

# **Draft Environmental Impact Assessment**

## **Hoofer Boat Dock & Deck Replacement**

**University of Wisconsin - Madison  
800 Langdon Street  
Madison, WI 53703**



**Prepared for:**

**University of Wisconsin - Madison  
Facilities Planning & Management  
30 N. Mills Street, 4<sup>th</sup> Floor  
Madison, WI 53715-1211**

**September 2017**

# Draft Environmental Impact Assessment

## Hooper Boat Dock & Deck Replacement

University of Wisconsin - Madison  
800 Landon Street  
Madison, WI 53703

This report prepared by:



Erin Gross  
Environmental Scientist

This report reviewed by:



Ben Peotter, PE  
Project Manager



5201 E. Terrace Drive, Suite 200  
Madison, WI 53718  
608.443.1200 • Fax: 608.299.2184  
[www.AyresAssociates.com](http://www.AyresAssociates.com)

# Contents

	<u>Page No.</u>
Introduction .....	2
General .....	2
Project Description .....	2
EIA Process.....	3
Scoping Letter.....	3
Draft EIA .....	3
Draft EIA Public Meeting .....	4
I. Description of Proposed Action .....	5
A. Title of Proposed Project.....	5
B. Project Location.....	5
C. Project .....	5
General Project Description .....	5
Purpose and Need (Objective, History, and Background).....	5
D. Estimated Cost and Funding Source .....	6
E. Project Schedule .....	6
II. Existing Environment.....	7
A. Physical.....	7
Soils and Topography .....	7
Utilities .....	7
Surface Water and Groundwater .....	7
Wetlands and Flood Plains .....	8
Air .....	8
B. Biological .....	9
C. Social .....	11
D. Economic.....	12
E. Other (Hazardous Materials, Archaeological, Historical, etc.).....	12
DATCP Registered Tanks.....	12
EPA Database Search.....	13
BRRTS.....	13
SHWIMS.....	13
Archaeological and Historical .....	13

	<u>Page No.</u>
F. Parking and Transportation .....	14
III. Proposed Environmental Change.....	15
A. Manipulation of Terrestrial Resources.....	15
Surface Manipulation .....	15
Subsurface Manipulation .....	15
B. Manipulation of Aquatic Resources.....	16
C. Structures.....	17
D. Other .....	17
Sustainable Design .....	17
Hazardous Materials.....	17
Utilities .....	18
Noise.....	18
Traffic and Parking.....	20
Erosion Control.....	20
Visual .....	20
IV. Probable Adverse and Beneficial Impacts.....	21
A. Physical Impacts.....	21
B. Biological Impacts .....	21
C. Socioeconomic Impacts.....	22
D. Other (Archaeological, Historical, etc.).....	23
Energy and Utilities .....	23
Archeological and Historical.....	23
Hazardous Materials.....	24
V. Probable Adverse Impacts That Cannot Be Avoided.....	25
VI. Relationship between Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity .....	26
VII. Irreversible or Irretrievable Commitments of Resources if Action is Implemented .....	27
A. Energy .....	27
B. Archaeological and Historic Features or Sites.....	27
C. Financial .....	27
VIII. Alternatives .....	28
IX. Evaluation.....	29

A. As a result of this action, is it likely that other events or actions will happen which may significantly affect the environment? If so, list and discuss. (Secondary effects) ..... 29

B. Does the action alter the environment so a new physical, biological, or socioeconomic environment would exist? (New environmental effect)..... 29

C. Are the existing environmental features that would be affected by the proposed action, scarce, either locally or statewide? If so, list and describe. (Geographically scarce) ..... 30

D. Does the action and its effects require a decision, which would result in influencing future decisions? Describe. Is the decision precedent setting? ..... 30

E. Discuss and describe concerns which indicate a serious controversy? (Highly controversial) .. 30

F. Does the action conflict with official agency plans or with any local, state or national policy, if so, how? (Is the action inconsistent with long-range plans or policies?) ..... 30

G. While the action itself may be limited in scope, would repeated actions of this type result in major or significant impacts to the environment? (Cumulative impacts) ..... 30

H. Will the action modify or destroy any historical, scientific, or archaeological site? ..... 30

I. Is the action irreversible? Will it commit a resource for the foreseeable future? (Does it foreclose future options?) ..... 31

J. Will action result in direct or indirect impacts on ethnic or cultural groups or alter social patterns? ..... 31

K. Other ..... 31

X. List of Agencies, Groups, and Individuals Contacted Regarding this Project..... 32

XI. Recommendation ..... 34

XII. References..... 35

### **List of Appendices**

- Appendix A - Scoping Letter, Responses, and Distribution List
- Appendix B - Draft EIA Public Notice
- Appendix C - Site Maps and Additional Site Information
- Appendix D - Site Photographs
- Appendix E - Future Site Plans
- Appendix F - Endangered Resources Review Request
- Appendix G - Environmental Database Search Data
- Appendix H - Historical and Archaeological Research

## Acronyms and Abbreviations

ACM	Asbestos Containing Materials
AHI	Architecture and History Inventory
ARI	Archaeological Report Inventory
ASI	Archaeological Sites Inventory
AST	Aboveground storage tank
BGS	Below Ground Surface
BRRTS	Bureau of Remediation and Redevelopment Tracking System
CLEAN	Contaminated Lands Environmental Action Network
DATCP	Department of Agriculture, Trade and Consumer Protection
DFD	Division of Facilities Development
DSF	Division of State Facilities
EIA	Environmental Impact Assessment
ERR	Endangered Resources Review
FEMA	Federal Emergency Management Agency
FTE	Full-Time Equivalent
LBP	Lead-Based Paint
LEED	Leadership in Energy and Environmental Design
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NR	National Registry
NRHP	National Register of Historic Places
SHWIMS	Solid and Hazardous Waste Information System
TSS	Total Suspended Solids
UST	Underground storage tank
UW	University of Wisconsin
UW-Madison	University of Wisconsin-Madison
UWSA	University of Wisconsin System Administration
WDNR	Wisconsin Department of Natural Resources
WEPA	Wisconsin Environmental Policy Act
WHPD	Wisconsin Historical Preservation Database

# Introduction

---

## General

The University of Wisconsin – Madison (UW-Madison) Facilities Planning and Management has retained Ayres Associates on behalf of the University of Wisconsin System Administration (UWSA) to prepare an Environmental Impact Assessment (EIA) for the proposed replacement of all components of the boat docks and storage decks including ramps, gangways, and anchoring systems, as well as shoreline restoration and other site amenities for the UW Hoofers Sailing Club in Madison, Wisconsin. The EIA will be prepared in accordance with the Wisconsin Environmental Policy Act (WEPA), Wisconsin Statutes 1.11, and UWSA guidelines (Board of Regents’ Resolution 2508, November 6, 1981). The purpose of the EIA is to assess potential impacts of the project on the physical, biological, social, and economic environments.

## Project Description

The proposed project consists of replacing the existing boat docks and decks for the UW Hoofers Sailing Club as outlined in their July 2016 Hooper Waterfront Study Master Plan and Fixed Dockage Structural Assessment (DFD Project Number 15B2Z). This project is located on the south shore of Lake Mendota immediately west of the UW-Madison Memorial Union Terrace. The project includes replacement of all components of the boat docks and storage decks including ramps, gangways, and anchoring systems, as well as shoreline restoration and other site amenities. The design intent is to follow the recommendations of the above final Waterfront Study Master Plan. Ultimately, the goal of the project is to obtain the ability to launch boats quickly, easily, safely, and with the least amount of mechanical involvement.

The final master plan includes:

- Replacement of the four docks that are currently located north of the landside of Hoofers which are named, moving west to east, Tech, 420, Scow, and Sloop (based on the type of sailboat that is stored there). Restoration and construction will occur in three phases to accommodate for Hooper’s spring/summer schedule and reduce costs.
  - Floating docks with sloped launch ability are recommended for the Tech and 420 piers. A T-dock is the most feasible option for these piers due to ease of use and is more likely to be the most permissible option. For this application, StructurMarine’s Structure 80 floating dock construction is recommended in the Waterfront Study Master Plan since it is the most robust floating dock system and is intended for open ocean application. This system is easy to setup and eliminates tailoring/carting and additional boat/equipment handling which ultimately reduces potential for damage and improves safety.
  - The Scow deck has been rebuilt as a seasonal deck, but no longer functions for boat storage. It has been expanded as a flat area for Hoofers classes and equipment maintenance. A new floating scow dock will replace the existing in place fixed dock providing better freeboard and stability. The davit, crane-like device that raises and lowers boats, will be relocated from landside to an angled deck on the west end of the scow deck. This location’s proximity will improve efficiency and safety as Hoofers loads and unloads boats/equipment from a trailer.

- The Sloop deck will be rebuilt as a seasonal deck that will provide windsurf launching on the west end, as well as open flat areas for equipment maintenance and laydown. The deck’s east end will provide new rail launch and storage system for the sloop sailboats. North of the Sloop deck, shore station lifts and floating finger docks will house four motorboats. The Sloop dock will be replaced entirely as a floating dock section.
- A new low profile floating dock and platform, west of the Tech pier, will provide a low freeboard launch capability for Lasers and Bytes (sailboats). The new dock and gangway will share an additional dock to support shore station lifts for motorboats, which will be split into groups to provide the closest proximity to the Tech and 420 docks, as well as the paddle craft launch. This close access and quicker launch capability provides improved efficiency.
- Since all boat storage will be moved to the water, the former paved area between the vehicular access road and the shoreline path will be reclaimed as green space. A portion of the greenspace may be transformed into a biofiltration area for Parking Lot 8 and road surface runoff if permitting and design constraints allow. The greenspace will also provide a more appealing aesthetic to the Hoofers and shoreline path users.

This is a 100% gift-funded project, and as such, will be delivered with design and construction contracts held by the University and managed by UW-Madison. Construction will be delivered upon approval by the Board of Regents of the University of Wisconsin System at or before 25% design completion. The current preliminary estimated project cost is \$2,408,000 and will be funded using 100% Gift Funds.

## **EIA Process**

### **Scoping Letter**

A Scoping Letter to solicit input on potential environmental impacts of the project was sent to selected parties and agencies on August 8, 2017. A copy of the Scoping Letter and distribution list of recipients is included in Appendix A. Comments were solicited, but comments were not received during this process. The project distribution list for the Scoping Letter is the same one used for this Draft EIA document.

### **Draft EIA**

The Draft EIA is being made available on September 15, 2017, for a 15-day public review period. A public notice is being posted in the *Wisconsin State Journal* and the *Badger Herald* newspaper on September 15, 2017, to present the draft findings of the EIA and to request public input prior to finalizing the EIA. Copies of this Draft EIA are available at UW-Madison’s Helen C. White Library and Madison Public (Central Branch) Library, and online at:

[www.ayresprojectinfo.com/Hoofers-EIA](http://www.ayresprojectinfo.com/Hoofers-EIA)

All comments on the Draft EIA report need to be received no later than 6:00 p.m., October 2, 2017, for incorporation into the Final EIA document. Comments may be submitted in writing at the public meeting, verbalized during the public meeting, or sent to the address below:



Ben Peotter, PE  
Ayres Associates  
5201 E. Terrace Drive, Suite 200  
Madison, WI 53718  
[PeotterB@AyresAssociates.com](mailto:PeotterB@AyresAssociates.com)

### **Draft EIA Public Meeting**

A Draft EIA public meeting is scheduled for October 2, 2017, at 5:00 p.m. at the Memorial Union, at 800 Langdon Street, Madison, WI 53706 on the north side of the UW-Madison campus. The room will be noticed on the activity boards inside the Union. The meeting is open to the public and will be attended by representatives of the design team, UW-Madison, UW Hoofers, UW System Administration (UWSA), and Ayres Associates. Information and comments provided during the meeting and throughout the public comment period will be included in the Final EIA report. Refer to Appendix B for the Draft EIA Public Notice.

# **I. Description of Proposed Action**

---

## **A. Title of Proposed Project**

Hooper Boat Dock & Deck Replacement  
University of Wisconsin – Madison

## **B. Project Location**

800 Langdon Street  
County: Dane  
Site Location: City of Madison, Wisconsin, 43°04'38.87" N, 89°24'04.21" W

## **C. Project**

### **General Project Description**

The proposed project consists of replacing the existing boat docks and decks for the UW Hoopers Sailing Club as outlined in their July 2016 Hooper Waterfront Study Master Plan and Fixed Dockage Structural Assessment (DFD Project Number 15B2Z). This project is located on the south shore of Lake Mendota immediately west of the UW-Madison Memorial Union Terrace. The project includes replacement of all components of the boat docks and storage decks including ramps, gangways, and anchoring systems, as well as shoreline restoration and other site amenities. The design intent is to follow the recommendations of the above final Waterfront Study Master Plan. Ultimately, the goal of the project is to obtain the ability to launch boats quickly, easily, safely, and with the least amount of mechanical involvement.

### **Purpose and Need (Objective, History, and Background)**

Wisconsin Hoopers operates out of Memorial Union, on the south shoreline of Lake Mendota on the University of Wisconsin-Madison campus, located at 800 Langdon Street. The Wisconsin Hoopers is the largest student organization at UW-Madison and has over 2,500 members comprised of students, faculty, staff, and community members. While Hoopers is a student-led organization, Wisconsin Union members can join any of the six clubs, creating a unique blend of students and community members enjoying the outdoors together. Hoopers has sub-groups such as: outing, mountaineering, horseback riding, scuba, ski and snowboard, and sailing. Wisconsin Hoopers started in 1931 and the Sailing Club has been a part of the Hooper outdoor adventure clubs since 1939. In that time, it has grown from a handful of boats and members taking care of them, to the second largest inland sailing club in the country.

Hoopers offers more than 120 different boats and sailboards to their members which is spread between 8 different fleets and comprised of 15 different types of crafts. The Hoopers Sailing Club offers members unlimited instruction (no prior sailing knowledge is required) as part of their membership fees and once members are certified, they have unlimited access to sail during regular club hours. Hoopers also has a youth sailing program for those who are

not old enough to be regular club members. The purpose of the Hoofers Sailing Club is to promote sailing at UW-Madison by providing the organization, equipment, instruction, and financing necessary to encourage recreational and competitive sailing.

The Hoofers Sailing club uses a variety of seasonally installed piers at the UW-Madison Memorial Union, which provide water access to students, faculty, and the general public. These piers are installed annually by volunteers and are composed of various light steel bar joists, support structures, wooden decking, and steel grate decking. Piers are installed in the spring and removed in the fall to prevent ice damage during the winter months.

Common issues occur at the Hooper Sailing Club related to deteriorating piers and the club's proximity to the shoreline/lakeshore path that runs along the south shore of Lake Mendota. Piers have been seen damage as a result of age, repetitive seasonal takedown, and weather. Misalignment and damage of the piers impacts the structural integrity and may ultimately create dangerous situations for pier users. Additionally, the shoreline and shoreline paths are heavily used public recreational and commuting paths that are used for walking, jogging, and biking. Proximity of the Hoofers facilities to the paths creates a challenge in which land area is not available for sailing equipment storage along the lake edge, which is the preferred location. Therefore, Hoofers is forced to store equipment and boats just south of the paths which creates cross traffic between path users and Hoofers users whom are transporting boats and equipment across the paths. To promote traffic safety between the two user groups and improve inefficiencies, options were presented to UW-Madison and the Hoofers Sailing Club to mitigate some of these potential problems.

#### **D. Estimated Cost and Funding Source**

This is a 100% gift-funded project, and as such, will be delivered with design and construction contracts held by the University of Wisconsin System and managed by UW-Madison. Construction will be delivered upon approval by the Board of Regents of the University of Wisconsin System at or before 25% design completion. The current preliminary estimated project cost is \$2,408,000 and will be funded using 100% Gift Funds.

#### **E. Project Schedule**

The proposed project schedule milestones as of the release of this document is as follows:

Final Design and Bidding	January 2017 – February 2018
Begin Construction Phase I	September 2018
Begin Construction Phase II	April 2019
Approximate Completion	May 2019

Note: Individual project components and detailed milestones concerning the Hoofers Boat Dock & Deck Replacement project will be scheduled to avoid interfering with the regular Hooper's sailing season.

## II. Existing Environment

---

### A. Physical

#### Soils and Topography

Soils in the proposed project area (Figure 4, Appendix C) are mapped on United States Department of Agriculture maps. Most of the site consists of water, but the western 6.5% is labeled as Kidder loam with a 12 to 20 percent slope (eroded), the central 15% as Batavia silt loam with 2 to 6 percent slope (gravelly substratum), and the eastern most 2% labeled as Virgil silt loam with a 0 to 3 percent slope (gravelly substratum).

The Kidder profile soils are associated with moraine zones. These soils are naturally well drained. The Batavia soils are found along outwash plains and are also naturally well drained. The Virgil component is also found on outwash plains and is labeled as somewhat poorly drained. Permeability of the Virgil soils is moderately slow in the surface and slow and very slow in the subsoil sand substratum.

Slopes in the project area are relatively level at approximately 850 mean sea level (msl) along the Mendota lake front and generally slopes to the north. For existing site conditions, refer to Figure 3 in Appendix C.

#### Utilities

Existing utilities along the shoreline include water, gas, storm water, electric, and sanitary. Storm water utilities from the Water Science and Engineering Laboratory is directed toward Lake Mendota, through 20-inch water outlets have a 24-inch lake water intake is located on the eastern side of the building.

Other utilities, associated with the Memorial Union, lie south of the shoreline path. These utilities are located primarily along Langdon Street and North Park Street. An upgraded central utility corridor was expanded south of the Memorial Union running east to west on Langdon Street, and south from Library Mall through the East Campus mall area. Within North Park Street, the utility corridor runs north from Langdon Street then west up Observatory Drive. This corridor provides all major utilities to the Memorial Union, including steam, domestic water, chilled water, primary electric, sanitary, telecommunications, compressed air and storm water piping. Numerous connections to these services exist at the Memorial Union.

See Appendix E, Sheet Number V100 for utility configuration as of September 2017.

#### Surface Water and Groundwater

Lake Mendota, the largest and northern most of the chain of lakes in Madison, Wisconsin, has a surface area of 9,781 acres with a maximum depth of 83 feet (Wisconsin Department of Natural Resources, July 1981). The water level was reported at 850.01 feet by the Wisconsin Department of Natural Resources (WDNR) in 1981 and measured at 849.8 feet in April 2010. The Lake Mendota 100-year flood elevation is 852.0. The existing shoreline along

the north edge of the project site is completely developed, with concrete steps or concrete railings.

UW Hoofers directs its summer and winter water activities on Lake Mendota from the Terrace access from the Union. Hoofers utilizes Lake Mendota extensively for their outdoor activities. Hoofers and Outdoor Programs activities are described further in the social section.

CGC, Inc. conducted a subsurface study of the Memorial Union in July 2011 to clarify the subsurface conditions in that area. Groundwater elevations from geotechnical borings was found to be near 21.8 feet below ground surface (bgs) on July 15, 2011. The water level in Lake Mendota at this time was close to the same elevation. Groundwater levels should be expected to fluctuate seasonally as variances in precipitation, infiltration, evapotranspiration rates affect the level of Lake Mendota.

### **Wetlands and Flood Plains**

Wetlands do not exist within the project boundary, although wetland indicator soil (Virgil silt loam, gravelly substratum, 0 to 3 percent slopes) exists on the western landside portion of the project. See Figure 5 for a full account of wetland indicator soil locations within the project boundary.

The project site is located within a 1% annual chance flood (100-year flood) and a Zone X floor area according to FEMA Flood Maps. Zone X areas are those which have a 0.2% annual chance of flood; areas of 1% annual chance of flooding with average depths of less than one foot or drainage areas less than 1-square-mile and areas protected by levees from 1% annual chance flooding.

Refer to Appendix C, Figure 5 and 7 for the Wetland Indicator and FEMA floodplain maps associated with the project site.

### **Air**

Chapter NR 400 of the Wisconsin Administrative Code regulates air pollution. Contaminants regulated by this chapter include the "criteria pollutants": particulate matter, sulfur dioxide, organic compounds, nitrous oxides, carbon monoxide, and lead. There is regulation of hazardous air contaminants and visible emissions. As of June 1, 2014, all counties in Wisconsin are attaining the National Ambient Air Quality Standards (NAAQS) for particle pollution. Due to this change, all counties now have more stringent air pollution regulations placed on businesses and industries of the Madison area and throughout Wisconsin.

The air quality index (80 out of 500 on August 31, 2017) in Madison is considered a "moderate" value with acceptable air quality; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution. This index is 39% greater than the Wisconsin average, and 162% less than the highest average (210, California).

The UW-Madison facility falls under the existing UW-Safety air permit 113103430-P02, including both Part I and Part II of the Title V Air Pollution Control Permit. Currently, the

Hooper's spray booth is listed as an insignificant source, but is evaluated as a source. The spray booth will have to be evaluated for applicable permit limitations. Operation Permit requirements are under s. NR 407, Wis. Adm. Code.

## **B. Biological**

The project construction will be in an area that is currently developed with asphalt, landscaping, and docks. Surrounding the vicinity of the proposed site changes is vegetation that may support habitat for birds and small mammals. This vegetation includes approximately 28 mature trees, shrubbery, flower beds, and turf grass. According to existing pre-design plans, twelve mature trees are to be removed on the south side of the site and will be replaced by younger trees with a more appropriate spacing.

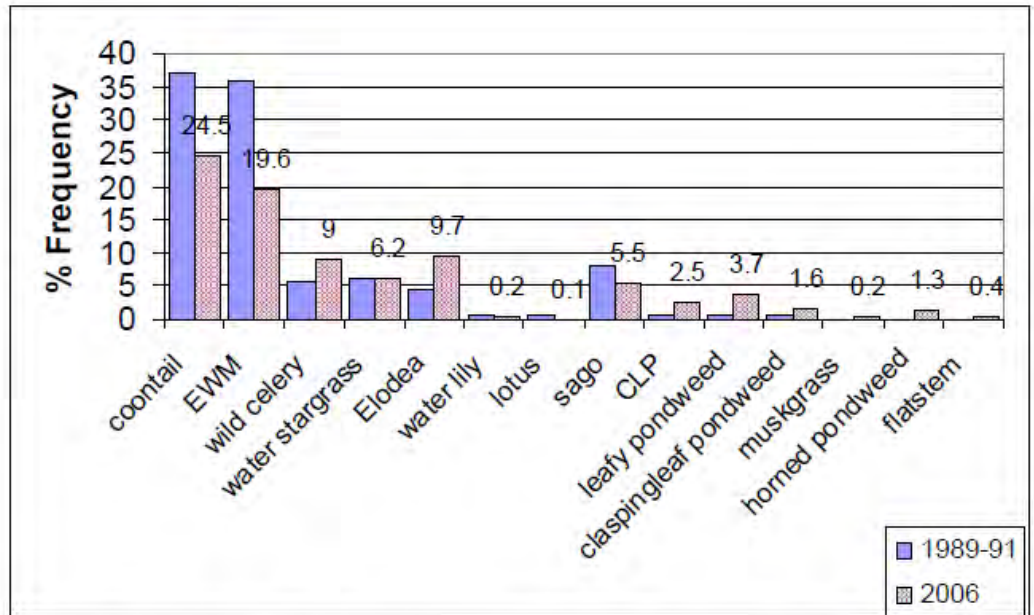
An Endangered Resources Review (ERR) request (Form 1700-079, R 6/17) was submitted to the WDNR on July 28, 2017, for information on threatened, endangered, and special concern species that may potentially be in the general area of the project or may be impacted by the project. A response was received on August 11, 2017, stating that zero species require actions, two species have recommended actions, and ten species have no follow-up actions. The ERR does not constitute WDNR authorization of the proposed project and does not exempt the project from securing necessary permits and approvals from the WDNR and/or other permitting authorities. The ERR request correspondence regarding the project is located in Appendix F.

### **1. Flora**

The majority of the flora within the terrestrial project area consists of minimal amounts of turf grass with a small number of solitary or small groupings of trees, and ornamental shrubs. This sparse vegetation offers minimal cover and does not provide suitable habitat for large wildlife. Most of the wildlife in the area would seek shelter in larger vegetated areas along the Lakeshore Path or within the UW-Madison Lakeshore Nature Preserve to the west. The fauna that would potentially use the project area, at least intermittently, would be primarily limited to small mammals, birds, and insects.

According to reports from the WDNR, there have been five plant species of special concern found in the general area of the Hoopers project. However, these observations are historical and a lack of suitable habitat currently exists.

A Terrace Tree Inspection Report was completed in October 2011. Dr. Bruce Allison, an ISA Board Certified Master Arborist, examined all of the trees on the terrace (east of the project site) using a series of tests to determine the long-term health of the trees. Since a large portion of the project involves the shoreline of Lake Mendota, the flora of the Lake is to be considered too. A 2006 Aquatic Plant Management Plan by the Office of Lake and Watersheds of the Dane County Land and Water Resources Department indicated the most popular plant species in the lake at that time were Eurasian watermilfoil and coontail. Both of these invasive species were shown to be on a decline. In the same study, 11 native species were shown to exist in Lake Mendota, an increase since the prior sampling in 1991.



The relative frequency describes the percentage that each aquatic plant species contributes to the whole aquatic plant community. Relative frequency is a commonly used metric since survey results can be compared with surveys that used different sampling techniques.

## 2. Fauna

According to the Wisconsin Department of Natural Resources and the U.S. Fish and Wildlife Service, threatened or endangered species that are located within or around the project area include the Lake Sturgeon and the Blanding's Turtle. The sturgeon is listed as endangered species. The sturgeon spawns from late April through early June. The WDNR recommended that water work should be conducted outside of the Lake Sturgeon's spawning season to avoid impacts to the species. Voluntary measures should be taken to also protect the Blanding's Turtle habitat, according to the WDNR. Impacts to wetlands of water bodies with standing water at least three feet deep should be avoided at all times and shallower areas should have work conducted outside of the turtle's active season (March 5 through November 15). If the Blanding's Turtle is found, it should be carefully moved to a suitable habitat outside of the project area.

While not a protected species, the WDNR has communicated concerns about ten species. These include various species of fish, mammal, plants, and bees. However, the observations of these animals are historical and currently no suitable habitat exists. No impact is expected to these species. To adequately protect these species during construction, appropriate erosion and siltation controls should be practiced continually. The WDNR also asks that if erosion control netting is used, it be the type constructed with a gauze weave that allows for independent movement of strands to present small animals from becoming trapped.

## C. Social

### **UW-Madison**

UW-Madison, founded in 1848, stretches across 936 acres on the main campus. This campus is the oldest and largest of 13 campuses within the University of Wisconsin System. The Fall 2016 enrollment of 43,338 consists of 29,536 undergraduates, 8,904 graduate students, 2,725 professional students (law, pharmacy, etc.), and 2,173 special students. All UW System campuses remain under enrollment management levels set by the Board of Regents to assure a high quality educational experience for students.

To support this enrollment, UW-Madison employs 17,733.7 full-time equivalent (FTE) persons, including 2,017.5 faculty members. In addition, student employment is also extensive, both on and off campus which includes approximately 2,000 students. The student body consists of approximately 49.2 percent male and 50.8 percent female. Approximately 61 percent of the student body is from Wisconsin, 29 percent are non-residents, with the remaining 10 percent consisting of Minnesota Compact students. UW-Madison has an estimated 435,412 living alumni (The statistics provided by [www.wisc.edu](http://www.wisc.edu) website).

Wisconsin Hoofers operates out of Memorial Union, on the south shoreline of Lake Mendota on the University of Wisconsin-Madison campus, located at 800 Langdon Street. The Wisconsin Hoofers is the largest student organization at UW-Madison and has over 2,500 members comprised of students, faculty, staff, and community members. While Hoofers is a student-led organization, Wisconsin Union members can join any of the six clubs, creating a unique blend of students and community members enjoying the outdoors together. Hoofers has sub-groups such as: outing, mountaineering, horseback riding, scuba, ski and snowboard, and sailing. Wisconsin Hoofers started in 1931 and the Sailing Club has been a part of the Hooper outdoor adventure clubs since 1939. In that time, it has grown from a handful of boats and members taking care of them, to the second largest inland sailing club in the country.

Hoofers offers more than 120 different boats and sailboards to their members which is spread between 8 different fleets and comprised of 15 different types of crafts. The Hoofers Sailing Club offers members unlimited instruction (no prior sailing knowledge is required) as part of their membership fees and once members are certified, they have unlimited access to sail during regular club hours. Hoofers also has a youth sailing program for those who are not old enough to be regular club members. The purpose of the Hoofers Sailing Club is to promote sailing at UW-Madison by providing the organization, equipment, instruction, and financing necessary to encourage recreational and competitive sailing.

The Hoofers Sailing club uses a variety of seasonally installed piers at the UW-Madison Memorial Union, which provide water access to students, faculty, and the general public. These piers are installed annually by volunteers and are composed of various light steel bar joists, support structures, wooden decking, and steel grate decking. Piers are installed in the spring and removed in the fall to prevent ice damage during the winter months.



## **D. Economic**

Wisconsin Hoofers operations are self-funded, and generate enough money to off-set operation cost.

The University of Wisconsin-Madison has a huge impact on the local and state economy, and the Memorial Union/Wisconsin Hoofers as part of this campus plays an integral role in promoting the social aspect of the campus. The location of the Wisconsin Hoofers and facilities contained within are unique and, while difficult to quantify, have a positive impact on enrollment. Additionally, the facility itself generates income as well as results in jobs for building services, programming, and membership revenue and provides the space for Hoofers to fund their many programs.

From the 2015-2016 Budget Redbook, UW-Madison had a total 2015-2016 budget of approximately \$2.96 billion, which consisted of approximately \$872.4 million from State Revenue, \$558.7 million from student tuition, \$890.2 million from federal programs, \$511.7 million from gifts, grants and segregated funds, with the remaining \$132.8 million made up of state laboratory fees, hospital authority payments, indirect cost reimbursement, auxiliary enterprises, and operational receipts.

UW-Madison had 21,796 budgeted faculty and staff positions in 2016 (Budget in Brief, 2016) and faculty have an average salary of \$104,900. UW-Madison, along with affiliated organizations and connected startup companies, contributes \$12.4 billion per year to the Wisconsin economy (\$2.1 billion from out-of-state monies), while supporting 128,146 Wisconsin jobs and generating \$614 million in state tax revenue (NorthStar Economics, March 2011).

In the 2016-2017 budget, Hoofers was allotted \$51,835,645, which includes services such as the equestrian center, sailing club, facilities management, administrative services, courses, and marketing. Other costs accumulated by Hoofers is offset by memberships and course costs that are paid by patrons.

## **E. Other (Hazardous Materials, Archaeological, Historical, etc.)**

Standard environmental databases were reviewed for potential environmental concerns within the project site. Findings of the review are discussed in the following paragraphs.

### **DATCP Registered Tanks**

The Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) database was searched for sites with registered above-ground storage tanks (ASTs) and/or underground storage tanks (USTs) on September 6, 2017. A search for ASTs and USTs on the project site and adjoining parcels was conducted. One tank, a 300-gallon unleaded gasoline UST, was closed/removed as of October 1989 on the project site (800 Langdon Street). One 300-gallon diesel AST is currently in use on the project site and was installed in 2013. No leaks or spills are associated with this AST. The 300-gallon unleaded gasoline tank closed in 1989 is listed as a no action required site, according to the WDNR, since minor

contamination was witnessed near the fill pipe. No further action was conducted following the removal of the tank.

Refer to Appendix G1 for storage tank details.

### **EPA Database Search**

The United States Environmental Protection Agency's (EPA's) multi-system database and EnviroMapper was searched on September 6, 2017, for sites listed as Superfund (CERCLIS) sites and generators or handlers of hazardous waste. Superfund sites were not identified within an approximate 0.5-mile radius of the project area.

### **BRRTS**

The WDNR Bureau of Remediation and Redevelopment Tracking System (BRRTS) database and corresponding RR Sites Map was searched on September 6, 2017. The RR Sites Map is the WDNR's web-based mapping system that provides information about contaminated properties and other activities related to the investigation and cleanup of contaminated soil or groundwater in Wisconsin. The RR Sites Map is part of the WDNR's Contaminated Lands Environmental Action Network (CLEAN), an inter-linked network of DNR databases tracking information on different contaminated land activities.

The project area is identified on the BRRTS database as no action required site (BRRTS number 09-13-295557). See the above "DATCP Registered Tanks" section for further details.

The next nearest sites noted on BRRTs were the Chazen site and former Peterson building located along University Avenue and the East Campus Mall at least 600 feet to the south. Soil contamination was noted on the Chazen construction site in August 2008 and closed in June 2011. In addition, soil contamination was noted on the Peterson building site in November 1992 and closed in December 2008.

Refer to Appendix G2 for a map depicting the sites identified in the BRRTS database that are within proximity to the project location as well as the corresponding activity details.

### **SHWIMS**

The Solid and Hazardous Waste Information System (SHWIMS) provides access to information on sites, and facilities operating at sites that are regulated by the WDNR Waste Management program. Activities that occurred at facilities include landfill operation, waste transportation, hazardous waste generation, wood burning, waste processing, sharps collection, and many others. SHWIMS was searched for applicable sites on September 6, 2017. The search area included a search radius of 0.25 miles surrounding the project site. The project site is listed as an infectious waste generator related to animal, micro lab, and sharps. Contamination of the project site is not anticipated related to this waste generation.

### **Archaeological and Historical**

A search within the Wisconsin Historical Preservation Database (WHPD) was conducted July 28, 2017, for the project area as part of the EIA process. In this review, four databases

were accessed: Archaeological Report Inventory (ARI), Archaeological Sites Inventory (ASI), National Registry (NR), and Architecture and History Inventory (AHI). The project site, Hoofers, is listed as a historic site and is within a historic neighborhood. Hoofers appears in the Wisconsin Architecture and History Inventory (AHI) (AHI# 102546) and is located within National Register of Historic Places (NRHP) Bascom Hill Historic District (Ref. #: 74000065, Listing ID: 59).

A HIST-A document was submitted to the Historical Society in August 2017 and a response has not yet been received, although Hoofers is a non-contributing facility to the Bascom district and the Hoofers building itself will not be interrupted as a result of this project.

Other nearby historical sites are not anticipated to be impacted as a result of this project. Refer to Appendix H for a summary of the WHPD database search results.

## **F. Parking and Transportation**

Currently, the UW-Madison campus has 18 parking garages, 83 parking lots, and 10 UW-Arboretum lots. Vehicle parking is not available on the project site, although bicycle and pedestrian traffic is prevalent on the landside of the project.

Common issues occur at the Hoofers Sailing Club related to the club's proximity to the shoreline/Lakeshore path that runs along the south shore of Lake Mendota. The Lakeshore and shoreline paths are heavily used public recreational and commuting paths that are used for walking, jogging, and biking. Proximity of the Hoofers facilities to the paths creates a challenge in which land area is not available for sailing equipment storage along the lake edge, which is the preferred location. Therefore, Hoofers is forced to store equipment and boats just south of the paths which creates cross traffic between path users and Hoofers users whom are transporting boats and equipment across the paths. To promote traffic safety between the two user groups and improve inefficiencies, options were presented to UW-Madison and the Hoofers Sailing Club to mitigate some of these potential problems.

### III. Proposed Environmental Change

---

Common issues occur at the Hoofers Sailing Club related to deteriorating piers and the club's proximity to the shoreline/Lakeshore path that runs along the south shore of Lake Mendota. Piers have been seen damage as a result of age, repetitive seasonal takedown, and weather. Misalignment and damage of the piers impacts the structural integrity and may ultimately create dangerous situations for pier users. Additionally, the shoreline and shoreline paths are heavily used public recreational and commuting paths that are used for walking, jogging, and biking. Proximity of the Hoofers facilities to the paths creates a challenge in which land area is not available for sailing equipment storage along the lake edge, which is the preferred location. Therefore, Hoofers is forced to store equipment and boats just south of the paths which creates cross traffic between path users and Hoofers users whom are transporting boats and equipment across the paths. To promote traffic safety between the two user groups and improve inefficiencies, options were presented to UW-Madison and the Hoofers Sailing Club to mitigate some of these potential problems.

The project consists of replacing the existing boat docks and decks for the UW-Madison Hoofers Sailing Club as outlined in their July 2016 Hooper Waterfront Study Master Plan and Fixed Dockage Structural Assessment (DFD Project Number 15B2Z). The project includes replacement of all components of the boat docks and storage decks including ramps, gangways, and anchoring systems, as well as shoreline restoration and other site amenities. The design intent is to follow the recommendations of the above final Master Plan.

The scope of the project itself is described in Section I, C., but the proposed site plans for the Agriculture Center of Excellence Additions are located in Appendix E.

#### A. Manipulation of Terrestrial Resources

Terrestrial resources deal with changes that will occur to land surfaces as opposed to water or air resources.

##### Surface Manipulation

As a result of this proposed project, some surface features within the project boundary will change. Short-term changes to terrestrial resources on the surface during construction will include the excavation and removal of some pavement, concrete, vegetation, and soils to facilitate greenspace improvements on the west side of the site. The docks installed will be floating just south of the University of Wisconsin crew course limits.

##### Subsurface Manipulation

Long-term (permanent) manipulation of existing terrestrial resources which will be affected by the construction include soil removal for adjustment of site grades, potential water and electric routing systems to connect to existing devices. Fill material displaced during construction will be properly managed and disposed off-site, if not suitable as fill-in for other locations at the project site.

## B. Manipulation of Aquatic Resources

Landside restoration and new pier construction will be the primary activities that have the greatest impact on aquatic resources. These activities take place along the shore and lake boundary and will modify the seawall that currently exists. Concrete anchors will be installed underneath the floating piers to brace the four docks that will be installed along the shoreline. Construction of the piers will need to take into account timing to respect the period of high fish use and presence, as well as maintenance of the substrate condition. While initially expected to contain a specific grain size of existing rock surfaces and interstitial spaces that allow for walleye egg deposition and incubation in sediment free, highly oxygenated conditions, this was not the case. Smith Group/JJR conducted a lake bottom sampling event in 2012 related to the Memorial Union renovations and did not find this mix of clean stone material that the WDNR stated was a concern. Instead, the study found the lake to have a silty substrate which does not result in having to restore the lake bottom to a fishery grain size mix. No dredging or other activities are anticipated with this project and thus permitting with the US Army Corps of Engineers is not required. Some WDNR permitting would be conducted independently of the WEPA process. These activities may result in modifications to the design, construction aspects or other mitigative measures that change the approach outlined in the design as it currently sits.

At this time, based on the lake bottom sampling event in 2012, it is anticipated that no spawning beds or other sensitive water based habitat will be removed, filled, or otherwise harmed during the development of this project.

A short-term increase in sediment runoff into the lake is possible due to the surface area being disturbed for the modification to the shoreline and landside features and general project construction. It was stated in the WDNR's letter response on the Endangered Resource Review that strict erosion and siltation controls be practiced while making improvements to the site. This would minimize the potential for sediment to enter the lake and protect fish and aquatic creature habitat. They also noted that erosion control netting (also known as erosion control blankets, erosion control mats, or erosion mesh netting) can have detrimental effects on local snake and other wildlife populations. Wisconsin Administrative Code NR 151 which includes performance standards for construction sites and post construction sites are applicable to this project due to the size of the project (greater than an acre in size, the minimum for applicable permit).

Since some impervious surfaces are decreasing in the project area (by approximately 1,800 square feet), it is estimated that there will be some suspended solids (TSS) reduction from runoff compared to existing conditions in the long-term following completion of the project. Most of this reduction comes from the greenspace improvement on the west side of the project site.

Small quantities of soil will be excavated throughout the site to implement utility connections and construct the greenspace on the west side of the site. The campus Storm Water Master Plan (see "Manipulation of Aquatic Resources" above) developed by the University will provide guidance for developing erosion control and storm water pollution prevention methods. These methods will be carried out according to standards laid out by the Wisconsin Department of Natural Resources. Best management practices (BMPs) will be

used before and after construction, including silt fencing and erosion matting where appropriate, as well as stormwater inlet protection, dust control, and dewatering provisions if necessary. Appropriate storm water management and erosion control measures will be used to control discharge into Lake Mendota. The topography at the existing site generally slopes from the south to north, with grades ranging from 859 at the southwest side of the site to 855 along the lake shore. Proposed site grades for much of the site will be similar to existing.

Regional groundwater, which is estimated to be 21.8 feet bgs, is not anticipated to be impacted by this proposed project. If water is pumped from the area for temporary dewatering, this water is expected to contain suspended solids and will be required to meet WDNR discharge requirements resulting in filtering the discharged water using approved devices. However, the discharge will not be going to a wetland or to a WDNR-listed Exceptional Resource Water or Outstanding Resource Water.

### **C. Structures**

Currently, the project site has four docks within its boundaries (moving west to east): Tech, 420, Scow, and the Sloop. Buildings on the landside of the project are not going to be altered as a result of this project, although some vegetation, pavement, and concrete will be impacted. The four existing docks will be replaced with five new docks (moving west to east): Laser Dock, Floating “T” Dock, Scow Dock, Windsurfing Dock, and the Sloop Dock. Also as a result of this project, the davit crane will be moved north, closer to the lake, and electric and water utilities will be connected to the new docks according to site plans.

### **D. Other**

#### **Sustainable Design**

The proposed project will meet the Division of State Facilities (DSF) sustainable guidelines, which are intended to promote the effective use of existing space, conserve natural resources and reduce detrimental effects on the environment, ensure energy efficiency and consider life-cycle costs of indicatives. This approach follows closely Leadership in Energy and Environmental Design (LEED) standards.

#### **Hazardous Materials**

Asbestos Containing Materials (ACMs) nor lead based paints (LBPs) are not expected to be encountered as a result of this project. Although, all commercial, industrial, public, or institutional structures are subject to inspection prior to demolition/renovation (according to WDNR code, NR 447). The hazardous materials must be properly abated following WDNR guidelines during demolition and removal of the structures. Pursuant to NR 447, a submission of Form 4500-113 (<http://dnr.wi.gov/files/pdf/forms/4500/4500-113.pdf>) will be required 10 working days prior to asbestos abatement and/or demolition. Materials containing LBP may not be recycled, and may only be used as fill with a written exemption or approval from DNR under Chapter NR 500, Wisconsin Administrative Code unless it is abated. If the material is to be disposed, it must go to a construction and demolition landfill, or an approved municipal solid waste landfill. Proper precautionary measures for abatement

activities will be implemented as required by code to protect students and users of the facilities.

Neither historical dumping nor hazardous materials have been reported in the boundaries of the project site through database searches available. The tank closure investigation from 1989 indicated minimal soil contamination in the area near the fill pipe of the former UST. It is unlikely this would impact the project site.

The project site is listed as an infectious waste generator related to animal, micro lab, and sharps. Contamination of the project site is not anticipated related to this waste generation.

### **Utilities**

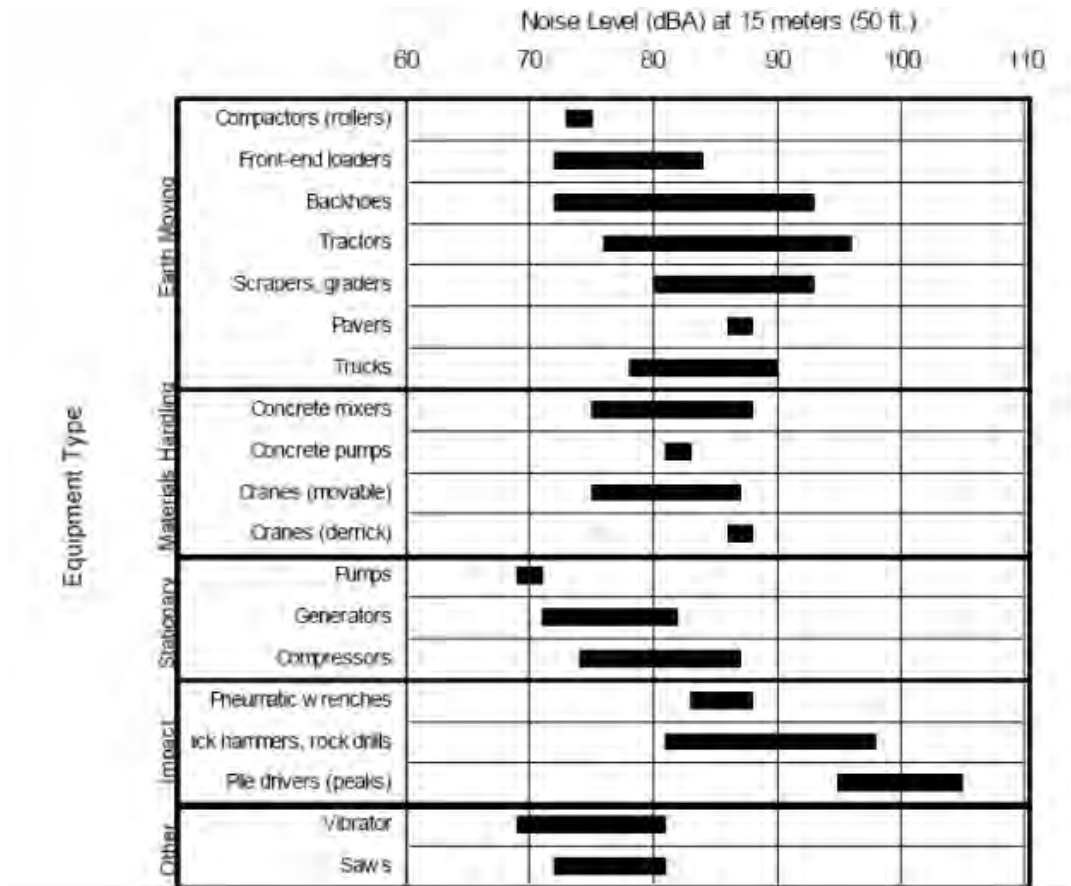
Utilities that provide services to the expanded buildings will be modified and expanded as necessary to properly service the new docks. The surrounding utilities have the capacity to provide these expanded or improved services with no adverse impacts. Site development will tie into existing water and electric lines that are in the project area.

### **Noise**

Short-term noise impacts will occur during the demolition and construction periods. Major elements that will produce elevated noise levels include demolition activities, vibrations, equipment noise, material delivery, hauling, grading, and landscaping. Anticipated noise will most directly impact those individuals living or working near the project, including nearby students, faculty, staff, and visitors utilizing the Hoofers/Memorial Union facilities, nearby residents, buildings, and recreation areas adjacent to the project areas.

Outdoor construction noise is expected to be short in duration with standard hours of operation between 7:00 AM and 3:30 PM Monday-Friday. Commencement of higher noise-generating activities will be restricted to later in the morning. All construction work will be in compliance with the applicable City of Madison noise permit and local ordinances. For those times when construction work takes place outside the standard work hours, a noise ordinance variance will be requested from the City of Madison.

The noise is expected to have the most impact on the following places: the existing Hoofers and Memorial Union building, students, faculty, patrons, and members in Memorial Union area, and students and faculty in classes in nearby buildings west of the project site. Construction of the new docks and greenspace will attempt to be conducted during periods of academic breaks such as, spring and summer break. Noise may also impact the surrounding biological environment, so caution shall be used to avoid high activity times for existing animals in the area.



**Figure 1 Construction Equipment Noise at 15 Meters**

Source: U.S. Report to the President and Congress on Noise. February 1972.

The figure above lists typical peak operating noise levels from construction equipment at a distance of 50 feet, grouping construction equipment by mobility and other operating characteristics. Earth moving equipment of limited size will be used for this project due to the site constraints. Residual noise levels in an outdoor residential setting are 44 dB during the daytime, and 40 dB during the evening (U.S. Senate, February 1972).

To minimize the impacts of construction noise, contractors will be responsible for ensuring that exhaust mufflers and engine enclosures are in place and in good working order for all on-site trucks and equipment. An engine enclosure reduces low-frequency noise coming from the engine, while an exhaust muffler deadens the noise of escaping gases from combustion, similar to a car muffler. On-site workers will also be responsible for hearing protection as necessary to prevent long term health effects from working near or around these types of construction equipment over extended periods of time.

Long-term noise changes are not anticipated as a result of the project compared to existing conditions.



## **Traffic and Parking**

Short-term traffic patterns may change as a result of the project. During the construction phases, there may be potential slowdowns and intermittent disruptions of vehicular, and pedestrian traffic in driveways due to construction tractor vehicle and machinery movement at the project site during construction. Traffic impacts are expected to be limited to the entrance and exit locations and adjoining roadways.

Traffic in the vicinity of the proposed project is mostly student and staff traffic traveling to and from classes and pedestrian/bicycle traffic on the shoreline path. In the specific project area, traffic is limited to students, staff, bicyclists, and pedestrians utilizing the shoreline path and Memorial Union/Hoofers facilities. During construction, it is likely that construction movement/storage will have to be configured to not interfere, or have the interference be minimized, with existing driveway and shoreline path facilities.

Overall, traffic patterns on the shoreline path are anticipated to improve in the long-term. This project's intent is to make better use of the existing Hoofers facility by improving dock storage space and moving the davit crane closer to the lake to reduce pedestrian/crane interactions. Boats that are currently stored south of the shoreline path, will be able to be stored closer to the lake onto the larger docks.

## **Erosion Control**

Surface water runoff from the proposed site work will be controlled both during the construction phase and following site development. Silt fences and other runoff/siltation devices will be utilized during construction activities in accordance with construction best management practices (Wisconsin Administration Code Chapter NR 151 Runoff Management and NR 216 Storm Water Discharge Permits) to minimize environmental impacts of the project. The erosion control plan will comply with university, city, and state standards.

An erosion control plan has not yet been developed for this project. The project may require a construction tracking pad to reduce tracking of soil material on to adjoining driveways.

## **Visual**

Visual aesthetics in the vicinity of the proposed building will be affected. The asphalt, concrete, and landscaped surfaces in the location of the additions will be removed and replaced with new landscaping and docks. Physical site topography will not be significantly changed. The new docks will have a more updated aesthetic compared to the existing ones.

## **IV. Probable Adverse and Beneficial Impacts**

---

### **A. Physical Impacts**

There are no significant adverse physical impacts anticipated. There will be short-term impacts due to noise and dust generated by construction equipment. However, these impacts will be localized to the immediate project site, and no long-term impacts are anticipated.

The proposed project will also not threaten air quality. Air emission impacts will be limited to those from short-term use of equipment and site work during project construction, and there are no significant emission sources in the planned use of the facility once constructed.

Site land use will transition from floating docks, asphalt parking, concrete, sidewalks, and landscaping to slightly more greenspace and larger docks. The new site features are anticipated to impact site topography, infiltration, and storm water runoff patterns in the immediate area of the project site. Lake Mendota, the nearest surface water body to the project site (where the docks will lie on the north side of the site), will be impacted by runoff from the site since the runoff is designed to flow to the north. This adverse impact could occur if the surface water control measures such as vegetation, silt fencing, or inlet protection are not adequately sized, installed, or maintained during construction activities. Impacts from improperly managed runoff could include transfer of possible on-site or nearby parking lot debris and fluids and soil and sediment transfer. Sediment transfer is a primary concern during the construction phase of the project because more soil will be exposed during site development while the site contains few stabilizing features to prevent erosion. Transfer of sediments, debris, and vehicular fluids through site runoff to Lake Mendota may impact the turbidity, temperature, nutrient balance, and trace contaminant levels within the lake and potentially affect living species of fish or plants within the lake. The extent of the impacts to these features is expected to be minimal post-development due to the implementation of storm water controls. Impacts during the construction phase would depend on the level and type of surface water control methods employed during site development.

Due to the slight decrease of impervious surface from grass and tree removal and gain in greenspace, the runoff is expected to be slightly less in the long term. This project will decrease impervious surface area by approximately 1,800 square feet. Storm water plans for pre- and post-construction are still being developed at the time of this report development.

### **B. Biological Impacts**

Long-term adverse biological impacts are not anticipated as the project site is located in a developed area, including where docks already exist. Green space of the project site is expected to increase given existing landscape designs by approximately 1,800 square feet. The landside project area is on developed land and it is not considered to be wildlife habitat of any significance beyond song birds or small mammals, such as squirrels. Dock construction will be conducted during time periods to avoid high biological activity.

Adverse biological effects of the addition and renovation project have not been identified by the Wisconsin Department of Natural Resources or the U.S. Fish and Wildlife Service. According to the WDNR, “zero species require actions, two species have recommended actions, and ten species have no follow-up actions.” The project should secure necessary permits and approvals from the WDNR and/or other permitting authorities prior to project construction.

Adverse biological impacts of removal of trees and vegetation planted as part of this project will reduce habitat for nesting song birds and tree dwelling mammals. These trees and vegetation will be replaced with 1,800 more square feet of greenspace.

### **C. Socioeconomic Impacts**

Adverse social aspects of the proposed addition and renovation are primarily related to the construction and relocation phases of the project. In the short-term, increased vehicular congestion due to construction traffic may adversely impact drivers, bikers, and pedestrians along adjoining driveways, shoreline path, and sidewalks in the vicinity of the project. This impact is unavoidable as the construction equipment and deliveries are required for successful completion of the project. Existing students, staff, and patrons that frequently use the Hoofers facilities and adjoining facilities (such as buildings and shoreline path) will also be adversely impacted due to the potential disruption of certain facilities while construction is taking place. Strategic construction phases are being prepared to prevent disruption as much as possible. This includes phasing construction to the extent possible to be out of phase with the academic school year, Hoofers dock usage, and high biological population times. In the long-term, there will be no adverse impacts to students, visitors, or employees as a result of this project. This physical construction will inconvenience the parties involved, but it is a necessary step in the occupancy process and is offset by the positive effects of the updating the Hoofers docks space.

This project will provide long-term beneficial impacts to the social environment at the university by improving the quality and efficiency of the Hoofers docks. Beneficial social effects of the new docks include improved piers for safety and aesthetic purposes, reduced traffic between pedestrians and Hoofers users, and improved efficiency in getting boats onto Lake Mendota from their storage areas. These components contribute to Hoofers Sailing Club’s initiative to provide the organization, equipment, instruction, and financing necessary to encourage recreational and competitive sailing.

Beneficial economic impacts are both direct and indirect in nature. Short-term beneficial economic impacts include employment and retention of design, architectural, and construction project team members. In addition, there will be a positive impact to the local and regional retail community resulting from purchase of food, lodging, fuel, equipment, and supplies during the demolition and construction phases. Long-term impacts may include additional revenue from the ability to entice new Hoofers members with the updated facilities.

Currently, there is a commitment of financial resources in the amount of \$2,408,000 which will be funded using 100% Gift Funds. Based upon a January 2011 study titled “The Impact of Construction on the Wisconsin Economy” (C3, Jan. 2011), every \$1 spent directly on

construction projects produces an immediate economic effect of approximately \$1.32. Therefore, the commitment of \$2,408,000 may generate \$3,178,560 in total economic impact. The same January 2011 study states that every \$1 million spent directly on construction projects will have an immediate effect of generating approximately 12 jobs. Therefore, this project may generate 28 full time positions during the course of construction, though some of that is related to the off-site construction of the docks themselves. In the long-term, existing Hoofers staff and volunteers will continue to manage and maintain the new Hoofers facility.

Long-term operating costs of the proposed utility installations at the expansions will result in a slight increase in maintenance costs. Utility operating costs will primarily consist of an increase in lighting on the new piers, which is minor in comparison to the overall existing Hoofers and Memorial Union building's use.

## **D. Other (Archaeological, Historical, etc.)**

### **Energy and Utilities**

There will be a continued commitment of energy resources to construct the project, including fossil fuel consumption used by construction vehicles and equipment. Energy that will irreversibly be consumed includes fuel and electricity used to run construction equipment and to operate construction material manufacturing plants and quarries. Other electrical needs may include lighting, compressors, and tools.

In the long term, the proposed action will slightly increase resource consumption through every day dock use that requires lighting and general electricity use. New building components that are to be installed will be installed with the intent to maintain DFD Sustainable Facilities Standards to demonstrate sustainability; however, this project is not pursuing LEED certification. Utilization of energy efficient bulbs and times lights will also help mitigate energy consumption.

Utility systems from the existing area can adequately handle the expected loads from the new docks. However, it is a cumulative effect that will contribute to the long-term increase in use of the utility systems.

### **Archeological and Historical**

The project site, Hoofers, is listed as a historic site and is within a historic neighborhood. Hoofers appears in the Wisconsin Architecture and History Inventory (AHI) (AHI# 102546) and is located within National Register of Historic Places (NR) Bascom Hill Historic District (Ref. #: 74000065, Listing ID: 59).

A HIST-A document was submitted to the Historical Society in August 2017 and a response has not yet been received, although Hoofers is a non-contributing facility to the Bascom district and the Hoofers building itself will not be interrupted as a result of this project.

## **Hazardous Materials**

Impacts associated with hazardous materials or environmental conditions on-site are not anticipated. Abatement of asbestos containing materials and lead will be conducted in safe manner consistent with regulatory standards to protect the health and welfare of the workers and residents of the facilities.

## V. Probable Adverse Impacts That Cannot Be Avoided

---

An unavoidable adverse impact of the proposed project is the commitment of energy, materials, and financial resources. The project will require an initial financial commitment of \$2,408,000, as well as additional annual operating and maintenance expenses.

Adverse, unavoidable short-term impacts include vehicular and pedestrian interference and increased noise and dust during construction. Pedestrian traffic on the shoreline path will be disrupted during construction and potentially rerouted in portions based on construction phasing. Boat storage availability may also be adversely impacted due to construction phasing and movement.

Construction sequencing options have been proposed to minimize the impact of project development on the biological environment, members, staff, students, and pedestrians who use the shoreline path. However, sequencing can only limit the impacts to the area that are unavoidable. Construction impacts may make portions of the Hoofers site and surrounding areas inaccessible, result in detours of the shoreline path, and other unavoidable impacts dictated by construction events taking place while members/students/faculty/pedestrians may be utilizing the facility.

Noise impacts caused during construction will be intermittent and short term in nature. Noise impacts will result from vehicular traffic entering and leaving the project area during the morning and evening when work shifts begin and end, and also during times when vehicles load and unload equipment and materials. Noise impacts from the construction of the project will be temporary. Students, staff, and pedestrians utilizing the Hoofers facility and shoreline path will also be adversely impacted due to disruption of existing functions while construction is taking place. Patrons, staff, and students at the Memorial Union and surrounding buildings, west, east and north of the project site, may also notice noise impacts proposed project site as well. Construction phasing will be designed in a way to minimize impact to the biological environment, Hoofers users, and nearby pedestrians and patrons, but unavoidable noise impacts will remain. Noisy construction activities will be minimized or not allowed during scheduled academic events such as midterms and finals.

Appropriate and safe access to these facilities will be put in place for all users. Sequencing will be carefully scheduled and implemented to avoid conflicting with the biological environment on site.

## **VI. Relationship between Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity**

---

During the short-term, the properties, staff, students, faculty, patrons, and the local environment in the vicinity of the proposed project will be affected by construction and construction related activities. Related short-term impacts will include increased noise levels and consumption of fuels and other construction materials. These impacts will not exist in the long-term when demolition, renovation, and construction are complete.

During the short-term, the local project environment will be affected by construction and construction related activities. This short-term demolition and construction project provides a long-term service and response to an increased need for structurally safe docks, upgrade in boat storage capabilities, and safer pedestrian/boat traffic patterns surrounding the shoreline path. Short term use of the environment will also facilitate the construction of more greenspace on the western side of the project site.

By constructing new piers that are more capable of handling harsh weather and improving the pier mechanisms, Hoofers is not only conserving their economic resources of seasonal install/deconstruction, but they are also protecting the safety of those who work on these piers (by removing damaged materials and improving the structural integrity). Short term site improvements save assets such as safety, materials, energy, cost, and time compared to repairing existing deteriorated piers or moving the Hoofers facility entirely.

## **VII. Irreversible or Irretrievable Commitments of Resources if Action is Implemented**

---

### **A. Energy**

There will be a commitment of energy resources to construct the project, including fossil fuel consumption used by construction vehicles and equipment. Energy that will irreversibly be consumed includes fuel and electricity used to run construction equipment and to operate construction material manufacturing plants and quarries. Electrical needs may include lighting, compressors, and tools.

Long-term consumption of resources to allow project completion, and continued operation of the facility, will not negatively impact or overload supplies. New pier components that are to be installed will be installed with the intent to maintain UW-Madison's initiative to demonstrate sustainability; however, this project is not pursuing LEED certification.

### **B. Archaeological and Historic Features or Sites**

A HIST-A document was submitted to the Historical Society in August 2017 and a response has not yet been received, although Hoofers is a non-contributing facility to the Bascom district and the Hoofers building itself will not be interrupted as a result of this project.

### **C. Financial**

An unavoidable impact of the proposed action is the commitment of energy, materials, and financial resources to design and complete the project. The project will require an initial financial commitment of \$2,408,000, as well as on-going annual utility and operation and maintenance expenses. The building additions will result in a slight increase in expenditure of energy and, therefore, an increased utility cost. This project will not create an increase in tuition for students directly.



## VIII. Alternatives

---

Alternatives to the proposed project are described below.

- No Action/Defer the Project Request. This alternative eliminates construction of the new piers and additional greenspace on the west side of the project site. A no-build alternative does not meet the Hoofers Sailing Club needs. If no action is conducted, the existing piers will continue to be serviceable, but the useful life will not be extended and unsafe structure and traffic conditions will persist or even increase due to deterioration over time. Hoofers will also suffer socially, with continued reduced boat storage and traffic interruptions from pedestrian/bike traffic on the shoreline path. The existing piers will also continue to degrade and eventually become unsafe and unserviceable for Hoofers members to use.
- Other Design Alternatives. Simply, other design alternatives for the dock and deck modifications were discussed and rejected by the design team. This included pile supported, floating low profile docks, and breakwater/floating attenuator designs. Based on the Hoofers' needs to improve safety and efficiency on site, these alternative designs did not meet project goals or project budgets and were thus refined to the chosen alternative.

Other alternatives, such as demolishing the piers and building new facilities elsewhere, were not explored since they did not meet the financial limitations of the facility, were well beyond the scope of this project in siting a new area, and did not address the best use of the space by UW-Madison.

## IX. Evaluation

---

### A. As a result of this action, is it likely that other events or actions will happen which may significantly affect the environment? If so, list and discuss. (Secondary effects)

No, construction of the new piers and greenspace will not change the nature of, or the participation at, the Hoofers Sailing Club. No significant environmental impacts are identified from this project.

A slight overall net decrease of impervious surface to the Hoofers Sailing grounds will be realized with the completion of the project compared to the existing site conditions. This will result in a minor decrease in storm water runoff. A new storm water management plan is still being developed, but will re-address storm water runoff.

Following completion of the construction, noise, emissions, and traffic will not be significantly increased at the site.

### B. Does the action alter the environment so a new physical, biological, or socioeconomic environment would exist? (New environmental effect)

Yes. The actions of the proposed project will alter the environment so a new physical, biological, and socioeconomic environment will exist, as described below:

- Physical – The proposed landside improvements will impact site topography and runoff patterns.
- Biological – This project will increase grassy areas on the west side of the project site and twelve mature trees are to be removed on the south side of the site and will be replaced by younger trees with a more appropriate spacing.
- Social – This project will provide beneficial impacts to the social environment on campus by improving the quality of the Hoofers facilities and efficiency of boat movement/storage on site. This project will also improve safety in terms of improving the piers' structural integrity and limiting pedestrian/bicyclist and Hoofers traffic interactions.
- Economic – Economic impacts of the project are anticipated to primarily be short-term from employment and retention of design, architectural, and construction project team members. In addition, there will be a positive impact to the local and regional retail community resulting from purchase of food, lodging, fuel, equipment, and supplies during the demolition and construction phases. Student tuition will not be directly impacted as a result of this project.

**C. Are the existing environmental features that would be affected by the proposed action, scarce, either locally or statewide? If so, list and describe. (Geographically scarce)**

No. The environmental features that exist at the project site are not geographically scarce. Threatened and/or endangered species are not anticipated to be impacted, as long as construction avoids times of high fish spawning activities. This area is not changing its current use, boat storage and docking for Hoofers, so existing environmental features will not be significantly changing long-term.

**D. Does the action and its effects require a decision, which would result in influencing future decisions? Describe. Is the decision precedent setting?**

No. The decision to construct the project does not restrict future decisions or development on campus, nor is it precedent setting in terms of new or expanded campus policy.

**E. Discuss and describe concerns which indicate a serious controversy? (Highly controversial)**

Concerns indicative of serious controversy were not identified during the course of this EIA. Scoping Letters were distributed to 27 individuals and agencies. Written responses were not received.

**F. Does the action conflict with official agency plans or with any local, state or national policy, if so, how? (Is the action inconsistent with long-range plans or policies?)**

This action does not conflict with official agency plans or any local, state, or national policy. The action is consistent with the goals established by UW-Madison and Hoofers and will support the future needs anticipated for Hoofers Sailing Club.

**G. While the action itself may be limited in scope, would repeated actions of this type result in major or significant impacts to the environment? (Cumulative impacts)**

This action does not result in significant cumulative impacts to the environment. Any future actions of this type will carefully consider potential effects to the environment. It is not anticipated that this action will promote further actions of this type through UW-Madison. Any future expansions or renovations of these facilities or other facilities that might be served by this system would also result in renovations of Hoofers space.

**H. Will the action modify or destroy any historical, scientific, or archaeological site?**

Impacts to historical, scientific, or archaeological sites are not anticipated.

**I. Is the action irreversible? Will it commit a resource for the foreseeable future? (Does it foreclose future options?)**

The action is not irreversible, but substantial additional funding would be required to do so. It would be possible to restore the site to its current condition, convert the property to green/water space, or convert it to another use if necessary.

**J. Will action result in direct or indirect impacts on ethnic or cultural groups or alter social patterns?**

This project will not impact, either directly or indirectly, ethnic or cultural groups, or alter social patterns.

**K. Other**

No other impacts are anticipated.

## **X. List of Agencies, Groups, and Individuals Contacted Regarding this Project**

---

Below is the list of individuals or agencies contacted during the preparation of this EIA. A complete list of those involved in the scoping and Draft EIA process can be found on the distribution list in Appendix A. A Draft EIA Report will be provided to every individual/agency on the distribution list, either in hardcopy or via electronic notification.

### University of Wisconsin System

Maura Donnelly  
UW System Administration  
780 Regent Street  
Suite 239  
Madison, WI 53715-2635

### University of Wisconsin – Madison

Gary Brown  
Director, Campus Planning & WEPA Coordinator  
30 North Mills Street, 4<sup>th</sup> Floor  
Madison, WI 53715

Bo Muwahid  
Project Manager  
30 North Mills Street, 4<sup>th</sup> Floor  
Madison, WI 53715

### Project Designer

Andy Luehmann, PE & Nate Novak, PLA  
SmithGroupJJR  
44 East Mifflin Street, Suite 500  
Madison, WI 53703

A copy of the Draft EIA report is available at the following libraries:

### Local Libraries

University of Wisconsin – Madison  
Helen C. White Library  
600 North Park Street  
Madison, WI 53706

Madison Public Library  
201 West Mifflin Street  
Madison, WI 53703

Websites

The Draft EIA is available for viewing online at:

[www.ayresprojectinfo.com/Hoofers-EIA](http://www.ayresprojectinfo.com/Hoofers-EIA)

## **XI. Recommendation**

---

The UW-Madison Environmental Affairs Coordinator will review the Draft EIA and comments received during the Draft EIA public comment period and prepare a recommendation as to the need for an Environmental Impact Statement (EIS) for this project. If UW-Madison concludes that this project is not a “major action that would significantly affect the quality of the human environment,” a Final EIA will be prepared that includes that recommendation. If it is found that this project might have a significant impact, a full Environmental Impact Statement (EIS) will be recommended, drafted and final public hearing will be held before the project is authorized for construction.

## XII. References

---

Department of Public Works. City of Madison Park Division. City of Madison 2012-2017 Park and Open Space Plan. City of Madison: n.p., 2012. Print. Legislative File ID No. 25928.

Heg, J. E., ed. "Wisconsin and her institutions: University of Wisconsin: History" in The blue book of the state of Wisconsin 1883 Madison, 1883; p. 393

NorthStar Economics, Inc. The University of Wisconsin-Madison's \$12.4 Billion Impact on the Wisconsin Economy. Rep. N.p.: U of Wisconsin Madison, March 2011.

The Weather Channel website. Monthly Averages for Madison, WI. Accessed: August 2014. <http://www.weather.com/weather/wxclimatology/monthly/graph/USWI0411>.

United States Department of the Interior. Geology and Ground-Water Resources of Dane County, Wisconsin. 1965. <http://pubs.usgs.gov/wsp/1779u/report.pdf>.

University of Wisconsin-Madison. Campus Master Plan – Executive Summary. UW-Madison, Facilities, Planning and Management, 2005. <http://uc.wisc.edu/masterplan/images/exec-sum-FINAL.pdf>

City of Madison Website. <http://www.cityofmadison.com>

United States Environmental Protection Agency Envirofacts Website. <http://www.epa.gov/enviro/>

University of Wisconsin System. Scope of Services, Environmental Impact Statement (EIS), Music Performance Building, July 2014.

University of Wisconsin System. 2007-2009 Biennium – Major Project Request. Music Performance Building, UW-Madison.

Web Soil Survey, <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

Wisconsin Department of Administration. Division of State Facilities – Sustainable Facilities Standards. May 24, 2012.

Wisconsin Department of Agriculture, Trade and Consumer Protection –Storage Tank Database. [http://dvmwapps.wi.gov/ER\\_Tanks/ER-EN-TankSearch.htm](http://dvmwapps.wi.gov/ER_Tanks/ER-EN-TankSearch.htm)

Wisconsin Department of Natural Resources Remediation and Redevelopment Sites Map Website. <http://dnrmaps.wi.gov/sl/?Viewer=RR%20Sites>

Wisconsin Department of Natural Resources Surface Water data Viewer Website. <http://dnrmaps.wi.gov/sl/?Viewer=SWDV>

Wisconsin Department of Natural Resources – Solid and Hazardous Waste Information Management System online database. <http://dnr.wi.gov/sotw/Welcome.do>