims to reduce MHC's own climate footprint through campus-wide efforts to reduce energy use, increase recycling, cut waste and use ecologically sustainable products, etc. Departments and offices are encouraged to "take the pledge" and commit to specific actions. As of May 12, 2008, some 30 departments and 660 individuals had done so. For more information, please go to: www.mtholyoke.edu/offices/es/18001.shtml.

The Curricular Trail: More than 300 acres of Mount Holyoke's 800-acre campus are undeveloped landscape, consisting of forests, lakes, streams, marsh, shrub wetlands, forested wetlands and vernal pools. These natural systems are home to hundreds of animal species, including beavers, otters, American eel, birds and coyotes. These diverse environments and life forms exist near areas of rapid development, providing students with opportunities to study ecological processes and their responses to human activities. The trail was developed for purposes of data collection and study of the rich array of environmental phenomena on campus. Senior research associate Dr. Leszek Bledzki oversees the monitoring of weather, water flow and water quality in Stony Brook and Upper and Lower lakes on campus. Faculty, students and staff also survey native and invasive plant, fish and invertebrate species, and characterize forest composition. The Curricular Trail provides valuable research and learning opportunities, as well as an appreciation for our campus ecology.

Energy Recovery System for Science Complex: In early 2007, an energy recovery loop was installed in the science complex to reclaim heating and cooling energy from the building exhaust. Year round, the system is expected to save \$53,000 in heating and cooling costs.

A heat recovery system takes some of the energy being discharged in the exhaust stream and uses it to pre-heat or pre-cool the incoming outdoor air. For the science complex, a "runaround loop" heat recovery system was selected. This system uses an intermediate fluid, in this case an antifreeze solution, to transfer heat between the exhaust and incoming makeup air streams. This system does not require that the incoming and makeup air streams be in close proximity, and does not run the risk of cross-contamination should a component fail.

The recovery loop creates little visible change in the energy system's operation, but it removes very significant loads from the central heating and cooling systems. In fact, the peak load reductions are approximately equal to the increased loads anticipated from the new LEED-certified residence hall. Thus, Mount Holyoke will bring a large new building on line with no net addition to the central campus heating and cooling systems.

Student Organic Garden: In the summer of 2007, students broke ground on an organic vegetable garden on campus. Three student interns, under faculty supervision, planted and cultivated crops, collected data on soil chemistry, insect populations and weeds and conducted preliminary experiments. In September 2007, the first harvest drew sixty students out on a Sunday afternoon to carry the harvested vegetables to Dining Services, which later that week used the organic vegetables to prepare a “Gracious Dinner.” The Center for the Environment (CE, see below) is coordinating garden activities with the Garden Society, a vibrant student organization, to increase the visibility, enjoyment and utility of the garden on the MHC campus, including expanded use for course and laboratory work.

Funding for the garden’s first year came largely from a \$5,000 gift from the Class of 2007. The CE will be working to raise additional funds in order to expand future garden activities. Seeds are now germinating for the 2008 garden, and a new crop of interns is ready to begin work. We also plan to strengthen collaborations with nearby community farm organizations, including Nuestras Raices in Holyoke and Red Fire Farm in Granby.

Compostable Ware Purchase Program: In 2007, the Center for the Environment undertook the bulk purchase of compostable ware products from Dining Services for resale at discounted prices to student organizations and campus offices. Through this program, the CE enabled several groups—including the Korean Asian Sisters Association, C.A.U.S.E, the Jewish Student Union and the Office of Religious and Spiritual Life—to make their events more environmentally friendly.

Student-initiated Water Conservation: As a project for their Environmental Studies Senior Seminar, two students successfully implemented a new water conservation plan on campus. Working closely with Facilities Management, the two students decided that water savings would most effectively be achieved by altering faucet flow in residence halls. This was accomplished by retrofitting the faucet screens, which reduced the flow rate from 2.2 gallons per minute to 0.5 gallons per minute—a 77 percent water savings—without significantly affecting water pressure. With assistance from MHC’s Vice President for Finance and Administration, the students projected annual water savings of approximately 7,318,500 gallons, which translates into a monetary savings of \$29,274 based on current water prices, with minimal installation cost. This cost-savings estimate does not include the energy saved from reduced hot water. Facilities Management installed the fixtures across campus in the summer of 2007.

Kick the Bottle Campaign: During spring semester, CE launched this campaign to raise awareness about the local and global environmental impacts of bottled water, and to reduce its consumption. Plastic bottles not only litter the landscape and create mountains of waste, they take oil to produce—1.5 billion barrels in the United States alone.

Kill-a-Watt Competition: The Kill-a-Watt Energy Conservation Competition is one of the nation's longest running programs for reducing college students’ ecological footprints. The dorm that reduces its energy use the most from the same month the previous year wins the competition. As an incentive, \$100 is awarded to the winning dorm each month. The Kill-a-Watt competition is a collaborative effort between the Environmental Action Coalition, Environmental Stewardship, and Facilities Management.

Challenges and Responses

The major challenge of the college's efforts is to unite the diverse programs, departments and offices on campus around our common sustainability goals. There is very broad support campus-wide for achieving these goals, including from the Board of Trustees and the President's office, however sustaining the focus on stewardship actions in the face of multiple demands on everyone's time is an ongoing challenge. The

college's response to this challenge is to keep our sustainability mission and goals highly visible and to monitor progress regularly. The Board of Trustees receives periodic updates on our key environmental indicators, for example, and our Environmental Management Systems committee meets regularly to track implementation, assess progress and develop new ideas. In addition, our campus's extraordinary participation in Focus the Nation, on January 31, 2008, and our follow-on Focus the Campus initiative have educated and engaged a broad spectrum of the campus on energy and sustainability issues.

ENGAGEMENT AND SUPPORT

Leaders and Supporters

Center for the Environment: The MHC Center for the Environment (CE) is an interdisciplinary academic center whose mission is to engage students more actively in the myriad dimensions of environmental study, to link local action to global issues and to promote environmental awareness and literacy across the academic disciplines. The CE (www.mtholyoke.edu/ce) spearheads and supports many on-campus stewardship programs and initiatives, as well as public programming and student internships.

Green Partners: Student interactions with both the natural and built environments abound throughout all aspects of campus life, from the grounds and facilities to academics to extracurricular student activities. MHC's Green Partners is a collaboration of the Department of Environmental Studies, the Botanic Garden, the Energy and Recycling Managers, the Office of Environmental Health and Safety, the Environmental Action Coalition (EAC) and the Center for the Environment. This collaboration offers many opportunities for students to become involved in environmental issues on campus.

Dining Services is committed to protecting global and local resources and incorporating environmentally sustainable practices into dining programs when operationally feasible. During the spring semester of 2005, Dining Services started a composting program of pre- and post-consumer waste. Because the napkins used are 100 percent bleach free and 100 percent post-consumer recycled material, they can be disposed of with post-consumer waste. For Dining Services staff, bins are available to compost pre-consumer food-prep waste, including potato peels, lettuce trimmings and the like. For students, there is a bin labeled "compost" at all dish room windows into which they empty their food waste before returning their dishes; another bin is provided for excess liquids. The food containers or "paper boats" used in the Blanchard Campus Center are stacked at the recycling area and then picked up for composting as well. The compost at these locations is collected three times a week and brought to a farm in Greenfield, Massachusetts. Dining Services is now also using compostable ware (i.e. plates, cups, bowls and utensils) for all outdoor events. Most of these products are made from special biodegradable corn starch-based plastic.

Environmental Health and Safety: The Office of Environmental Health & Safety provides the campus community, including faculty, staff, students and visitors, with the support, advice and leadership necessary to maintain a safe, healthy, and environmentally responsible campus, while supporting the educational mission of the College. This office spearheads the Focus the Campus initiative.

Environmental Stewardship: MHC's Environmental Stewardship Program works to reduce the overall environmental footprint of college operations. The program coordinates campus efforts with student ECO-reps who serve as liaisons between students and the administration.

Funding and Resources

Mount Holyoke has a diverse set of ongoing efforts to reduce our ecological footprint, and the resources and funding to support these efforts are equally diverse. Our institution-wide commitment to

environmental goals means that a good portion of our resources and funding comes from the dedication and creativity of staff members willing and able to orient their activities toward these goals. An important example is the office of Dining Services, which purchases food directly or indirectly from 31 local farms, uses "permanent ware" in dining halls, collects food waste for composting and uses 100 percent biodegradable products for picnics. Specific funding sources also play an important role; alumnae donors, for example, have been instrumental in the construction of LEED-certified buildings, as well as for operation of the Center for the Environment. A gift from the class of 2007 provided the funding to start the student organic garden.

CLOSING COMMENT

The Mount Holyoke College community has a deeply embedded sense of responsibility toward the environment. These shared values create great potential for positive change. What we find is that if we build a platform and invite participation, creative energy flows in and change happens. Campus by campus, we can work together to bring about an ecologically sustainable world. Onward!