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**University of Wisconsin at Milwaukee
Milwaukee, Wisconsin
2006, Habitat Restoration**

BACKGROUND

Campus Profile

The University of Wisconsin at Milwaukee (UWM) strives to be Wisconsin's premier urban campus. We at UWM are proud to educate more than 27,000 multicultural students in 152 degree programs at our 11 schools and colleges; to host an outreach program that serves 47,000 people each year; to contribute to academic research, earning research standing in the top 102 public universities in the nation; and to cheer our National Collegiate Athletic Association Division I champion teams. Those numbers do not paint a complete picture. UWM students connect to the people and natural resources of our region through hundreds of service-learning, internship, and research partnerships. Our campus-wide initiative, The Milwaukee Idea, is enriching, and being enriched by, the people, places, and natural resources of southeastern Wisconsin. Inspired by its motto "Learn More," UWM students, along with faculty and staff, have initiated a campus greening initiative to *do more* for the environment.

In spring 2003, UWM hosted the first UW System Green Campus Symposium and successfully assembled approximately 40 campus planners, facilities managers, and faculty members from around the state, as well as six representatives of the Division of State Facilities. During 2003 and 2004, members of our faculty and staff, and our students networked, shared ideas, collaborated on recycling projects, and established the UWM Environmental Council. During the 2004-2005 academic year, the council hosted lunch-time campus greening presentations and networking sessions, joined the National Wildlife Federation's (NWF) Campus Ecology Program, applied and received grants for storm water master planning and best management practices, supported environmentally related student organizations, established Share the Earth programs in the Student Union, and established a service learning program in our introduction to conservation and environmental science course. We in the council have been busy, but we still have work to do!

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GOALS AND ACCOMPLISHMENTS

Goals

The habitat restoration of Downer Woods and the newly installed prairie garden adjacent to the School of Architecture and the Urban Planning Building involved community members, the off-campus Field Station, students, and faculty and staff members.

The three goals we in the project submitted at the beginning of our membership focused on water, waste management, and energy. We made significant progress in each of those areas, that will culminate in summer 2006 and during the 2006-2007 academic year. During 2005-2006, Ecotone, the student environmental organization, focused on habitat restoration projects. Ecotone recognizes the UWM campus's significant ecological footprint in the community and seeks to engage UWM and the surrounding community in improving its ecological health. Ecotone's habitat restoration efforts focused on two sites on the UWM Campus: Downer Woods, an 11-acre natural area, and a recently established prairie garden surrounding part of the Architecture and Urban Planning (AUP) Building. Our long-term goal for Downer Woods is to re-establish the pre-settlement vegetation. Our long-term goal for the AUP prairie garden is to increase appreciation and acceptance of native plantings in urban spaces. The specific short-term goals for both habitat restoration projects included the following:

- **Assessment:** Survey Downer Woods for native and nonnative invasive plant communities, mammals, and birds. Identify desirable and undesirable plants in the AUP prairie garden.
- **Education:** Host an Environmental Council brownbag forum focused on Downer Woods and the AUP prairie garden. During biweekly Ecotone meetings and work days, educate members of Ecotone, volunteers, and service learning students enrolled in the course, titled Introduction to Conservation and Environmental Science.
- **Action:** Remove 3 to 6 acres of invasive species in Downer Woods, maintain the AUP prairie garden, and plant native prairie plants.
- **Policy:** Draft a campus-wide environmental policy statement for submission to members of UWM's administration, faculty, staff, and student governance.

Accomplishments

With respect to assessment, Joel Springsteen, officer of Ecotone and UWM Field Station employee, worked 620 hours in Downer Woods, identifying native plants, clearing buckthorn (an invasive shrub), and identifying birds and mammals. Unexpectedly, he found a large population of white-footed mice. Raccoons, chipmunks, squirrels, rabbits, and the occasional white-tailed

deer also use the woods. The woods are an island of green in a sea of urbanized, impervious surfaces. However, not all of the green is good; Downer Woods is infested with two types of buckthorn, as well as invasive honeysuckle, burdock, and garlic mustard. He completed literature reviews that confirmed the increased predation of song-birds in invasive honeysuckle and buckthorn versus native shrubs. He also identified 29 bird species that use Downer Woods for breeding and feeding or as a stop over site during migration. Additionally, Jen Archem, a graduate student in biological sciences, studied the effects of buckthorn on woody and herbaceous cover in Downer Woods. Her master's thesis results confirm that buckthorn decreases native species' richness and diversity.

As for education, we in the project educated people about native plant restoration at UWM Environmental Council presentations, environmental science service-learning courses, and Ecotone meetings and work days. As evidence of the positive effect of education, a service-learning student working with Ecotone in Downer Woods wrote, "The introduction of buckthorn has threatened the existence of the following native shrubs: chokecherry, red twigged dogwood, maple leaf viburnum, raisin bush-viburnum, arrow leaf viburnum, and gooseberry. The introduction of garlic mustard has threatened the following native herbaceous plants: wild geranium, jack-in-the-pulpit, trillium, trout lily, blue lobelia, Michigan lily, Canada columbine, and wild ginger. By eradicating buckthorn and garlic mustard from Downer Woods, Ecotone has made it possible for the aforementioned native plants to flourish again. This change will significantly increase the biodiversity of Downer Woods" [written permission for quote granted, student name withheld]. This student was shocked that invasive buckthorn plants are still legally sold and planted as ornamentals in the United States.

With respect to action, more than 30 students completed their 10-hour service-learning requirement with Ecotone, working in the AUP prairie garden and Downer Woods, organizing Earth Day events, or collecting petitions for UWM to adopt an environmental policy statement. Students spent 300 hours restoring Downer Woods alone; together, they cleared more than four acres filled with litter and with Buckthorn and other invasive plants such as garlic mustard! Students also cleared weeds and planted shooting stars in the AUP prairie garden and collected more than 300 signatures in support of an environmental policy.

With respect to policy, students and many faculty and staff members were unaware of the immeasurable value of Downer Woods and the AUP prairie garden before the project. Some referred to the prairie garden as a weed patch and thought of those woods as a dangerous place. Students, as well as faculty and staff members, who appreciate the prairie garden and Downer Woods were motivated to instigate an environmental policy statement, which the UWM administration will review in the 2006-2007 academic year. The policy statement simply states the following:

EARTH Week 2006-Sponsored by the UWM E-Council: We the undersigned have read and enthusiastically support the Talloires Declaration to promote responsible environmental stewardship and sustainable practices. We ask UWM to adopt the 10-Point Action Plan as part of University policy.

The Talloires Declaration can be found at the website for University Leaders for a Sustainable

Future at www.ulsf.org/programs_talloires_td.html.

Challenges and Responses

An impediment to eliminating invasive plant species in Downer Woods is the unmanaged wooded areas on campus outside of the Downer Woods fence line, as well as areas on and off-campus where nonnative honeysuckle and buckthorn are maintained as ornamentals. Without a campus-wide commitment to environmental education and policy, those nonnative species will continue to be a seed source that spreads to our woods. Currently, only a handful of highly dedicated members organize and implement the projects of Ecotone and the UWM Environmental Council. Many people express interest but are too busy to volunteer much of their time. Some service-learning students work on habitat restoration to complete their course requirements, rather than by choice. The project leaders have been accessible to such students and have strived to make the projects fun and interactive. In future projects, we hope to recruit more active members and future officers of Ecotone, to train them in natural history and restoration techniques, and to honor them through recognition with the UWM Center for Volunteerism and Student Leadership.

ENGAGEMENT AND SUPPORT

Leaders and Supporters

Laurie Statz and Joel Springsteen, both of Ecotone, are the leaders of the habitat restoration projects. Jim Reinartz, director of UWM's field station, supported the Downer Woods restoration project through training, education of natural history, and supervision. Christina Buffington, instructor of a service-learning course and a founding member of the UWM Environmental Council, supported both projects by implementing service-learning and by providing connections to members of the administration, faculty, and staff. Students who were enrolled in the course titled Introduction to Conservation and Environmental Science, CES 210, co-taught by Christina Buffington and Dr. Mary Gruhl, worked with environmental organizations, such as Ecotone, in the Milwaukee area to complete the 10-hour service-learning requirement. Through their service hours, interviews with Ecotone officers, attendance at Ecotone meetings and work days, research about invasive species, and presentation to their peers, CES 210 students gained a deeper understanding of course content along with a greater awareness of societal needs and civic responsibility.

Funding and Resources

The UWM main campus provides funds to maintain and protect Downer Woods, while the off-campus UWM Field Station manages the woods and supervises student labor. Ecotone paid for supplies for service learning-students, using its funding from the Student Appropriations Committee through the UWM Student Association. The budget for invasive species maintenance for the 11-acre Downer Woods site included \$6,000 to \$8,000 for labor (more than 600 paid student-labor hours) and \$60 for supplies. Volunteer service-learning students provided an additional 300 hours, at a cost savings of \$2,700.

The 2005-2006 academic year marked the second year of the AUP prairie garden. Ecotone used its Student Association funding to buy seed and transplants at the following times: spring 2004 (\$250 for seed and \$400 for sand), fall 2004 (\$250 for seed), spring 2005 (\$400 for transplants and mostly shooting stars), and fall 2005 (\$600 for transplants of diverse species). Wild Ones, a

nonprofit organization promoting the use of native plants, donated leaf mulch and transplants during the first year. Also in the first year, *Riverwest Currents* newspaper donated surplus newsprint for suppressing turf grass.

Community Outreach and Education

The UWM Environmental Council lunch-time presentation about Downer Woods included attendance by 30 or more students; neighbors, and members of the faculty, staff, and administration. Jim Reinartz described the natural history of Downer Woods, including the vegetative communities and the human communities that lived at the site. Downer Woods was once a Native American settlement; the oak trees present today have their origins from Native Americans. In the past decades, several hundred community members have worked to protect Downer Woods from development. Those neighbors are happy to see renewed student interest in and ownership of Downer Woods and the new AUP prairie garden.

Climate Change

Downer Woods sequesters carbon through its mature stand of trees. Both graduate or undergraduate student research projects may analyze vine growth in Downer Woods as a result of increased atmospheric carbon dioxide concentration.

National Wildlife Federation's Campus Ecology® Program

NWF's Campus Ecology program motivated the UWM Environmental Council to set goals and to gain support for campus greening projects at on and off-campus locations. The most useful resources from the Campus Ecology program were *State of the Campus Environment* and the *Greenscapes* resource packet providing data, ideas, and examples to motivate us project members to implement our various projects.

CLOSING COMMENT

Service-learning students, plus faculty and staff members, worked with Ecotone and were struck most by the passion and commitment of student members volunteering their time and by the environmental ethic embedded in Ecotone's organizational principles. To view those principles, see the Ecotone website at: www.uwm.edu/StudentOrg/ecotone/pages/index.htm.

Ecotone's organizational principles are as follows:

Foremost intermediacy, work toward University of Wisconsin campuses' cooperation with natural systems and local-regional economies in utilizing environmentally and socially restorative practices in agriculture, building, trade, and other critical resources.

Second responsiveness, achieve clear goals in noticeable projects on and around UW campus, thereby bringing more students to an ecological awareness if not literacy.

Third diversity engage students, faculty, administrators, and local land custodians alike to adequately distribute resources for a wide-range of projects supportive of sustainable efforts.

Always democracy, examine each question in terms of what is ethically and esthetically right, as well as what is economically expedient. A thing is right when it tends to preserve the integrity, stability and beauty of the [whole] community (Aldo Leopold - Sand County Almanac)

(Source: Ecotone Student Organization, UW-Milwaukee).