

Attachment 2B

EDGEWOOD COLLEGE

ENVIRONMENTAL ACCOMPLISHMENTS

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Edgewood College is a community of people dedicated to a dynamic educational heritage. It is located on 55 acres of land adjacent to Lake Wingra. Edgewood has made a significant commitment to ensuring the environmental health of the campus and the surrounding community.

Environmental issues are central to Edgewood's philosophy and its approach to campus improvement. The college has implemented plans and processes to educate its students about sound environmentalism while also applying these principles to campus improvements. We seek to expand our role as an environmental leader so there continues to be a strong synergy between our academic credentials and environmental standards.

This report summarizes some of our past and current environmental accomplishments, beginning with a historical perspective of the land we are attempting to preserve and nourish. Our efforts are grounded in the five Sinsinawa Dominican values of truth, justice, compassion, partnership, and community. Specific examples are provided in terms of applying these values to our buildings, grounds, and curriculum. These environmentally-friendly outcomes include: renovating Mazzuchelli Biological Station, seeking LEED certification for a new residence hall, rain gardens, Indian mounds, woodland plan, invasive species management, erosion management, Wingra Watershed Project, and Eco-Olympics.

A Sense of Place

Since the last Ice Age, 12,000 to 14,000 years ago, people have gathered on the shores of Lake Wingra in September. Paleo Indians gathered to harvest wild rice and the other animals that were drawn to this natural magnet. The first agriculturalists were women who harvested rice in birch bark canoes. It is thought that the men harvested the ducks and geese and dried them on racks. The land has historical springs, which we are currently attempting to preserve, that were sacred places for these indigenous people.

About 500 A.D., two things changed, the making of pottery and Indian mounds. The Indian mounds functioned as clan totems and burial mounds. Native-American spirituality was connected to the mounds, particularly three effigies representing earth,

sky, and water. We have representation of all three of these effigies on campus today, the bear representing the earth, the eagle representing the sky, and the panther representing water. At one time there were 2,500 Indian mounds in Dane County. Two hundred and fifty still remain, with 15 of them on the Edgewood campus.

Former Wisconsin Governor Cadwallader Washburn gifted the lakeshore land to the Sinsinawa Dominicans in 1881. In their historic tradition of vital and free inquiry into human and revealed truth, the Sinsinawa Dominican Sisters founded Edgewood College in 1927 as a junior college for women. The college has evolved into a highly-respected co-ed institution that has been named one of the top liberal arts colleges in the Midwest by *U.S. News and World Report*. Edgewood currently offers more than forty undergraduate programs as well as a number of individualized majors. There are also five master's programs and one doctoral program in Educational Leadership.

Edgewood College has undergone an intense period of growth during the last ten years. Since 1970, student enrollment has increased from just over 500 students to more than 2,400 in 2005. The college's response has been to expand its physical plant through the construction of major academic facilities and the renovation and addition of housing in existing campus buildings. January 1991 marked the completion of the beautiful Oscar Rennebohn Library. Marie Stephen Reges Hall began housing students in the fall of 1994, offering double and triple suite-style rooms. This residence hall created more varied student living options in addition to the single rooms for women at Regina Hall, a traditional co-ed hall at Marshall, and co-ed apartment style living at Weber Hall.

January 1999 marked the opening of the Sonderegger Science Center, a unique national model for collaborative education, which promises to change the way that science is taught, integrating student education from kindergarten to college. A fountain and retention pond was constructed in conjunction with the new science building as part of our storm water management system. Ground breaking for the Henry J. Predolin Humanities Center took place in June 1999. The Predolin Humanities Center houses classrooms and offices, an auditorium, and a new student commons with an extended terrace reaching out into the courtyard.

As Edgewood College continues to grow and prosper, it remains true to its mission as a community of learners "fostering open, caring, thoughtful engagement with one another....in an educational community that seeks truth, compassion, justice, and partnership."

Applying the College Mission to Environmental Performance

Edgewood College has attracted a unique collection of administrators, faculty, and students grounded in the five Dominican values of truth, justice, compassion, partnership, and community. These values have been applied to the college's partnership with the natural environment. Below is a summary of some of the environmental accomplishments

achieved in terms of buildings and grounds that demonstrate how the natural environment permeates managerial decisions on campus.

Building Issues on Campus

- Mazzuchelli Renovation: In the spring and summer of 2003, Edgewood College undertook the renovation of the Mazzuchelli Biological Station. New water and electrical lines were carefully installed to skirt a protected Indian mound. Two 75 square foot rain gardens of natural vegetation adorn the front of the biological station. The primary purpose of the rain gardens is to catch and naturally filter the rain runoff from the building and release it back into the ground water supply, rather than straight into Lake Wingra. Scientific equipment was installed around the gardens that allows students to test the effectiveness of the gardens' filtration and the plants' water use. The information gathered from these research projects can help the city and property owners when designing their own rain gardens. Additional equipment was installed to test the energy use of the building. Students can measure gas and electricity use and research the efficiency of the new heating and cooling systems and windows. The Mazzuchelli remodel used low VOC paints and finishes. Many recycled building finishing and decorative materials were used. We recycled the old building materials and removed asbestos-containing floor tiles so the concrete could be recycled. The previous old building had lead-based paint which was removed pre-demolition by a certified abatement company.

J.H. Findorff & Son was awarded the *2005 Environmental Excellence Award* given by the Association of General Contractors (AGC) for their work on the Mazzuchelli Center. The criterion for the award focuses on the following areas: water quality and conservation, reduced habitat disturbance, site preservation and habitat restoration, materials salvaged and/or recycled from project, and air quality. The Mazzuchelli Center incorporates the recycling of cabinets, copper piping, and other material throughout the building as well as insulated glazing, day-lighting, and high performance glass to improve energy efficiency.

- New Residence Hall: On April 3, 2006, the City of Madison Plan Commission approved a conditional use permit for the construction of a new residence hall on campus. We are scheduled to break ground on the new residence hall in the summer of 2006 and students will move into the new building in August of 2007. Edgewood College received a \$35,000 planning grant from the Kresge Foundation in March of 2006 for the purpose of pursuing LEED Certification for the building. In terms of the general design, the natural resources were catalogued and the building designed accordingly. For instance, one wing of the building was shifted ten feet to accommodate the root system of a two hundred year old oak tree. Roof water will be collected and stored to use in irrigating the trees. Other sustainable design strategies currently under consideration include:

- *Heating Ventilation and Air Conditioning*: Closed loop water source heat pump system for heating and cooling; high-efficiency natural gas boiler for hot water loop with solar pre-heating; heat recovery units in the public areas ventilation system.
 - *Lighting*: Natural lighting and window locations will minimize energy use; exterior high-pressure sodium lamps that are the long life and most efficient High Intensity Discharge light source; compact fluorescent lamps, motion sensors.
 - *Indoor Air Quality*: Low VOC carpet; low or zero VOC paint; organic-based linoleum flooring; low-emitting materials in adhesives, sealants and composite wood.
 - *Resource Minimization*: Low-flow showerheads, faucets and toilet fixtures to reduce water consumption by 30% over conventional fixtures; construction-site waste recycling; recycled content interior materials; utilize local and regional materials.
 - *Renewable Energy Systems*: Solar thermal water pre-heating
 - *Site*: Indigenous landscape that does not require irrigation; preservation of heritage trees; storm water on site will be detained and allowed to infiltrate; pervious pavement for bike parking, moped parking and/or pedestrian walk areas.
 - *Other*: High efficiency appliances, washers and dryers; bio-composite material in selected millwork; use of certified wood; views of outdoors available to 95% of interior spaces.
- Housekeeping: We purchase cleaning products that have minimal hazardous wastes, such as switching from solvent-based cleaners to citrus-based cleaners.
 - Science Labs: We previously purchased lab chemicals in liters and there was significant unused amounts that would be disposed of as regulated waste. The lab manager now purchases smaller quantities on a just-in-time system that reduces waste and the potential for large accidental releases. This costs more up front but saves money in the longer period through lower waste removal costs.
 - Other Building Issues: Sonderegger Science Center, built in the early 1990s, is a mercury-free building. During the remodeling of a residence hall, all mercury light switches were replaced with non-mercury switches and properly recycled. We are in the process of replacing traditional switches with motion sensors where possible, and replacing incandescent lights with compact fluorescent lights.

Grounds Issues on Campus

- Rain Gardens: Edgewood College has seven rain gardens as well as an experimental rain garden. These gardens capture large volumes of runoff, largely from campus parking lots. Students involved with Edgewood College's Wingra Watershed Project and community members associated with Friends of Lake

Wingra helped plan and plant these gardens, much of it in terrible soil – compacted clay, covered with construction fill from previous building projects. Even in these poor soils, the plants are growing well and capturing much of the sediment and runoff from rain events. The experimental rain garden is being used for research by DNR, United States Geological Survey, and the UW-Madison.

- Tree Removal: The removal of two decaying oak trees symbolize Edgewood College’s relationship to the environment. We had two decaying oak trees more than 200 years old that were posing a safety risk to those walking near them. We consulted with an arborist to seek methods to prolong the trees' life. It was determined that the trees needed to be cut down for the safety of the campus community. Students are in the process of commemorating the second tree by commissioning a Native American artist to develop a sculpture with the remains that will be prominently displayed on campus.
- Indian Mounds: Only 250 of an estimated 2,500 Indian mounds remain in Dane County today. Edgewood College provides tours of the 16 Indian mounds on our campus for college students, grade school students, high school students, and community members. In 2003, Edgewood College planned on building a \$4.5 million dormitory addition to Regina Hall. When an archaeologist found part of an intact Indian mound estimated to be 1,000 years old, the college, in accordance with state law, aborted construction plans.
- Use of “salt” during the winter: For safety reasons, Edgewood College uses salt to eliminate ice and snow from parking surfaces and walkways. Concerns have been raised regarding the runoff to lakes. As a result we are exploring the use of alternative deicers, including sodium acetate, which we are now using on a portion of the campus. Although more costly, this has reduced environmental impacts. We are continually searching for a cost-effective alternative. A professor is participating on the Salt Reduction Subcommittee of the City of Madison Commission on the Environment. The committee is developing recommendations for reducing the use of harmful deicing chemicals in the city and we hope to use Edgewood College to pilot some of these recommendations.
- Woodland Plan along Edgewood Drive: The Edgewood Woodland is a narrow strip of woods, extending from Lake Wingra and associated wetlands to uplands on both sides of Edgewood Drive. The overall goal of management of the woodland is to enhance the integrity of the natural ecosystem while promoting compatible human interaction with that ecosystem. “Integrity” means the healthy functioning of a diverse community of native biota, which necessitates the control of invasive species which threaten to dominate the system to an unacceptable degree. “Promoting compatible human interaction” encompasses two components: education and aesthetic enjoyment. Education is the primary mission of the three Edgewood institutions which are incorporated as Edgewood Inc.; the “aesthetic enjoyment” component directs management to maintain the basic woodland character of the Park and Pleasure Drive while promoting a diversity of

native species (especially woodland wildflowers). The need for a long-term management plan for this woodland area was identified during the process of developing a comprehensive Master Plan for the Edgewood campus. A preliminary plan was developed by staff of Edgewood College and the Parks Department, with assistance from ecologists at the UW-Madison Arboretum. As a result of feedback from the Madison Parks Commission (which oversees issues pertaining to the Park and Pleasure Drive), an ad hoc “Edgewood Woodland Management Planning Group” was formed to further develop the Edgewood Woodland Management Plan and to incorporate input from neighbors and users of the Drive. The final plan was subsequently adopted by the Madison Parks Commission.

- Invasive Species Management: In partnership with the DNR, students from all three schools on the Edgewood campus have reared biological control insects and released them into our wetland. These insects have effectively controlled the spread of purple loosestrife. Students have also had work sessions to eradicate buckthorn and honeysuckle from the woodland.
- Erosion Management: Large amounts of bare unvegetated ground that was subject to erosion have been vegetated with strong turf and ground cover, decreasing the amount of phosphorous entering Lake Wingra. Erosion has also been decreased by pruning of the trees and other turf management techniques.
- Other Properties: In 2004, Edgewood College was donated a Westside facility on Deming Way for educational purposes. In 2005, we were also gifted two properties in Valton, Wisconsin, the Painted Forest (a historical art site) and a new art studio built and donated by the Kohler Foundation. Our philosophy of environmental stewardship and responsibility prevails at both of these locations. For instance, native plants are used in the landscape and a good stand of vegetation is maintained to minimize erosion and runoff.

Curriculum Issues

- Wingra Watershed Project: The Edgewood Wingra Watershed Project connects students with the local community, using the Lake Wingra watershed as a focus. Students are given the opportunity to extend their classroom learning by engaging in real-world issues, working with others to identify and solve problems, and presenting the results of their work to the public. Edgewood faculty, students, and staff collaborate with many other organizations and individuals to promote understanding and good management of the Wingra Watershed. Especially important is our partnership with the Friends of Lake Wingra, whose mission is "to promote a healthy Lake Wingra through an active watershed community." Examples of student projects include:

- *The Wingra Watershed*: Background and research on the landscape, climate, and people of the Wingra watershed; information on land use, energy, and transportation in the watershed.
 - *Watershed Management and Water Quality*: How what we do in our watershed (including using road salt, managing our lawns and gutters, and encouraging or discouraging wildlife and pets) affects the quality of our water, both above and below the ground.
 - *Lake and Wetland Ecosystems*: What lives in the wetlands in the Wingra watershed and in the lake itself, and how these organisms are affected by (and affect) people.
- Eco-Olympics: During the Spring Semester 2006, students in the “Social Responsibility in Business” enhanced the ecological well-being of the campus by managing the college’s first annual “Eco-Olympics. Duke University created the Eco-Olympics friendly competition concept and many colleges and universities have adopted it. Students enrolled in the class helped students living in one of our five residence halls to reduce heat, water and energy use. The residence hall that had the greatest monthly reduction in each category won prizes.