

March 2006

University of Wisconsin - Madison Lakeshore Nature Preserve Master Plan

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Cover Photographs (Left to Right)

- Grasses at Biocore Prairie in Autumn
- Volunteer Work Party at Muir Knoll
- Class of 1918 Marsh
- Lake Mendota Shoreline

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**UW-Madison Lakeshore Nature Preserve**

Adopted March, 2006

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## INTRODUCTION

### Overview

#### ***A Plan for UW-Madison's Lakeshore Nature Preserve***

The University of Wisconsin-Madison Lakeshore Nature Preserve permanently protects the undeveloped lands along the shore of Lake Mendota where members of the campus community have long experienced the intellectual and aesthetic benefits of interacting with the natural world. The Preserve shelters biologically significant plant and animal communities for teaching, research, outreach, and environmentally sensitive use; and safeguards beloved cultural landscape features. The Preserve is as essential to the university as its lecture halls, laboratories, and playing fields. It contributes to a powerful sense of place and fosters an ethic of stewardship to promote mutually beneficial relationships between humans and the rest of nature.

*—Lakeshore Nature Preserve Mission Statement, June 7, 2005*

This Master Plan for one of UW-Madison's most beloved campus landscapes was prepared under the guidance of the Lakeshore Nature Preserve Committee. As outlined in the Committee's Guiding Principles, "it is the responsibility of the Lakeshore Nature Preserve Committee to develop policies and guidelines for the stewardship of the Lakeshore Nature Preserve that protect and interpret the biological and cultural resources of the landscape in conjunction with the UW-Madison's educational mission." The Committee works to ensure that these natural communities and cultural landscapes pass unimpaired for the enjoyment of future generations. The Committee consists of University of Wisconsin-Madison faculty, staff, and students.

Key partners in developing the Master Plan were the UW–Madison campus community; the UW–Madison Division of Facilities Planning and Management; the University of Wisconsin Foundation; and the Friends of the Lakeshore Nature Preserve. The Friends of the Lakeshore Nature Preserve in particular plays a special role as advocate for the Preserve. It is a volunteer, non-profit organization comprised of dedicated individuals with close ties to campus, many of whom contribute regularly to the stewardship of the Preserve. The group promotes community involvement through volunteer field work, educational programs, fundraising, and its own Preserve! newsletter.

Finally, it should be noted that the Lakeshore Nature Preserve has benefited enormously from the generosity of people who have contributed both time and money to its care and stewardship. As noted below, the Frautschi family played a critical role in donating to the university the last remaining parcel that completed the continuous green belt of lakeshore land that now defines the Preserve. The Brittingham family made a key early gift in helping assemble these lands, and various alumni classes—especially the Classes of 1918, 1922, and 1955—have been extraordinarily generous in supporting major improvements in the Preserve, including the restoration of the Class

of 1918 Marsh. Individual donors have made smaller gifts too numerous to mention, gifts not just of money but of time and care. Without the volunteer labors of the Friends of the Lakeshore Nature Preserve, the Preserve would not be what it is today. We very much hope that this master plan will offer a vision for the future that will inspire all who care about the Lakeshore Nature Preserve to work hard and give generously to make this dream a reality.

#### ***Purpose and Goals of this Master Plan***

This master plan offers a framework for managing the Lakeshore Nature Preserve over the next decade. The plan seeks to maintain and improve the biotic health of Preserve lands and ecosystems while enhancing the Preserve's educational and recreational benefits for all who visit it. The plan analyzes the biological and cultural resources of the Preserve to propose site-specific designs and strategies for meeting these twin goals of protecting the resources of the Preserve while enhancing the many benefits visitors derive from them.

### **The Lakeshore Nature Preserve and its Context**

#### ***Physical Context***

The Lakeshore Nature Preserve consists of about 300 acres of the 933-acre UW-Madison campus. Located along the shore of Lake Mendota, which plays such a distinctive role in defining the entire campus landscape, the Preserve includes such beloved Madison places as Picnic Point and the Howard Temin Lakeshore Path. The Preserve stretches along the Mendota shoreline from Muir Woods around University Bay to the Class of 1918 Marsh and the tip of Picnic Point, and from there to the Biocore Prairie and Frautschi Point all the way to Big Woods and Eagle Heights Woods, on the west boundary of the campus with the Village of Shorewood Hills.

The Preserve includes a complex matrix of forests, prairies, wetlands, and former savanna ecosystems, and has as one of its most important goals the stewardship of the organisms and biophysical processes of these different habitats. It protects cultural resources that include Native American mounds and archaeological sites reaching hundreds and thousands of years into the past, as well as artifacts and structures revealing the more recent history of human land use over the past two centuries. Finally, the Preserve includes working landscapes that support the ongoing educational mission of the university, ranging from outdoor kilns to the Physical Plant Staging Area to one of the oldest, largest, and most culturally diverse community gardens in the United States.

## ***Historical Context***

The Lakeshore Nature Preserve has a complex history because its various parts each have quite distinctive pasts. The historic vegetation cover can be traced back to survey records that suggest a savanna-like landscape, with prairies and wetlands intermingled with open forests. Human use and impacts have been prevalent throughout the Preserve, leaving evidence of campsites and burial mounds; remnant walls and building foundations; and various recreational routes and structures.

The University of Wisconsin-Madison acquired the parcels of land comprising the Preserve over the past century and a half. Some, such as Muir Woods, were part of the campus landscape from the beginning; others, such as Picnic Point and Frautschi Point, were only acquired in the twentieth century with the understanding that they be held and managed as permanent natural areas for the benefit of campus and community alike. Management of these lands, formerly known as the Campus Natural Areas, was the responsibility of the UW-Madison Arboretum until 2000, when the present governance committee came into being. The Lakeshore Nature Preserve was given its current name in 2005 to declare more clearly its location, its integrity as a single unit, and its protected status as a natural green space in the midst of an otherwise urban campus. The new name not only signals its location along the shore of Lake Mendota, but declares the university's intention of permanently preserving this special natural area for future generations.



*Extent of the UW-Madison Lakeshore Nature Preserve*

## ***Previous Studies and Planning Efforts***

Several studies and plans generated for the Lakeshore Nature Preserve have informed this study. They include:

- Kline-Bader Campus Natural Areas Management Plan, 1996
- Campus Natural Areas existing biological and vegetation analysis, prepared by the Biology Subcommittee of the Campus Natural Areas Committee, 2003
- Campus Natural Areas biological community map, prepared by the Biology Subcommittee of the Campus Natural Areas Committee, 2003-2005
- UW-Madison, Cultural Resources Report, 2005
- Report of the Biology Subcommittee of the Campus Natural Areas Committee, Revised - June 2005.
- Report of the Social/User Subcommittee of the Campus Natural Areas Committee, 2003
- PowerPoint Presentation of the Infrastructure Subcommittee of the Campus Natural Areas Committee, 2003
- A Phase I Archaeological Survey of Muir Knoll, August, 2003
- 2004 Archaeological Investigations on the University of Wisconsin-Madison Campus, City of Madison, Dane County, Wisconsin
- Picnic Point, UW-Madison Campus, Dane County, Wisconsin: Results of a Phase I Archaeological Survey – July 2001
- Roma Lenehan, "Breeding Bird Diversity in an Urban Natural Area: University of Wisconsin-Madison Campus Natural Areas," May 2003

## Master Plan Process

The Master Plan process was initiated by John Harrington during his tenure as chair of what was then called the Campus Natural Areas Committee. Harrington assigned three Subcommittees the task of developing general management principles for the biology, infrastructure, and user activities associated with these lands. After Ken Saiki Design was hired in 2004 as the consultant team to guide the master plan process, a series of focus group sessions moved discussions forward during November and December of 2004. The consultant team facilitated discussions with seven different campus stakeholder groups during an intensive one-day series of meetings, and followed up with additional sessions to seek input from other stakeholders.

### Stakeholders

Stakeholder groups that provided input in the master planning process include:

- UW-Madison faculty, staff, and students
- UW-Madison Lakeshore Nature Preserve Committee
- Friends of the Lakeshore Nature Preserve
- UW-Madison Facilities Planning & Management staff
- UW-Madison Physical Plant staff
- UW-Madison Administration
- UW-Madison Campus Police
- UW-Madison Housing staff and residents
- UW-Madison Permit holders and faculty using the Preserve for curriculum needs
- UW-Madison alumni
- Madison area residents

### Public Input

A public input forum was held on April 26, 2005 to offer a brief overview of the master planning process and to encourage a dialogue about key issues such as biological restoration, trail designs, and physical infrastructure. A follow-up public forum was held on September 20, 2005 to elicit feedback regarding the preliminary master plan and conceptual site-specific recommendations. A final public presentation was made on February 15, 2006 to present the master plan findings and recommendations.

### Relationship to other planning initiatives

**UW-Madison, 2005 Cultural Landscape Resources Report:** The Cultural Landscape Resources Project inventoried and identified cultural icons and landscapes throughout the UW-Madison campus. The field investigation for this study encompassed lands held within the Lakeshore Nature Preserve and identifies key views, view sheds, and cultural and archaeological resources. These special resources within the Lakeshore Nature Preserve were mapped as a part of the Preserve Master Plan and have significantly influenced the siting of high-intensity use areas and trail locations.

**UW-Madison 2005 Comprehensive Master Plan Update:** The Lakeshore Nature Preserve Master Plan planning process has fortuitously coincided with an update to the University of Wisconsin-Madison Campus Master Plan. The Campus Master Plan has gone beyond previous campus master plans by placing much greater emphasis on the Lakeshore Nature Preserve as a defining feature of the campus. This Campus Master Plan Update has—very happily—incorporated new land into the Preserve and works with the guiding principles of the Lakeshore Nature Preserve Master Plan to enhance connections between the Preserve and the rest of campus. The Campus Master Plan makes recommendations for views and view sheds along the Howard Temin Lakeshore Path that are supported by the Lakeshore Nature Preserve Master Plan.

The 2005 Campus Master Plan Planning Principles reflect and support the core values of the Lakeshore Nature Preserve. The two plans agree that natural areas along the shore of Lake Mendota help define the UW-Madison campus in the following key ways:

- **A Spectacular Setting-** giving UW-Madison a unique lakefront setting defined by beautiful open spaces.
- **Experience of Place-** creating and preserving spaces for people to share their knowledge and experiences.
- **Connections-** enhancing connections between the built environment of the campus and its outdoor spaces.
- **Edges and Boundaries-** enhancing campus boundaries and edges to encourage a shared awareness of natural resources and a powerful sense of community.
- **Regional Community-** embodying life-long learning and community awareness of regional planning, economic growth, and environmental impacts.
- **World beyond-** linking the university to the broader city, state, and planet by helping students understand their place in a larger world.

## MASTER PLAN VISION AND GUIDING PRINCIPLES

This Master Plan seeks consistently to embody the following guiding principles of the Lakeshore Nature Preserve Committee:

### Lakeshore Nature Preserve Committee Mission (adopted 24 March, '04; revised 7 June, '05)

It is the responsibility of the Lakeshore Nature Preserve Committee to develop policies and guidelines for the stewardship of the Lakeshore Nature Preserve that protect and interpret the biological and cultural resources of the landscape in conjunction with the UW-Madison's educational mission.

#### *Three primary goals guide the Committee in this endeavor:*

- Preserve, restore, and interpret natural plant and animal communities in conjunction with UW-Madison's educational mission;
- Protect signature landscapes and views that are vital to defining the university campus and the city of Madison;
- Establish management priorities that maximize educational benefits while minimizing the impacts of educational use.

### Lakeshore Nature Preserve Committee Guiding Principles

The underlying principles of ecology and conservation biology lead to the following important planning and management objectives for the Lakeshore Nature Preserve:

- Preservation and restoration of ecological communities historically present and appropriate to the site
- Creation of large blocks of contiguous natural landscape
- Planning for appropriate transitions along edges
- Maintenance of contiguous areas of like use to minimize conflicts
- Consideration of land beyond the borders of the Preserve
- Maintenance and creation of corridors and linkages to natural communities
- Attention to biodiversity within each community type
- Control of invasive species
- Monitoring and record keeping to assure effective management

The Lakeshore Nature Preserve should be a showcase for rethinking a city's relationship to the natural systems in which it is embedded to make human and non-human communities more mutually supportive and sustainable.

The Preserve should be interpreted so that visitors will better understand the history of these lands, their human uses, and the changing natural communities that have existed here over time.

The Preserve should provide a retreat where people can contemplate their past, present, and future place in the larger web of life.

The Preserve should offer access to wild, non-human nature for the campus community.

Infrastructure elements in the Lakeshore Nature Preserve should:

- Be designed to protect the natural and cultural resources of the Preserve.
- Be designed to protect the safety of users.
- Minimize adverse physical, biological, and aesthetic impacts.
- Serve multiple uses whenever possible.
- Support the biological diversity that is fundamental to the educational value of the Preserve.
- Be sustainable and environmentally friendly.

Management techniques should as much as possible mimic natural processes.

Artificial structures should be kept to a minimum, blending in space, form, and color with the natural setting.

Disturbance and compaction of the soil should be minimized to discourage invasive vegetation and erosion.

Trails should provide appropriate access while minimizing fragmentation of biological communities.

Motorized traffic, noisy machinery, and oversized equipment should be kept to a minimum.

Infrastructure should be designed to minimize required maintenance in accordance with the previous guiding principles.

In determining the ecological community appropriate to a site, the existing vegetation as well as historical and pre-European data should be considered.

Major changes in community physiognomy (e.g., forest to grassland) will be undertaken only after careful consideration and stakeholder input.

Planning recommendations should only be implemented after careful study and on-site evaluation; all design and management should be adaptive, evolving in an iterative way to accommodate new knowledge and data.