THE DEVELOPMENT OF AN INTERPRETIVE MASTER PLAN FOR TREEHAVEN ENVIRONMENTAL LEARNING CENTER

A Project Report

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ABSTRACT

This research project developed an interpretive master plan for Treehaven Environmental Learning Center that coordinated the overall development of the site's interpretive goals using a planning process to recommend interpretive programming and services. Although a busy and successful environmental learning center and summer campus for College of Natural Resources undergraduates attending the University of Wisconsin-Stevens Point (UWSP), Treehaven does not currently possess an interpretive master plan. An interpretive master plan may benefit Treehaven by providing a consistent theme for personal and non-personal interpretation and programming, suggestions for programming ideas, and the development of new interpretive media. A complete interpretive master plan determined what, how, and where interpretive information should be told through trails, programming, signage, and other interpretive media. Initial literature reviews suggested that interpretive master plans allow for cohesive, site-specific interpretive frameworks. This project used qualitative research methods to collect the required data to propose necessary suggestions to create this framework. The narrative data for this project was collected through individual interviews, site observation, and relevant documents and articles. A thorough review of appropriate literature and site-specific background information, followed by interviews with Treehaven stakeholders, assisted in determining interpretive goals for the site. The collected data was synthesized to develop a foundation for the interpretive master plan – the central interpretive theme.

Once the theme was decided, four additional sub-themes and corresponding messages were also developed. These themes, sub-themes, and messages provided the interpretive framework for potential interpretive media and programming, such as signs and wayside exhibits at locations with a distinct human presence so as not to disrupt the character of the landscape. Cell phone and internet technology was recommended to interpret areas unfit for permanent signage, such as active logging roads and research demonstration sites. Additional research was suggested for the creation of interpretive trails and media, as well as the increased usage of technology at interpretive sites.

ACKNOWLEDGEMENTS

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CHAPTER ONE: INTRODUCTION

Statement of Problem

This research developed an interpretive master plan for Treehaven Environmental Learning Center that coordinated the overall development of the site's interpretive goals, using a planning process to recommend interpretive programming and services.

Statement of Sub-Problems

Sub-Problem 1   The first sub-problem was to identify the mission, target and anticipated audiences, and resources available at Treehaven.

Sub-Problem 2   The second sub-problem was to determine a central interpretive theme for Treehaven's site and programming.

Sub-Problem 3   The third sub-problem was to provide recommendations for types of programming and interpretive media to communicate the central theme to audiences.

Background

Although a busy and successful environmental learning center and summer campus for College of Natural Resources undergraduates from the University of Wisconsin-Stevens Point (UWSP), Treehaven does not currently possess an Interpretive Master Plan (IMP). An IMP can benefit Treehaven by providing a consistent theme for personal and non-personal interpretation and programming,

suggestions for programming ideas, and the development of new interpretive media.

Limitations

Limitation #1   The study was limited to utilizing specific resources available to Treehaven and UWSP, such as current structures, funding, and human resources.

Limitation #2   The study was limited because this is only a conceptual plan and will not include media fabrication or program development.

Assumptions

Assumption #1   Treehaven would share necessary background information to address research problem.

Assumption #2   Treehaven stakeholders would consent to interviews.

Assumption #3   Interpretive Master Plans from other organizations are available as references.

Definitions

Interpretation: **a mission-based communication process** that forges emotional and intellectual connections between the interests of the audience and the meanings inherent in the resource (National Association for Interpretation, n.d.).

Interpretive Planning: The process of consensus development, a shared perspective by

all stakeholders on why interpretation is needed, who it will serve, and what significant stories it will tell (Buchholz, 2011).

Media: Means, methods, devices, or instruments by which the interpretive message is presented to the public (Definitions Project, n.d.).

Mission: The overall, immediate, and long-term goals of an organization.

Interpretive Media: A channel or system of non-personal communication that guides visitors to discover meaning in objects, places, and landscapes (Buchholz, 2011).

Personal Interpretation: One person or persons providing interpretation to another person or persons (Definitions Project, n.d.).

Theme: A tool that cohesively develops the central relevant idea or ideas for the audience. An interpretive theme articulates a reason or reasons for caring about and caring for the resource (Larsen, 2001).

Treehaven Environmental Learning Center: A residential natural resources education and conference facility located between Rhinelander and Tomahawk, Wisconsin. Owned and operated by the University of Wisconsin – Stevens Point, College of Natural Resources. Treehaven rests on a glacial ridge overlooking 1,400 acres of forest and wetlands (Treehaven Environmental Learning Center, n.d.).

Abbreviations

UWSP: University of Wisconsin-Stevens Point

CNR: College of Natural Resources

TH: Treehaven

IMP: Interpretive master plan

CHAPTER TWO: LITERATURE REVIEW

This research developed an interpretive master plan for Treehaven Environmental Learning Center that coordinated the overall development of the site's interpretive goals——using a planning process to recommend interpretive programming and services. The following categories and subsequent review of literature provide information and resources that aided in the creation of Treehaven's interpretive master plan.

Interpretive Media Design and Use

There are several books and articles that provide a detailed account of how to design and utilize interpretive media in nature centers, outdoor trails, and environmental education centers. A lot of detail needs to go into planning and creating interpretive media. Ballantyne, Hughes, and Moscardo break the process of designing interpretive signs into 10 steps, including (but not limited to): defining what interpretive signs and exhibits are, how to effectively use interpretive signs to grab visitors' attention, writing text so that visitors understand and learn from the interpretive sign, and the importance of evaluating one's interpretive media design (Ballantyne, Hughes, & Moscardo, 2007).

While Ballantyne, Hughes, and Moscardo primarily discuss the interpretive content of signs, Gross, Zimmerman, and Buchholz (2006) pay closer attention to the technical aspect of media design. In their book *Signs, Trails, and Wayside Exhibits: Connecting People and Place*, the authors detail such media design

aspects as text font and sign material choices and sign fabrication, while also discussing the importance of communication and interpretation. The authors also pay special attention to outdoor interpretive media and the construction of interpretive trails.

After studying the signage system at Mississippi State University's Crosby Arboretum, Wandersee and Clary propose that certain criteria must be met for an outdoor signage system to be considered exemplary (Wandersee & Clary, 2007). These authors conducted a study on outdoor interpretive signs, which concludes with a descriptive list of 20 desirable traits that should be included in interpretive signs. Some of these traits include reading level, average number of words per sentence, and average number of syllables per word. According to Wandersee and Clary, possessing certain traits makes for more effective signage.

Best Practices in Interpretive Nature and Environmental Education Centers

Besides the design and use of interpretive media and trails, another important aspect to consider when designing an interpretive master plan for Treehaven will be the relationships between interpretation and center design. Evans and Chipman-Evans (1998) discuss this topic on the community level in their book *How to Create and Nurture a Nature Center in Your Community*. The authors offer a framework for developing nature centers and sanctuaries with the help of the local community. The book details, step-by-step, topics such as organizing the community and gaining local support. Finding ways to include the community

would be an interesting interpretive dimension to include in an interpretive master plan.

In another book on interpretation, Gross and Zimmerman (2002) provide a text that focuses on effective interpretive designs and techniques used by nature centers and visitor centers across the country, from national parks to local centers. Through seven chapters, 650 photographs, and 125 case studies, the book details some of the best practices found in the professions of nature center and visitor design and interpretation. Topics include "Centers in a Changing Society," "Design: Honoring the Spirit of Place," "Dimensions of Design," "Planning an Interpretive Center," "Interpretive Media and Programs," and "Keeping Up with Change."

David Kistler, the principal and mechanical engineer at SmithGroup in Detroit, details in his article "Sustainable Nature Center" the sustainable use of water at the Environmental Discovery Center at Indian Springs Metropark in Michigan. Kistler discusses the building design challenges and discusses the solutions to these challenges in detail. Despite the initial challenges, the Environmental Discovery Center is energy efficient and acts as a showcase for sustainability in building, education, and interpretation (Kistler, 2008). Kistler's article draws attention to the prospect of using the building itself as an interpretive opportunity.

Guides to Interpretation and Education

There are many available resources and guides for interpretation and environmental education. Larry Beck and Ted Cable's *Fifteen Guiding Principles for Interpreting Nature and Culture* discusses the meaning and modes of interpretation, evolution of interpretation, and importance of interpretation in our current society and lives (Beck & Cable, 2002). Beck and Cable describe 15 interpretive principles, detailing specific principles and proper ways for interpreters to help their audience have a memorable and educational experience. Examples of some of these principles include: Lighting a Spark, Bringing the Past Alive, and Promoting Optimal Experience.

Sam Ham presents the book *Environmental Interpretation: A Practical Guide for People with Big Ideas and Small Budgets.* The text is divided into three parts, each detailing a significant component of interpretation. These three parts are: Important Concepts, Conducted Activities, and Self-Guided Media. Each part is further divided into chapters that contain important guidelines for interpretation or creating interpretive programs or media (Ham, 1993). All of Ham's interpretive techniques are designed to be low-cost and easily replicated. Ham's guide contains both technical instructions, but is also geared towards the beginning educator or interpreter.

Freeman Tilden's seminal work *Interpreting Our Heritage* provides another resource in his Six Principles of Interpretation, among other key pieces of

information such as written interpretation, appropriate use of technology in interpretive programming, and the use of humor. To paraphrase the principles, interpretation: needs to relate to the visitor; must not rely solely on information; is a teachable art; is comprehensive and focuses on the whole rather than the part; not only instructs, but provokes; and recognizes the need for different approaches for both young and adult audiences (Tilden, 2007). Considered a "pioneer in the field of natural and cultural interpretation," Tilden and his six principles lay the foundation for what professional interpretation should aim to be (Tilden, 2007).

Edgar W. Jenkins, a professor of Education at University of Leeds in the U.K., argues that the public's understanding of science would increase with an increase in diversity and an emphasis on local systems in environmental education. Educators should go beyond delivering knowledge and should instead concentrate on engaging students with their local environments and building the skills necessary to be a part of conversation regarding environmental issues (Jenkins, 2003). Jenkins speaks of the importance of relationships between knowledge and people and he encourages students to ask questions and search for their own answers. Nature center and environmental education centers can use interpretation as a way to acknowledge that relationship between people and knowledge.

Reis and Roth take an in-depth look at the culture of environmental education curriculum design and how this culture affects the curriculum and field of

environmental education. The authors argue that through their curriculum, environmental educators are perfectly poised to influence how future generations view and understand the environment and environmental issues (Reis & Roth, 2007). They don't focus on just *what* educators say but also *how* the information is said through curriculum and interpretation.

W.C. Thompson, a professor of Geography and West Point, details how teachers can use interpretation during field trips to solidify lessons learned in the classroom. Thompson argues that field trips should be seen as an opportunity to introduce interpretive techniques as a new method to assist students in connecting to learning environments outside of the classroom (Thomspon, 2010). Thompson describes how interpretation is different from simply delivering information; interpretation attempts to create personal connections to the topic being discussed instead of merely supplying facts and figures. Specifically, the article addresses the concept of geointerpretation, which is an interpretive method that focuses on geography and geology to teach natural history, landscape evolution, and species interaction (Thomspon, 2010). The author makes the case for integrating interpretation with classroom teaching to enhance the learning experience.

Interpretive Planning Resources and Guides

Although there is a plethora of information about interpretation and environmental education, the amount of published material regarding interpretive *planning*

seems to be lacking. However, Lisa Brochu's *Interpretive Planning: The 5M Model for Successful Planning Projects* is a comprehensive guide to interpretive planning that attempts to fill that gap. The book specifies the step-by-step process that is successful interpretive planning, including the needs for interpretive planning, how to begin the planning process, working with management and markets, working with messages and themes, and interpretive media (Brochu, 2003). Brochu even details how to put the final report together. This book was an essential resource in creating an interpretive master plan for Treehaven.

Summary

The end-goal for this project was to develop an interpretive master plan for Treehaven that will coordinate the overall development of the site's interpretive goals and recommend interpretive programming and services. The books and journal articles reviewed under <u>Interpretive Media and Design Use</u> provided valuable information and resources on how to appropriately and effectively implement interpretive media in various indoor and outdoor settings. One of the potential aspects of the Treehaven interpretive master plan is interpretive trails. Resources that focus on interpretive media were important when recommending possible avenues for outdoor (or indoor) interpretive media.

The works listed under <u>Best Practices in Interpretive Nature and Environmental Education Centers</u> assisted in deciphering interpretive possibilities that help

connect the relationship between Treehaven's mission and its physical site, including the buildings and grounds.

The books and journal articles in Guides to Interpretation and Education helped keep the guiding principles of interpretation – Tilden's Six Principles and Beck and Cable's Fifteen Principles, for example – in mind while developing a central interpretive theme. These resources served both as guidelines and inspiration when applying the central theme to the interpretive master plan. These references also served as reminders when deciding on personal and non-personal media to suggest within the plan.

Whereas most of the literature reviewed assisted with the intricate details of interpretive programming or media suggestions, Lisa Brochu's *Interpretive Planning: The 5M Model for Successful Planning Projects* served as a detailed, step-by-step guide to the larger interpretive planning process as a whole. Brochu's work helped with timelines, the central theme, and how to pull the final plan together.

All of the resources reviewed provided detailed advice on how and when to effectively use different interpretive methods and techniques, as well as how to pull all of that information together to create an overall mission-based interpretive theme and master plan.

CHAPTER THREE: METHODOLOGIES

Research Methodology

This project used qualitative research methods to collect the data necessary to create an interpretive master plan for Treehaven Environmental Learning Center. The narrative data for this project was collected through individual interviews, observation, relevant documents and articles provided by Treehaven, and additional interpretive master plans used as references. A thorough review of appropriate literature, followed by semi-structured interviews with the Director, Assistant Director, Forest Ecologist, a member of the donor family, and an invested volunteer occurred to determine their interpretive goals for the site as well as to clarify information regarding Treehaven's mission, audiences, resources, history, and significant stories that should be told. Interview data was then analyzed and synthesized to determine statements of significance, which were then utilized to develop interpretive themes. The interpretive themes became the building blocks for the recommended types of interpretive programming, media, and trails found within the interpretive master plan.

Data Collection

Initial data collection began by developing a comprehensive understanding of the site's history, current uses, and future goals. Treehaven's Land Management Plan was reviewed to gain a thorough understanding of the site's land and family history, geological land cover, and current research, educational, and commercial

uses. Documentation regarding audience/demographic information, available resources, and current interpretive and educational programming was also examined. Five additional interpretive master plans, developed by Schmeeckle Reserve, Mary Bonnell, and the Pennsylvania Department of Conservation and Natural Resources, served as references for information necessary to the interpretive planning process, such as how to effectively and clearly organize a plan and some of the commonalities among interpretive plans.

After reviewing pertinent documents and artifacts to gather background information on Treehaven, as well as interpretive planning, individual semi-structured interviews were held with the Director, Assistant Director, Forest Ecologist, and other stakeholders to collect additional data. These interviews gathered personal input from Treehaven's stakeholders while also researching the resources of potential stories to be told with interpretive themes and methods. This information, along with the prior background research, was synthesized to develop statements of significance used to determine a central theme, sub-themes, and the most helpful interpretive resources available to Treehaven.

Upon finalizing a central interpretive theme, recommendations were determined to tell *what* should be told and *how* and *where* the information should be told through trails, programming, signage, and other media.

Sources of Data

The Director and Assistant Director of Treehaven were key respondents in the data-collecting phase of the project as they had interpretive goals for Treehaven in mind. Treehaven's Forest Ecologist was also included as a respondent during data collection to get his perspective on opportunities for forest education and land management. The son of the family that donated the land for Treehaven was included in the interview process to gain his unique view on the landscape and history of the site. Finally, input from a volunteer who regularly assists at Treehaven provided perspective from a stakeholder who chooses to freely give his or her time to the organization. The aforementioned individuals were selected due to their close ties to Treehaven and knowledge of environmental education and interpretation. The following interpretive master plans also served as crucial sources of data when determining what kind of background information to focus on and how to organize a master plan:

- Laurel Ridge Comprehensive Interpretive Plan – (Pennsylvania Department of Conservation and Natural Resources, 2009)

- Roxborough State Park Interpretive Master Plan – (Bonnell, n.d)

- Great River Road Visitor Center Interpretive Master Plan – (Zimmerman and Buchholz, 2005)

- Sanibel-Captiva Conservation Foundation Interpretive Master Plan – (Gross, Zimmerman, and Buchholz, 2004)

- Lost River Cave and Valley Interpretive Master Plan – (Zimmerman, Gross and Buchholz, 2006)

Treatment of Sub-Problems

Sub-Problem 1:

The first sub-problem was to identify the mission, target and anticipated audiences, and resources available at Treehaven. Addressing this sub-problem required the use of multiple methods, including reviewing official written documents and websites, holding informational meetings, and conducting interviews with Treehaven staff and stakeholders. Meetings were held with the Director, Assistant Director, and Forest Ecologist at Treehaven to discuss and further clarify Treehaven's mission statement. These meetings were held early in the data collection process and were necessary to gain a better understanding of Treehaven's mission and how to address that mission within an interpretive master plan.

Following the initial meetings with Treehaven staff, official documentation was obtained regarding Treehaven's mission, audiences, available resources, site use, land management, and geological land cover. This information was gathered from Treehaven's official website and land management plan, as well as during additional meetings with the Director, Assistant Director, and Forest Ecologist to gather supplemental background information. To determine what kind of background information and resources were most commonly found in interpretive master plans, existing interpretive master plans from other sites were examined; commonalities among the plans and organization ideas were recorded.

Once the initial background information was collected, a list of ten questions was developed regarding mission, audiences, available resources, and educational and interpretive programming. These questions (Table 1) were developed for individual, semi-structured interviews with Treehaven staff and stakeholders.

Table 1: Semi-structured interview questions used for Treehaven staff and stakeholders.

Question #	Question Content
Question 1	Treehaven's mission statement is: Treehaven, a campus of UWSP - College of Natural Resources is the Wisconsin center for integrating natural resources education, management, research and recreation. Please elaborate how you think Treehaven achieves or works toward each of these four components.
Question 2	How does Treehaven communicate the components of its mission statement (education, management, research, recreation) with its visitors, audiences, and students?
Question 3	What resources are available for: education, management, research, recreation?
Question 4	Who visits Treehaven and why do they come?
Question 5	What do you think about Treehaven having an Interpretive Master Plan?
Question 6	What do you think about the addition of interpretive trails on Treehaven property?
Question 7	What do you think about the addition of interpretive media (signs, waysides, exhibits, etc.) on Treehaven property?
Question 8	Currently, what kind(s) of interpretive programming is offered at Treehaven?
Question 9	Are there any aspects of Treehaven's history (land and/or

	institution) that you find to be particularly interesting or unique? If yes, do you think this information should be communicated to Treehaven visitors?
Question 10	Are there any aspects of Treehaven's future goals (land and/or institution) that you find to be particularly interesting or unique? If yes, do you think this information should be communicated to Treehaven visitors?

The Director, Assistant Director, Forest Ecologist, member of the donor family, and a dedicated volunteer were contacted via telephone or e-mail to consent to an interview. All five respondents consented, and dates and times were arranged for interviews. Interview participants signed an informed consent form before the start of each interview (See Appendix C). The interviews, held in person or on the telephone, consisted of the ten questions noted in Table 1 and were recorded with an audio-recorder.

Following its completion, each recorded interview was transcribed into a word document for data analysis and synthesis.

Sub-Problem 2:

The second sub-problem was to determine a central interpretive theme for Treehaven's site and programming. The first step in addressing this sub-problem was to compile all relevant background information and interview data in one master spreadsheet document made up of eight individual spreadsheets containing all interview coding, categories, and statements of significance. The

transcribed interviews were coded for propositions, or statements from interviewees that directly addressed the research problem and sub-problems. Each of the ten interview questions was coded for propositions regarding the following specific topics: mission; resources; audiences; stories; current interpretation; interpretive trails; interpretive media; and interpretive master plan. All repeated propositions were noted, and the coded interview data was then synthesized in a systematic format within the spreadsheets to develop categories regarding the individual topics (for example, categories regarding audiences were different from categories regarding interpretive trails). The most repeated categories were then used to develop statements of significance to aid in determining a central interpretive theme, as well as sub-themes, for Treehaven's site and programming. Because developing an interpretive master plan is a mission-based *communication* process, these themes were then discussed with Treehaven's Director for input and review before being finalized for use in the interpretive master plan.

Sub-Problem 3:

The third sub-problem was to provide recommendations for types of programming and interpretive media to communicate the central theme and sub-themes to Treehaven's audiences. After the central theme and sub-themes were reviewed and finalized, a trip was made to Treehaven to take photographs of potential areas for interpretive media, trails, or destinations based on background information, interview responses, and the developed interpretive themes. These

photos, taken within the buildings and at various locations on Treehaven's 1400 acre property, aided in the development of conceptual interpretive trail and media plans detailed in the Recommendations section of the interpretive plan. Additional meetings were held with the Director and Assistant Director to propose and revise interpretive ideas and plans for programming, also included in Recommendations.

All final recommendations and suggestions for further research were based on previous work discussed in the literature review; background research and information from Treehaven documents and electronic resources; commonalities found among existing interpretive master plans; synthesized data from individual, semi-structured interviews; meetings with Treehaven staff and stakeholders; and visits to Treehaven's site and property.

CHAPTER FOUR: RESULTS

RESULTS OF SUB-PROBLEMS

Sub-Problem 1:

The first sub-problem was to identify the mission, target and anticipated audiences, and resources available at Treehaven. The results for this sub-problem came primarily from interview responses with Treehaven staff and stakeholders. Interview questions 1 – 4 (see Table 1, Chapter 3) primarily addressed Sub-Problem 1, which was broken down further into the following additional sub-problems and objectives during the coding and data synthesis process (see Appendix A for all interview coding):

- Sub-Problem A: Identify Treehaven's mission.

  - *Objective 1: Identify the key components of the mission statement.*

  - *Objective 2: Identify current methods of communicating the mission statement.*

- Sub-Problem B: Identify Treehaven's audiences.

  - *Objective 1: Identify **who** visits Treehaven.*

  - *Objective 2: Identify **why** people visit Treehaven.*

- Sub-Problem C: Identify Treehaven's available resources.

  - *Objective 1: Identify the physical resources available to Treehaven.*

Results from Sub-Problem A: Identify Treehaven's mission:

Objective 1: Identify the key components of the mission statement.

The first step in identifying Treehaven's mission was to identify the key components of the official mission statement, which reads: "Treehaven, a campus of UWSP – College of Natural Resources, is the Wisconsin center for integrating natural resources education, management, research, and recreation." Regarding the mission statement itself, most of the respondents said in their individual interviews that the main component of Treehaven's mission is some form of education, whether that is working with school groups, undergraduate students from the University of Wisconsin-Stevens Point, or various other groups that utilize Treehaven's property. One respondent noted that, "Education has always been our primary focus," while another emphasized attempts at keeping education at Treehaven "experiential and outdoors and hands-on." Education was often mentioned with ties to the physical landscape, as one respondent noted, "The land resource is a platform for learning…it's a classroom."

In addition to a broad mention of education as a key component of the organization's mission, sustainable forestry and land management was also a recurring topic among Treehaven stakeholders. "The second major part of what we do is really focused on sustainable forestry," was a recurring comment from respondents. Three of five respondents mentioned this as a major component of Treehaven's mission, and yet the following was also mentioned regarding sustainable forestry and land management – "What we don't have is our story and the story of the land management here."

The topic of research, both current research efforts and expanding research in the future, was also mentioned by multiple respondents. The consensus appeared to be that "very, very little actual research has been done on the property," but that "there's a lot that Treehaven could do with research." There was an interest among all respondents that, although research is already found within Treehaven's written mission statement, future research endeavors should play a more critical and focal role in Treehaven's mission.

Recreation, the last of the four components listed within Treehaven's official mission statement, was frequently addressed by respondents when discussing both education and outdoor experiences. Recreation was rarely mentioned as a stand-alone topic – as it appears in the mission statement – but rather as a vehicle that attracts people to Treehaven for specific educational, professional, and outdoor experiences. As one respondent noted, "That's probably what we do best – getting people outdoors and experiencing nature." Another respondent said, "This is a place where people can think and get his or her life into a really cleansed way of living…with passive types of recreation – hiking, snowshoeing, cross-country skiing."

According to interview data, these outdoor experiences driven by recreational and educational opportunities help visitors create a sense of environmental appreciation within themselves. One respondent stated, "The first thing you do if you're trying to create an environmental appreciation, which is often the level that we're getting people at, is to get them outside and into a fun experience…then

you start building on it." A different respondent built on this same premise, "It's [Treehaven] an environmental learning center…not just academic book learning or philosophical interviews…this is a place where you can put your hands in the dirt, where you can touch the trees, where you can smell the air." Despite not being written in the official mission statement, the idea of environmental appreciation was routinely brought up by interview respondents when discussing Treehaven's mission.

The final recurring component from mission statement discussions was the concept of integrating the separate mission components. One respondent mentioned, "The key part of the mission statement is the integration of all those things…even though they're [visitors] not being guided by us, what can we provide for them? What experience can they discover on their own to help them learn something that has to do with our natural resources…or experience or learn something about the management that's going on out here, or maybe research, or maybe all of those things?" There were varying opinions on the level of success Treehaven is currently achieving with its mission-integration efforts. Some of the respondents felt that "the focus of the entire staff and the people there is to reinforce the mission…it's just done in so many subtle ways," and others thought, "when we do it well…we're integrating all of those pieces together in their educational experience." The general consensus was that Treehaven does a fine job of integrating the components of the mission, but there is still room for improvement to help maximize the Treehaven experience for visitors.

Although Treehaven's mission statement has four official components (education, management, research, and recreation), interview data resulted in the following key components of Treehaven's mission: education; sustainable forestry and land management; current and future research endeavors; recreation and education; recreation and outdoor experiences; environmental appreciation; and integration of mission components. While many of these are indeed similar to the components found within the official mission statement, interview results show additional depth to Treehaven's mission than what is currently written; namely, there is also a desire to build environmental appreciation through educational and outdoor pursuits at Treehaven.

Objective 2: Identify current methods of communicating the mission statement.
Beyond identifying the key components of Treehaven's mission, it was also necessary to determine how Treehaven currently communicates its mission to visitors. All interview respondents agreed that, "99% of our communication right now is through oral experiences," and that "we don't right now really have any interpretive media other than ourselves that help provide information and experiences to make those connections." It was also mentioned that "the mission is referred to in all of the brochures for the programs." Interview results showed that Treehaven primarily communicates its mission through oral programming, with written communication (such as brochures and newsletters) as a secondary communication technique.

Results from Sub-Problem B: Identify Treehaven's audiences:

Objective 1: Identify who visits Treehaven.

Interview results showed a wide range of audiences that visit Treehaven. The most common response referred to the undergraduate program hosted by Treehaven every summer. One respondent said, "This summer we'll go through 216 undergraduates from the College of Natural Resources," which was echoed by multiple individuals. Interview results showed additional audiences at Treehaven: retirees, captive audiences (referring to the undergraduate students), conferences and training groups, a diverse socioeconomic range of school groups (all with a 4th grade minimum age requirement), individuals seeking college credit from the University, and local residents. It was noted by 4 out of 5 respondents that individuals not falling into the above categories "come because they want to," and are simply voluntary audiences.

Objective 2: Identify why people visit Treehaven.

But *why* do individuals and groups want to visit Treehaven? Identifying Treehaven's audiences required not only investigating *who* visits Treehaven, but *why* people visit Treehaven; the reasons for visiting Treehaven are telling about the types of people that visit the site. It was noted by several respondents that "the public comes because of the trail system." There was also frequent mention of Treehaven's quality and diverse programming and experiences that draw people in. A common interview response was, "They see Treehaven as providing good programming, but they also see Treehaven as providing an

experience that they can't get anywhere else." Likewise, another respondent

mentioned, "We're kind of a weird breed of being a college campus, a natural

resources education center, a conference facility; but I think that's also the

attractor of why people come, because we have a lot of different things to

experience right here. I think people come here because we've got all of these

different interests that they have all in one place." Treehaven's use as a

conference and training facility was frequently mentioned in interview data, as

was the required summer program for undergraduates in the College of Natural

Resources. Overall, results showed that the majority of individuals visit

Treehaven for required undergraduate courses, to attend a conference or

training, for quality and diverse programming and experiences, and to use the

trail system.

Results from Sub-Problem C: Identify Treehaven's available resources:

Objective 1: What resources are available for education, management, research,
and recreation?

Regarding Treehaven's available resources, responses were consistent among

stakeholders. Each respondent referred to the importance and availability of

human resources. For example, one respondent noted, "From the education

side, first you have to look at the people, which is our primary vehicle for

communicating." However, the use of human resources at Treehaven expands

beyond education. According to interview data, "Research is technically a part of

our Treehaven resident ecologist position." The topic of people as the "primary

resource" was continually mentioned by all respondents during the interview

process, whether they mentioned specific staff members, work study students, or volunteers.

In addition to available human resources, the land base itself was another common response to the question of resources. One respondent stated, "We don't have a big touch and feel nature center, but we have 1400 acres of land and all these trails." This sentiment was echoed by the following statement made from a different stakeholder, "The land base itself is the giant resource we have – it's the biggest thing of all." Each respondent mentioned the 1400 acres of Treehaven land and property as an available resource. Situated throughout the land is Treehaven's trail system, another resource mentioned frequently throughout the interviews. Several respondents said, "In terms of other resources, there's trails – ski trails, snowshoe trails, walking trails." According to interview data, Treehaven not only relies on its staff and land as resources, but also on the facility and structures. It was noted by many that, "We have a couple of decks, some boardwalks, some bridges, the shelters, the cordwood cabin." Many felt that "the second biggest thing is the fact that we have this facility that has food and lodging available."

Another major resource noted by most respondents is Treehaven's affiliation with the University of Wisconsin-Stevens Point. Several respondents pointed out that, "One of the big resources that we do have is the fact that we're connected to

campus." Those connections bring with them potential new human and capital resources.

Additional resources mentioned include: physical props and equipment, minimal university funding, Treehaven's website, timber values, and program funding. However, the available resources to Treehaven most commonly mentioned in interviews were human resources, the land base and trail system, the facility itself, outbuildings and structures, and connections to the University.

Sub-Problem 2:

The second sub-problem was to determine a central interpretive theme for Treehaven's site and programming. Themes play a critical role in interpretation and the interpretive planning process, as they lay the foundation for connections between audiences and the resources or stories at a specific site; themes accomplish this through universal concepts and tangible resources. A universal concept is just that – an idea that connects with almost everyone, regardless of personal background. These universal concepts are intangible, as they cannot be physically touched and may contain different meanings to different individuals. However, most individuals can relate a universal concept to their own lives in one way or another. Universal intangible concepts cross human boundaries and rely on distinctly human emotions, ideas, struggles, and values. Examples of universal intangible concepts include love, death, survival, life, friendship, and morals, just to name a few. These terms may not conjure up the same images or

emotions for every individual, but that's the point. Universals concepts can be targeted in an interpretive message for the reader to apply to their own life in ways that make sense to them.

A theme or sub-theme requires an intangible universal concept to build emotional and intellectual connections between audiences and resources, but it is the tangible resource(s) within a theme that provide a sense of grounding and context for the audience. The tangible resource is what the audience can physically see, touch, hear, smell, or even taste. If the universal intangible resource draws on grand, sweeping, human concepts, then it is the tangible resource that provides specificity and points to a particular object, landscape, building, creature, etc. The tangible resource presents the audience with facts about the physical resource, while the universal concept allows audiences to explore the meaning of the physical resource as it relates to the human condition and, most importantly, to the individual.

Interpretive themes are a tool that can unify a site's important stories and messages by connecting universal concepts to tangible resources in statements that grab interests and ideas. Themes not only help organize a site's important stories, but they also help identify and explain the meaning within those stories and resources while still allowing audiences to arrive at their own conclusions. The purpose of a theme is not to spell out everything about a site in glaring, obvious terms; rather, it is to engage the visitor in an experience, to provoke thoughts, and to encourage the visitor to look at the resource in a new light.

When used for organizational purposes, a central theme introduces the main idea for the site. Whether personal interpretation or non-personal interpretive media, all interpretation should draw from the central theme statement as a single, unifying concept. A central theme statement, beyond organizing stories and ideas with a cohesive message, also organizes stories and resources in ways that can be clearly communicated to audiences through planned interpretive programming and media. Themes are the building blocks of both interpretation and interpretive planning.

Beyond the central theme statement, sub-themes may also emerge as a way to break the central theme into more specific ideas throughout a site. Sub-themes, like the central theme, contain universals and tangible resources, while providing an interpretive plan with more specific, individualized information about a particular aspect of the central theme. One central theme may result in a number of sub-themes. Because sub-themes are more specific than the central theme, sub-themes are especially useful when deciding where and how to use interpretive media and programming to convey stories and messages.

Sub-themes may be broken down further into specific messages and ideas through interpretive methods. Whereas themes and sub-themes organize the stories and are crucial to planning, it is often the messages that provide the bulk of the text in non-personal interpretive media, such as signs, waysides, exhibits, and brochures. However, it is important to remember that the messages are

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pulled from the sub-themes, which are in turn pulled from the central theme. Together, the central theme, sub-themes, and messages create a framework for how to most effectively communicate a cohesive and unified story to audiences.

Determining a central theme was the second sub-problem for this project. The results for this sub-problem came primarily from interview responses with Treehaven staff and stakeholders. Interview questions 9 and 10 (see Table 1, Chapter 3) primarily addressed Sub-Problem 2. In addition to determining a central interpretive theme, several sub-themes also emerged as a result of coding interview responses.

Several categories began to emerge when respondents were asked about the important stories that need to be told at Treehaven. Repeated propositions from interviews were grouped into categories. The most commonly repeated categories included: history (both land and human); the concept of restoration and change; sustainable forestry and land management; research and the role of undergraduates/the university; public participation; the legacy of the Vallier family; and the landscape itself. (For all categories and coding, please refer to Appendix A). Below are some examples of interview responses for the aforementioned most commonly repeated categories:

History (Land and Human):
"I think based on our history it's really more about people than it is about natural resources."

"There's a history of the land and how it was used even before the Kummers. There's some history here somewhere…how that land began to change over time."

"I try to impress upon starting at glaciation. We're at this tension zone where a couple of globes of glaciers met and I think that gives us an interesting landscape, which is part of understanding the land and the history."

"We had the glaciation, the rapacious logging from 1850-1920, and then we had forest fires which are a big part of the story. And then we had the re-plantings, which were in the 1940s."

"Most of our property was severely, severely burned. But if you look at the forestry type cover map you can see where the fire didn't burn on our property. You can see right by the forestry cover type – this side burned, this side didn't. Nobody sees that."

"It's hard to believe that when you look at the woods around us now that so much of it was field and so lightly covered at one time with grazing and farming."

"The early logging of this property."

"The early fires of this property."

"Interpreting the story of the land and what we do here."

Restoration and Change:

"And the restoration of the northern forests and I think that's what is unique or at least interesting. That we're trying to continue the development of the legacy of bringing this area back into a northern hardwood forest that would've existed centuries ago."

"The uniqueness is in the story of restoration and change and the potential future of it versus what it is right now."

"We can make comparisons between what this road looked like then and what it looks like right now. What that first year plantation looked like as they were planting it in 1956 and what it looks like right now."

"Where the complex sits on the university side, that was going to be a runway for the family airplanes…*Gordon Kummer* had taken a bulldozer to it and then he died, so everything changed. The plane was sold, the order was cancelled, and the only tree that was on the property where the complex is is that big white pine by the White Pine Lodge. It's the only tree that was there. The whole area was an empty field."

"The whole land restoration, and we're not really using the term restoration, but that's what it is."

"This is nation-wide that people look at the woods like it doesn't change. They change. That's why I like the thought of pictures - to be able to show what it looked like 40 years ago, 20 years ago, and maybe even some pictures of this is what we think it's going to look like in 10, 20, maybe 40 years from now."

"Because we're changing the landscape intentionally in a lot of different areas."

"The forest is changing all by itself and if you look at some old pictures you'll definitely see that."

"There are some specific things we're trying to do to this forest going to the future."

"We're interested in what happened 150-500 years ago on what happened on this property. That shows us why we're here now and then we're almost looking that far in the future - where do we want to take it? What are the small steps we take along the way to get there? This is very long-term, and how do you interpret that?"

"One of the things is going back to the forestry plan for the property. So many people hear a chainsaw and think that we're just destroying it and ripping it up and that there's no conservation involved in it."

"Information about that, about why we're cutting down these trees and why it's not left the way it is, why we're getting rid of invasive species that are out there. I think that the future goals for the property itself is a pretty exciting thing."

"What happens on the land is an ongoing change. Change is constant."

"And then what do we envision this land base looking like 100 years from now?"

Sustainable Forestry and Land Management:

"That whole forest management aspect, that we're sustainable forestry certified, that's a big part of the story, too."

"Today, we have active forest management on the property…the current one is that land management part of it."

"If you think long-term planning in businesses, five years is long-term planning. Well in forestry we're talking 100, maybe 150 years is long-term planning. I won't even be here to see it. I'll be lucky if my grandkids see what we're planning on."

"We're interested in what happened 150-500 years ago on what happened on this property. That shows us why we're here now and then we're almost looking

that far in the future - where do we want to take it? What are the small steps we take along the way to get there? This is very long-term, and how do you interpret that?"

"Now I see the benefits of what was planted 50 or 60 years ago when they were put in as saplings…they are now 50 feet high in many of the plantations. So you can see that growth and generation and now the regeneration that goes on. And that's exactly what my folks wanted. They wanted to maintain and develop a more productive type of land. They wanted a healthy forest, from all aspects."

"We're just stewards of a resource for now and in the future. Our job is to maintain it and to make sure that it's in better hands and as healthy as possible when it's moved from my tenure of keeping over it, as my folks did and then gave it to me to take care of, that it's left for the next generation to jump in an do better things with it."

Research and Role of Undergraduates/University:

"If we look at the bigger picture, the fact that we house the summer session here and become a field station in the summer time is unique. There are nature centers all around the mid-west, but very few of them have such a well-defined program like this, so that's a huge part of the story."

"The research that we're doing is just now becoming a big part of the story."

"Hey, we have this summer session program, we do public programs in these four areas, we have this glacial history, we have Native American use, we have logging, and now we have sustainable forest practices on the property, and the next big window is how far are we getting into research?"

"But the particularly unique things…the fire is an eye catcher. The scarification.

People gasp when they see it because it's horrible and ugly, but the unique thing

is that's the requirement of that tree to regenerate."

"I think we're just beginning to turn this corner with this interesting question of

"what will research be here in the next 5 years?" Which could be a much larger

part of our story than it has been."

"It's an interesting place because we're not just a nature center, we also have

land management and research and we also have this college summer session

thing. Those are all worthwhile stories to talk about. So I think any time we can

integrate the story of that into programming is great."

Public Participation:

"There's a really interesting story there so the public can help participate in the

future vision of what this land will look like."

"It's not that they're just unique to Treehaven - they're on everybody's property -

but unique in the sense of "let's show people how to interpret that on their own

property."

"I think the story or the unique aspect of the future goals is how do we bring

along the public? How do we bring the public into that story and experience that

along the journey? And how do undergraduates who come here get a sense of

what's going on here?"

Legacy of Vallier Family:

"The Valliers are an interesting part because they had so many fingers in so many important environmental conservation stories across Wisconsin from the Schlitz Audubon. So that family history needs to be a big part of it, too."

"I think the story of how the family donated the property and why they donated the property that became Treehaven is pretty interesting."

"They're a family that was huge in the natural resource conservation movement in Wisconsin, and a little more information about that and the things they've done - not only at Treehaven but other conservation efforts they've been part of - would be a nice touch, a nice learning experience."

"What we do today is for the next generations and that message really needs to be talked to folks."

"Now I see the benefits of what was planted 50 or 60 years ago when they were put in as saplings…they are now 50 feet high in many of the plantations. So you can see that growth and generation and now the regeneration that goes on. And that's exactly what my folks wanted. They wanted to maintain and develop a more productive type of land. They wanted a healthy forest, from all aspects."

"We're just stewards of a resource for now and in the future. Our job is to maintain it and to make sure that it's in better hands and as healthy as possible when it's moved from my tenure of keeping over it, as my folks did and then gave it to me to take care of, that it's left for the next generation to jump in an do better things with it."

"The people who are up at Treehaven, they are stewards of the property. None of us owns this property. It's bigger than any one group or one individual. It's something more sacred. So I think that every student that comes on this property leaves this property with a part of it. There's a steward legacy, and they don't even know it. But by being here and using it and using it constructively they become part of that legacy. And I think that the group will hopefully help to ensure the stability and longevity of this property and this area in years to come."

Landscape:

"The land itself, the property itself, there's nothing unique about it."

"What we don't have, by the way, we don't have a critically endangered habitat. There's not like some strange kettle or a bog with extremely rare plants."

"There are some tremendously unique things on the property - unique to me. Unique to other foresters. Unique to other land managers. They would consider that to be unique, although I don't know necessarily if that's going to be unique to everybody."

"We've got a couple of very unique wetlands and vernal ponds on the property that are unnoticed by 99% of the people who come here."

"There are some unique forest types that are going through some unique changes from conversion of one forest type to the next."

"More information so that they can understand what they're seeing. For instance, the garden right outside of the main office - what are all these plants? Why are they here?"

"There's so much opportunity to go beyond what's in the classroom with the facility like they have at Treehaven. It's being underutilized."

Using the above propositions and categories as guides, the following universal concepts continually emerged: change, past, present, future, family, legacy, ethics, sustainability, and need. Just as universal concepts emerged, so did the following tangible resources: landscape, Wisconsin, and citizens. With these universal concepts and tangible resources at hand, it was determined that Treehaven's central theme statement should be:

Treehaven's changing landscape offers a window to Wisconsin's past, a bridge to a sustainable future, and a snapshot of a present day shaped by family legacy, land ethic, and the need for environmentally literate citizens.

As discussed again and again in interviews, much of Treehaven's story comes from the changing relationship between people and the land; both the universals and tangible resources within the central theme are heavily influenced by the concepts of time, people, and the landscape.

The central theme was then broken down into the following four sub-themes and messages, based on the central theme itself, with additional consideration from interview responses about the mission, audiences, resources, and important stories:

- *Sub-Theme 1*: Treehaven is the living legacy of the Vallier family's desire to conserve and protect Wisconsin's natural places.
    - *Messages*:
        1. Dorothy Vallier and her husband Gordon Kummer, and later Dorothy and her second husband Jacque Vallier, were pioneers in environmental conservation efforts throughout Wisconsin.
        2. Decades of reforestation and conservation efforts by the Kummer and Vallier family restored a once barren and abused landscape to the thriving mixed hardwood forest now known as Treehaven.
        3. The Vallier family generously donated Treehaven to the College of Natural Resources at the University of Wisconsin-Stevens Point to be used as a platform for natural resource education, management, and research in Wisconsin.
- *Sub-Theme 2*: Treehaven forges lasting connections between visitors and the natural world through memorable outdoor experiences on the Treehaven landscape.
    - *Messages*:
        1. Miles of trails and 1400 acres of forested land provide a unique outdoor classroom for visitors.
        2. Passive recreation allows visitors to explore the land on their own time and at their own pace.

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- *Sub-Theme 3*: Treehaven's landscape reveals a complex and changing relationship between humans, wildlife, and the land throughout history in northern Wisconsin.

    - *Messages*:

        1. Treehaven rests on an ancient glacial ridge, providing many forest and wetland habitats for an abundance of wildlife.

        2. Humans heavily influenced the northern Wisconsin landscape during the late 19th century and early 20th century through logging activities, farming, and forest fires.

        3. Modern forestry practices are restoring Treehaven's landscape to the mixed hardwood forests and wildlife habitats of centuries past.

- *Sub-Theme 4*: Treehaven provides a unique venue to discuss and promote sustainability through land management practices, forestry research, and natural resources education.

    - *Messages*:

        1. Sustainable land management requires understanding the landscape's past while developing long-term plans for the future.

        2. A variety of research is conducted on Treehaven's property to gain a better understanding of sustainable forestry.

        3. Undergraduate students play a crucial role in research and education at Treehaven.

Sub-Problem 3:

The third sub-problem was to provide recommendations for types of programming and interpretive media to communicate the central theme to audiences. Specific recommendations for interpretive media and programming at Treehaven are discussed in depth in Chapter 5: Conclusions and Recommendations, but the results that led to those recommendations are noted in this chapter. The results for this sub-problem came primarily from interview responses with Treehaven staff and stakeholders. Interview questions 5, 6, 7, and 8 (see Table 1, Chapter 3) primarily addressed Sub-Problem 3.

In order to provide recommendations for interpretive media and programming to be included in an interpretive plan, it was necessary to collect information about the following topics:

- Current interpretive programming at Treehaven.

- Desire for potential interpretive trails on Treehaven's property.

- Desire for potential interpretive media on the property.

- Stakeholders' expectations about the interpretive plan.

Regarding Treehaven's current interpretive programming, several categories emerged from interview responses. Repeated propositions from interviews were grouped into categories. The most commonly repeated categories included: lack of interpretation; education as the primary focus; and oral interpretive

programming. Below are some examples of interview responses for the aforementioned most commonly repeated categories:

Lack of Interpretation:

"We don't probably purposely design and develop interpretive programs. I think we have educational programs that may have some interpretive components to them."

"The programs, honestly, could be better focused on the interpretive side."

Education as the Primary Focus:

"We don't probably purposely design and develop interpretive programs. I think we have educational programs that may have some interpretive components to them."

"I guess we could put into that basket all of the school programs that we do and all of the LIFE programs that we do, which are closed public groups that come for a connection."

Oral Interpretive Programming:

"The Birds and Brunch is an example of probably an interpretive program."

"The 4th grade program is kind of an obvious interpretive block…there's the logging history one, Native American stuff."

"The wolf ecology (workshop) where they actually got out when the opportunity presented itself."

"The photography workshop that they offer on a yearly basis."

"The Sex in the Garden program was a class interpretive program."

"In the spring they're in waders and wading around the stream, they're canoeing around the pond, they're learning the features of the land."

Based on the interview responses about current interpretation at Treehaven, it was determined that there is a lack of programming designed with interpretation principles in mind. Treehaven's focus is more on educational programs, and it is considered a positive thing if those programs happen to have an interpretive slant to them. It also became clear that almost all current interpretation is done through oral programming; there is some interpretive media, but hardly any, and mostly in the form of a few signs made with word processing software. Interview responses also showed a slight desire for increasing interpretive programming at Treehaven, but not make it a major focus for the staff.

Several categories emerged from interview responses regarding stakeholders' desires for potential interpretive trails on the property. Repeated propositions from interviews were grouped into categories. The most commonly repeated categories included: desire for interpretive trails; desire for interpretive destinations; maintain the character of the landscape; interpretive plant trail; forest management trail; Beaver Pond interpretive trail; separate hiking and interpretive trails; and handicap accessible trails. Below are some examples of interview responses for the aforementioned categories:

Desire for Interpretive Trails:

"I think we need them. I think we have a story to tell."

"One of the ways (to tell a story) is to have one or two interpretive trails on the property that would allow us or the visiting public to have another reason to come here."

"(Interpretive trails) would allow them to experience not only the recreation but a learning aspect to their self-guided visit."

Desire for Interpretive Destinations:

"There's other interpretive experiences I think are important…spots on the property that people want to go to. Things that we think they might value. They pick and choose the areas on the property that they would like to go visit. It's not a specific trail, but a destination."

"I think there are a couple of key spots that we at least need to have a marker, like a numbered marker that would be discreet that people could reference."

Maintain Character of the Landscape:

"Can you do it in such a way that you still maintain the character of the landscape?"

"I don't think we'd want interpretive signage all throughout the property. I don't think that would be necessary."

"If we did the whole property with signs all over, the downside is that if you have too much of that, too much manicuring of the system, or boardwalks and steps to

everything and maps and signs it takes away the wild character that we try to give people."

"Are you really walking in the woods? You've now gone to an educational, interpretive trail and that's a big distinction if there's signage all along the way."

"As long as we don't ruin the idea of what Treehaven is there for - being the natural resource it is."

Interpretive Plant Trail:

"Kevin actually had the idea where it would be identifying all the plants out there, which would be a very unique thing to actually walk along that trail and not only have something talking about forest succession but something saying "this is mullein" and then a little description about it."

Forest Management Trail:

"Another idea, as you know, we're doing all of these different forest management activities on the property. I think it would be interesting, along the trails, to have a descriptive plaque of those basic things - when was this thinned, how was it thinned, why was it thinned, when is it going to be done again?"

Beaver Pond Interpretive Trail:

"One of the trails that took a couple of years but it now loops around the old beaver pond…it was designed specifically as a nature trail and for hiking. It goes through some really beautiful habitats of Treehaven and is much more

aesthetically pleasing and interesting than walking on a logging road. So that's a prime candidate for an interpretive trail."

Separate Hiking and Interpretive Trails:

"To have people hiking for the sake of hiking and people doing the interpretive walk without ever running into each other. So having separate trails would be great."

Handicap Accessible Trails:

"I also think there should be a handicap accessible trail on this property. I think there should be an interpretive trail where someone who's handicapped can be driven out…and maybe there's a mile long trail out there that's manicured for that."

"I think the beaver pond overlook is an ideal place for somebody who's in a (wheel)chair to go down there and view that magnificent wetland."

Based on the interview responses about desires for interpretive trails at Treehaven, it became clear that there is a strong desire for interpretive trails, specifically around the beaver pond, as long as there is not too much signage or distractions that take away from the natural character of the landscape. There is also a desire for interpretive destinations on the property, probably marked with some kind of small marker or sign. It was also important to stakeholders that visitors have an option to choose between interpretive trails or hiking trails and

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that individuals in wheelchairs also have the opportunity to enjoy an interpretive trail or scenic overlook.

Several categories also emerged from interview responses regarding stakeholders' desires for potential interpretive media on the property. Repeated propositions from interviews were grouped into categories. The most commonly repeated categories included: desire for well-made, professional signs; maintain character of the landscape; location of media (not on logging roads); electronic media (apps, podcasts, GPS, etc.); media within buildings; trail signage; location of media (Dragonfly Pond, Beaver Pond, back deck); and benches by trail signage/media. Below are some examples of interview responses for the aforementioned categories:

Desire for Well-Made, Professional Signs:
"Some very well done interpretive signage perhaps that would allow them (the visitors) to experience not only the recreation but a learning aspect to their self-guided visit."
"We need to get really tight, clean, and beautiful stuff on those kiosks. There's three kiosks in all…and those are just begging to have good quality information put up on them."
"If they are done well they can be a real asset to what is being taught and what is being displayed."
"It needs to be professionally done, well-made, positioned media."

"The only suggestion I make is that the signage be standardized. I think it's pretty hokey when you have multiple different types of designs and things that don't blend."

Maintain Character of the Landscape:

"I don't think we'd want interpretive signage all throughout the property. I don't think that would be necessary."

"I keep saying less is more. We could put signs all over the place out there, but is it going to be obtrusive? If we have too many signs we're not going to be exhibiting what we think we want to exhibit here."

Location of Media (Not on Logging Roads):

"On some of the larger roadways out there it probably would not be good for us to put up a lot of signage on those because I don't want them to get knocked down by logging equipment."

"Anything on the property has to keep in mind, "Let's not keep it in a spot where we have to continually pull it out of the ground and move it every time we have to have an operation going on here." So there needs to be some thought put into that."

Electronic Media:

"I think we should be looking at apps."

"I think maybe podcasts."

"Other types of interactive electronic media that would be possible out there."

"Maybe a GPS-guided experience."

"I think those phone code things would be good on all three of them (kiosks)."

Media Within Buildings:

"Interpretive media may also include recommendations on how do we turn this building and the spaces we have within the physical buildings into an interpretive experience."

"Right here in the buildings either in the downstairs hallway or upstairs hallways is to have something educational…the potential might be in the hallway."

Trail Signage:

"The third would be signs out on the trail."

"I would subdivide that between posts, which we could have unlimited numbers of because they're very discreet, versus big signs."

Location of Media (Specific Destinations):

"And a sign with a story on it - I'd like one at the dock on Dragonfly Pond, I'd like one out the back door here on the back deck, and then at the Beaver Pond. All three of those sites already have unmistakable, imprinted elements - they've got a big wooden deck or dock, so why not use that because you're not changing the feeling of anything by adding a sign there."

"Down on the dock by Dragonfly Pond you have a good opportunity to have a kiosk and information there."

"At the garden, this could be great talking about how it's done naturally and what its use is."

Benches by Trail Signage/Media:

"I think if you have a sign friendly type of a spot, you may have a bench put down - maybe a little bit bigger so people could sit down and rest for a bit."

Based on the interview responses about desires for interpretive media at Treehaven, it was clear that stakeholders desire well-made, professional, standardized signs/media on the property. However, it is important that media is not abundant and overwhelming. It was important to stakeholders that the character of the landscape is maintained despite signage and media. It also became clear that forests at Treehaven are "working forests" with research and logging operations taking place throughout the year, which should be taken into account when providing recommendations for media. Roads heavily used for logging operations should not become interpretive destinations or contain signs/posts/etc.

There is also a strong desire for interpretation that can stand alone without the assistance of a staff member delivering a message, primarily through interpretive media. Several locations were repeatedly mentioned as potential locations for large interpretive signs or exhibits: Dragonfly Pond, Listening Point Overlook by the Beaver Pond, back deck of the main building, the garden, and the three existing kiosks on the property by the ski/snowshoe trailheads. The use of

interactive technology, in the form of cell phone apps, GPS, and podcasts, was also frequently mentioned when discussing interpretive media.

The final topic that needed to be discussed before providing recommendations for interpretive media and programming was stakeholders' thoughts and expectations for an interpretive plan. Repeated propositions from interviews were grouped into categories. The most commonly repeated categories included: wide range of interpretive possibilities; creating an institutional memory for continuation of plan; continuation and maintenance; and better/increased utilization of property. Below are some examples of interview responses for the aforementioned categories:

Wide Range of Interpretive Possibilities:
"I think there's a wide range of things that we could do to help tell the story and provide unique and interesting experiences for the visitors."
"I think it's a great idea. I think we need to have it. We need to figure out what is the thing that we want the people to know about us and where are the places we get that information out?"
"I don't think you can just have a forestry plan or just a wildlife plan or soils plan. I think you have to bring interpretation into it to understand the interactions of all the ecosystems which create the biosphere. It's an integral part of a solid, philosophic and operating comprehensive plan."
"Interpretive master plan in my mind is how do we tell our story following the principles of interpretation so that it's truly meaningful and interesting to our

constituency? And right now we have multiple disconnected inconsistent ways of trying to do that and we don't even really have a central theme on what we're trying to communicate."

Creating an Institutional Memory for Continuation of Plan:

"Create an institutional memory."

"It's going to be a component of an on-going and upgrading of interpretation of this property."

Continuation and Maintenance:

 "Everything that we put on this property has to be part of a maintenance plan. How are we going to replace it? Where's the money to replace it? Who's going to replace it? Where's the time allocated for this?"

"So it's not creation that bothers me so much or worries me, it's how do we maintain this through time?"

Better / Increased Utilization of Property:

"I think having a master plan, an interpretive master plan, will help getting better utilization of the property beyond the students and post-graduate students that are using it as part of a UWSP campus."

"I think a well worked master plan could increase the usage on the property."

Based on interview responses, stakeholders see an interpretive master plan as a means to develop and organize a wide range of interpretive possibilities (some

personal interpretation, but mostly non-personal) while simultaneously creating

an institutional memory for the continuation of interpretation at Treehaven.

Stakeholders also believe that developing an interpretive master plan could

potentially lead to better and increased utilization of Treehaven property. It was

also clear that maintenance and upkeep of proposed interpretive media be

included in the plan, possibly as an appendix.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

Recommendations for Interpretive Media, Trails, and Programming

Overview of Interpretive Media and Technology:

Treehaven stakeholders expressed concern about the landscape being "signed out to the max" and the possibility of media taking away from the character of the landscape. There was also concern about sign maintenance and putting signs on active logging roads where they could be easily knocked over by trucks and equipment. There was a suggestion for putting signs where a distinct human footprint already exists, such as a dock, overlook, boardwalk, etc. Stakeholders felt that adding a sign to an area that already has a clear human presence would not detract from the landscape; rather, it is an opportunity to help people connect with the landscape. There are many areas on Treehaven's property that lend themselves to a professionally made interpretive sign; namely, the back deck of the main building, the dragonfly pond deck, the garden, listening place overlook, the start of the proposed Wisconsin Plant Identification Trail, and several of the hallways in the main building complex. These are all areas that have a dock, deck, or clear human presence; signs and waysides in these locations would not detract from the natural feeling of the landscape.

The locations recommended for interpretive panels and wayside exhibits will probably not see many changes in the near future, so a permanent sign detailing

a particular sub-theme and message is appropriate, whereas active research and demonstration areas require information and interpretation updated more frequently through the use of QR, or "quick response," codes for smart phones. Smart phones scan the QR code, which looks like a bar code; the code opens the phone's internet browser and takes the individual to a website or video with additional information. QR codes could be especially useful for the forest research and demonstration sites, as well as sensitive habitats, around Treehaven. Stakeholders were very clear about limiting interpretive signage, especially on active logging roads, and maintaining the character of the landscape. As the research changes for a particular site, it is easy to update a website (linked to a QR code) to accommodate changes in research and results and interpret that information to the public. Most of the codes can be placed on existing trail markers, with the exception of a few destinations that require adding a wooden post. This is cost effective and low maintenance compared to designing, building, and maintaining interpretive signs and wayside exhibits. The QR codes allow visitors to connect to the resources and landscape through technology, which stakeholders desired.

While QR codes are a tool to combine interpretation and technology, not everyone has a smart phone. Relying solely on QR codes has the potential to alienate visitors who do not have smart phones, whereas interpretive panels may reach a broader audience. Also, while stakeholders desired increasing the use of technology for interpretation, there was still a strong desire for interpretive

signs. The recommendations in this plan aim to strike a balance between traditional interpretive signs and technology.

Beyond QR codes and smart phones, there are many other interpretive venues that Treehaven may explore through technology. There is a lot of potential for Treehaven's website and Facebook page to use videos (especially YouTube videos, which do not have a cost and can be embedded into websites), podcasts, slideshows, etc. A weekly or monthly podcast, video, or slideshow on Treehaven's website or Facebook would be an effective way to help previous visitors stay connected to and interested in Treehaven. The podcast, video, or slideshow could be about anything of interest at Treehaven, and the particular sub-theme could vary with each episode.

Some potential examples of podcasts, videos, or slideshows include: update on research sites, trail conditions/things to do on the trails, Kummer/Vallier family history, interesting habitat information, phenology, stream and pond watches, etc. The podcast/video/etc. could be made and uploaded by a Graduate Fellow or undergraduate student, providing a tie to the university. Developing interpretive videos or podcasts allow for more personal interpretation without increasing actual face-to-face interpretation.

Overview of Interpretive Trails and Programming:

This plan does not currently recommend the addition of interpretive trails at Treehaven. Although Treehaven stakeholders expressed interest in interpretive trails, they also expressed concern about upkeep and maintenance of interpretive signage and how signs could potentially impact the character of the landscape. In addition, there was concern about putting signs on active logging roads – which are most of the trails on Treehaven's property. The researcher concluded that an interpretive trail on an *existing* trail is probably not likely. If there is to be an interpretive trail at Treehaven an entirely new trail will have to be built somewhere on the property.

After interviewing Treehaven stakeholders, there seemed to be a greater desire for interpretive *destinations*, rather than entire interpretive trails. While Treehaven has an extensive trail system, it does not currently have any list or markings on the trail maps showing places of interest on the property. Likewise, as one travels the trails it is common to stumble upon areas with fences, flags, or even entire swaths of forest that are burned with no information as to what's going on in that particular area. There are also some unique forest habitats, such as the hemlock grove and cedar bog, that are easy to walk past without noticing.

Instead of recommending an interpretive forestry trail, it seems more fitting for Treehaven, based on its audiences, resources, and needs, to recommend Forest

Habitat and Research Destination sites. There are at least 8 sites that can be included – the deer fence, burn site, white birch regeneration site, red pine plantation, aspen stand, cedar bog, and hemlock grove – with potentially even more sites than those listed. These sites would be tied together with a marker on Treehaven's trail map that denotes them as Forest Habitat and Research Destination sites. QR codes attached to trail markers and posts would allow visitors to receive interpretation and information about these sites via cell phone. As the results and research changes, the websites linked to the QR codes can be updated and changed as well.

The majority of the proposed Forest Habitat and Research Destination sites have existing trail markers either at the exact site or very nearby. Only a few additional posts and/or markers would need to be added. QR codes would be attached to the trail marker or post. The codes could take visitors to videos of the Forest Ecology or undergraduate/graduate students explaining the research/demonstration or habitat site, providing more in-depth information than could be included on an interpretive panel. This also allows the visitor to receive some personal interpretation while out on the trail without requiring a staff member to be present at any particular moment.

Several stakeholders brought up the idea of an interpretive plant walk on the existing Beaver Pond trail by the Listening Place. Every summer, the undergraduate students must be able to identify more than 100 plants found

along this trail. And every summer, Treehaven staff and undergraduate teaching

assistants go out on the trail and flag the individual plants. Stakeholders

expressed a desire for a more permanent plant walk. However, the concerns

remained the same: too many signs would require too much maintenance and

would take away from the character of the landscape. Upon further thought, it

became clear that stakeholders did not necessarily desire an *interpretive* plant

walk, but rather an *identification* plant walk. With so many plants to cover, and a

"less signs is better" mentality, the volume of information on such a short trail

(roughly 1 mile) make it almost impossible to interpret. However, it *is* possible to

combine a small amount of interpretation at the beginning of the trail head with

an identification walk.

An interpretive sign is recommended to mark the trail head of the proposed

Wisconsin Plant Identification Trail. This sign should address the message from

sub-theme 2 about Treehaven trails acting as an outdoor classroom. This sign

would most likely be the end of interpretation on the trail, though. There are

three options for identifying plants along the trail itself:

- Cell Phone Tour/App: There are many options for companies that will

  design a tour or app for a cell phone, as seen in Technology

  Recommendations on Page #72.

- QR Codes: Small markers along the trail with attached QR codes take

  visitors to websites or videos detailing specific plants. However, this

  particular method requires an abundance of markers and staff vigilance to

make sure markers are not damaged and remain in correct locations. It is
also important to take into account that the large volume of markers may
detract from the natural feeling of the trail.

- Brochures: Small markers along the trail correspond to numbers within a
color, high resolution brochure detailing specific plants. However, this
particular method requires an abundance of markers and staff vigilance to
make sure markers are not damaged and remain in correct locations. It is
also important to take into account that the large volume of markers may
detract from the natural feeling of the trail.

SUMMARY OF RECOMMENDATIONS FOR MEDIA - WAYSIDE EXHIBITS/SIGNS

LOCATION	MODE OF INTERPRETATION	SUB-THEME(S)	ADDITIONAL RECOMMENDATIONS/NOTES
Main Building – Back Deck	Set of interpretive panels	Sub-Theme 1, Sub-Theme 2, Sub-Theme 3, Sub-Theme 4	There is enough space on the back deck for an interpretive panel for each sub-theme, if desired. Developing interpretive panel on back deck for each sub-theme would provide visitors with a good overview of all aspects of Treehaven, without having to leave main building complex. Interpretive panel(s) should be set low enough not to obstruct view of pond.
Dragonfly Pond Deck	Interpretive panel	Sub-Theme 3	Interpretive panel should be set low enough not to obstruct view of pond.
Garden	Interpretive panel	Sub-Theme 4	Interpretive panel should be mounted by garden fence and easy to spot by visitors casually walking past the garden.
Listening Place Overlook	Interpretive panel	Sub-Theme 3	Interpretive panel should be set low enough not to obstruct view of pond.
Right or Left of Listening Place Overlook	Trailhead Sign	Sub-Theme 2	Serves as trail marker for Wisconsin Plant Identification Trail with interpretive message about the trail as an outdoor classroom. Includes QR code and/or information about cell phone tour.
Main building – Downstairs hallway	Interpretive panel	Sub-Theme 4	Explain existing timber panels on downstairs hallway walls.
Main building – Dining Room	Interpretive panel	Sub-Theme 4	Connect produce from garden, composting system, food service.
Main building – Upstairs hallways	Set of interpretive panels	Sub-Theme 1	Detail Vallier family's contribution to Wisconsin conservation efforts and Treehaven's history.

SUMMARY OF RECOMMENDATIONS FOR MEDIA - QR CODES

LOCATION	MODE OF INTERPRETATION	SUB-THEME(S)	ADDITIONAL RECOMMENDATIONS/NOTES
Deer Fence – Trail Marker #24	QR Code	Sub-Theme 4	Forest Habitat and Research Destination. QR code attached to trail marker.
White Birch Regeneration Site – Trail Marker #36	QR Code	Sub-Theme 3, Sub-Theme 4	Forest Habitat and Research Destination. QR code attached to trail marker. Codes take visitors to video of Forest Ecologist or undergraduate students explaining the research/demonstration/habitat site.
Burn Site – Trail Marker #7	QR Code	Sub-Theme 3, Sub-Theme 4	Forest Habitat and Research Destination. Photos from the burn, in addition to a video or text interpreting the burn site, should be included. QR code attached to trail marker. Codes take visitors to video of Forest Ecologist or undergraduate students explaining the research/demonstration/habitat site.
Hemlock Grove – Trail Marker #34	QR Code	Sub-Theme 4	Forest Habitat and Research Destination. QR code attached to trail marker. Codes take visitors to video of Forest Ecologist or undergraduate students explaining the research/demonstration/habitat site.
Cedar Bog – Between Trail Markers #39 and #37	QR Code	Sub-Theme 4	Forest Habitat and Research Destination. *A post would need to be added to this spot to display the QR code.* Codes take visitors to video of Forest Ecologist or undergraduate students explaining the research/demonstration/habitat site.
Red Pine Plantation – Near parking lot	QR Code	Sub-Theme 3, Sub-Theme 4	Forest Habitat and Research Destination. *A post would need to be added to this spot to display the QR code.* Codes take

			visitors to video of Forest Ecologist or undergraduate students explaining the research/demonstration/habitat site.
Aspen Stand – Trail to the right of Dragonfly Pond	QR Code	Sub-Theme 4	Forest Habitat and Research Destination. *A post would need to be added to this spot to display the QR code.* Codes take visitors to video of Forest Ecologist or undergraduate students explaining the research/demonstration/habitat site.
Garden Shed	QR Code	Sub-Theme 4	QR code, attached to garden shed, should take visitors to images/greater detail of cordwood construction process, including photos from garden shed construction. Include information on how this ties to sustainability.
Cordwood Cabin – Marker #17	QR Code	Sub-Theme 4	QR code, attached to Cordwood Cabin sign, should take visitors to images/greater detail of cordwood construction process, including photos from Cordwood Cabin construction. Include information on how this ties to sustainability.
Kiosk – West end of property	QR Code	Sub-Theme 2	QR code takes visitors to Treehaven trail map and/or website.
Kiosk – Parking lot	QR Code	Sub-Theme 2	QR code takes visitors to Treehaven trail map and/or website.
Kiosk – Ski trailhead	QR Code	Sub-Theme 2	QR code takes visitors to Treehaven trail map and/or website.

SUMMARY OF RECOMMENDATIONS FOR INTERPRETIVE PROGRAMMING, MEDIA, and/or TRAILS

LOCATION	MODE OF INTERPRETATION	SUB-THEME(S)	ADDITIONAL RECOMMENDATIONS/NOTES
Various destinations on Treehaven property (Forest Habitat and Research Destinations): • Deer Fence • Burn Site • White Birch Regeneration • Red Pine Plantation • Aspen Stand • Cedar Bog • Hemlock Grove	QR Codes	Sub-Theme 3, Sub-Theme 4	Destinations noted with marker on trail maps symbolizing "Forest Habitat and Research Destination" sites. These destinations have either pre-existing trail markers or require newly built posts with attached QR codes. The codes take visitors to video of Forest Ecologist or undergraduate students explaining the research/demonstration/habitat site, providing more in-depth information than could be included on an interpretive panel. Also allows the visitor to receive personal interpretation.
Treehaven website and/or Facebook page	Podcast/video	Sub-Theme 1, Sub-Theme 2, Sub-Theme 3, Sub-Theme 4 (May vary from week-to-week or month-to-month)	Weekly or monthly podcast or video on website/Facebook page about something of interest at Treehaven. Examples include: update on research sites, trail conditions/things to do on the trails, Kummer/Vallier family history, interesting habitat information. Podcast or video could be made and uploaded by Graduate Fellow or undergraduate student – provides tie to university. Allows for more face-to-face interpretation without increasing interpretive programming.
Beaver Pond Trail (Proposed name change to Wisconsin Plant Identification Trail)	Cell Phone Tour *OR* QR Codes	N/A	Wisconsin Plant Identification Trail would *not* be an interpretive trail, but rather a plant identification trail with an interpretive sign marking the trailhead. A cell phone tour/app is one method for

			identifying plants along the trail.
Beaver Pond Trail (Proposed name change to Wisconsin Plant Identification Trail)	QR Codes	N/A	Wisconsin Plant Identification Trail would *not* be an interpretive trail, but rather a plant identification trail with an interpretive sign marking the trailhead. Small markers along the trail with attached QR codes take visitors to websites detailing specific plants. However, this particular method requires an abundance of markers and staff vigilance to make sure markers are not damaged and remain in the correct locations.
Beaver Pond Trail (Proposed name change to Wisconsin Plant Identification Trail)	Brochure	N/A	Wisconsin Plant Identification Trail would *not* be an interpretive trail, but rather a plant identification trail with an interpretive sign marking the trailhead. Small markers along the trail correspond to numbers within a color, high resolution brochure detailing specific plants. However, this particular method requires an abundance of markers and staff vigilance to make sure markers are not damaged and remain in the correct locations.

Recommendations for Interpretive Panel Materials

Overview:

There are a multitude of potential materials for interpretive panels; however, based on Treehaven stakeholder interview responses, two particular materials are recommended for interpretive panels at Treehaven: high pressure laminate and porcelain enamel. Treehaven stakeholders expressed concerns about interpretive signage requiring lots of maintenance and issues with cost. For these reasons, high pressure laminate and porcelain enamel signs may be a good option for Treehaven for a variety of reasons.

High Pressure Laminate:

High pressure laminate is considered durable, very resistant to weather and vandalism, and usually comes with a 10-20 year warranty against fading and delaminating. Another benefit of high pressure laminate signs, in addition to its durability and good graphic detail, is its versatility. Whereas some panel materials require the additional expense of framing, high pressure laminate can be produced in a variety of thicknesses that do not require additional framing. Framing is not required if the sign is at least ½ inch thick, which cuts down on both cost and additional maintenance for the frame.

Very little maintenance is needed for a high pressure laminate sign itself. Marker can be removed easily, and scratches can be buffed out with car wax. However, it should be noted that some maintenance is necessary to keep high pressure

laminate signs in good shape for the duration of their life expectancy; it is recommended that high pressure laminate signs be washed and waxed twice per year for long-term durability.

Porcelain Enamel:

Porcelain enamel is another material to consider for signs at Treehaven, as sign durability was a concern amongst stakeholders. It is important to note up front that porcelain enamel signs carry a high initial cost (up to six times as much as high pressure laminate) and are expensive to duplicate and/or replace; however, porcelain enamel signs provide better graphics, color retention over time, graffiti removal, abrasion resistance, and cracking/peeling resistance. Signs made from porcelain enamel can last longer than forty years with the proper maintenance of an annual wash and wax. Porcelain enamel signs also require framing.

SUMMARY OF RECOMMENDED INTERPRETIVE PANEL MATERIALS

Chart contents from Signs, Trails and Wayside Exhibits *by Michael Gross, Ron Zimmerman, and Jim Buchholz*

	High Pressure Laminate	**Porcelain Enamel**
Graphics and Color		
Graphics Capability/Resolution	Very good	Excellent
Color Capability	4-color digital	4-color screen
Image/Color Retention Over Time	Good	Excellent
Photo Reproduction Capability	Very good, full color	Excellent, full color
Material Durability		
Life Expectancy in Serviceable Condition	Good, 10-20 years	Excellent, 40+ years
Scratch/Abrasion Resistant	Very good	Excellent
Cracking/Peeling/Warping Resistant	Good	Excellent
Maintenance Needed	Bi-annual wash/wax	Annual wash/wax
Framing Needed	Equal to or less than ½ inch, no	Yes
Impact Resistance (Hard Blows)	Very good	Poor
Graffiti Removal	Very good	Excellent
Replaceability/Durability	Very good, inexpensive	Poor
Typical Applications		
Wayside Exhibits/Trail Panels	Very good	Excellent
Site and Facility Identification	Good	Good
Memorials/Plaques	Poor	Poor
Identification Labels	Good	Good
Cost Range per sq. ft. (2006 prices)	Low: $50-$70	High: $300-$600

Recommendations for Design Mediators and Fabricators

Recommendations for Design Mediators:

Schmeeckle Reserve
University of Wisconsin-Stevens Point
2419 North Point Drive
Stevens Point, WI 54481
Phone: 715-346-4992
Fax: 715-295-8918
E-Mail: schmeeckle@uwsp.edu
Website: http://www.uwsp.edu/cnr/schmeeckle

Recommendations for Fabrication Companies:

Media:
iZone Imaging
2526 Charter Oak Drive
Suite 100
Temple, TX 76502
Phone: 888-464-9663
E-Mail: info@izoneimaging.com
Website: http://www.izoneimaging.com

Or

iZone Imaging
Michael Dean, Western and Northeast US Region Sales Representative
Phone: 254-778-0722 Ext. 116
E-Mail: michael.dean@izoneimaging.com

Media frames, posts, plant stakes, pedestals:
Best Exhibits
DRM Diversafab
820 Industrial Court
Baraboo, WI 53913
Phone: 877-867-6884
        800-356-4882
Fax: 608-356-4883
E-Mail: ruth@best-exfab.com
Website: http://www.best-exfab.com

Recommendations for Technology Companies and Generators

Recommendations for QR Code Generators:

QR Stuff
Website: http://www.qrstuff.com

Kaywa QR Code
Website: http://qrcode.kaywa.com

GoQR
Website: http://www.goqr.me

Guide By Cell
Website: http://www.guidebycell.com

Note: These sites generate QR codes free of charge. There are options for QR code management and website development for monthly or yearly fees.

Recommendations for Cell Phone Tour/App Builders:

BarZ Adventures
Website: http://www.barzadventures.com

Tour App Builders
Website: http://www.tourappbuilder.com

Every Trail
Website: http://www.everytrail.com

Note: BarZ Adventures and Tour App Builders require an initial start-up fee, in addition to a monthly or annual fee as long as the app is available. There may also be a fee for users to download the app onto their smart phones. Every Trail is a free app that creates an interactive GPS-guided trail. Users may download the trail to their phone and use their phone as a trail guide with additional information along the way.

Recommendations for General Technology/Media Resources:

New Media for Interpretation
Website: http://newmediaforinterpretation.weebly.com/index.html

This website provides additional information on websites and companies that provide: file format conversions, screen captures, slideshows, video and multimedia, publishing, podcasting and music, map tools, broadcasting, and QR code generators.

Suggestions for Further Research

Interpretive Sign Design:

Because Treehaven is part of the College of Natural Resources at the University of Wisconsin-Stevens Point, it makes sense to use the university as a resource if Treehaven moves forward with implementing components of the interpretive plan, especially interpretive media. It is important to note that there is an Environmental Education and Interpretation major within the College of Natural Resources, as well as a class entirely devoted to interpretive media design. One suggestion would be for Treehaven to host an annual interpretive media design competition, in which there would be a call for EE/I undergraduate/graduate students to design an interpretive panel or wayside exhibit for a particular location (the Dragonfly Pond dock, for example) using the central theme, sub-themes, and messages detailed in this project. A student group from the interpretive media design class could also design a series of the ideas outlined in this project.

This would be mutually beneficial for both Treehaven and the winning student, as Treehaven would only have to pay for the sign's fabrication, but not pay for a professional designer, and the winning student would be able to put the sign's publication on his or her resume. One or two signs may be made per year in this particular relationship, until all 8-11 signs recommended in this project are constructed.

Social Media, Video, and Podcasts:

Additional research can be conducted regarding social media's growing importance in natural history interpretation and how these forms of technology can be used to deliver interpretive messages to audiences.

Cell Phone Apps, Tours, and QR Codes:

Additional research can be conducted regarding the use of cell phones and technology for interpretation and how these forms of technology can be used to deliver interpretive messages to audiences. It is suggested that a UWSP student design and implement a cell phone tour and/or app for Treehaven.

Wisconsin Plant Identification Trail Plan:

The initial idea for the Wisconsin Plant Identification Trail is outlined in this project. However, this is not an interpretive trail and therefore designing this trail was outside the scope of this project. It is suggested that a UWSP student design and implement the Wisconsin Plant Identification Trail along the current Beaver Pond trail.

Interpretive Trail Plan:

The design of an interpretive trail was outside the scope of this project; however, stakeholders expressed a desire for interpretive trails on the property and there is enough acreage to build a new trail. It is suggested that a UWSP student design

and implement an interpretive trail at Treehaven using the central theme and

sub-themes from this project.

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APPENDIX A – CODING AND DATA ANALYSIS
(On Following Pages)

	MISSION	

Sub-Problem A: Identify Treehaven's mission statement.
Objective 1. Identify the key components of the mission statement.
Objective 2. Identify current methods of communicating mission statement.

Interview question #1: Treehaven's mission statement is: Treehaven, a campus of UWSP-College of Natural Resources, is the Wisconsin center for integrating natural resources education, management, research, and recreation. Please elaborate how you think Treehaven achieves or works toward each of these four components.

Interview question #2: How does Treehaven communicate the components of its mission statement (education, management, research, recreation) with its visitors, audiences, and students?

Proposition	Proposition Repeats	Category
1. Education has always been our primary focus		Education
2. The second major part of what we do is…really focused on sustainable forestry	II	Sustainable forestry/land management
3. Research - very, very little actual research has actually been done on the property	I	Current research
4. There's a lot that Treehaven could do with research	I	Expanding research opportunities
5. We're really doing education, then management, then recreation, then research. That's sort of how it falls in terms of the amount of energy and time and resources we're putting into those things.		Integration of mission components
6. Key part of the mission statement is the integration of all those things		Integration of mission components
7. Even though they're not being guided by us, what can we provide for them? What experience can they discover on their own to help them learn something that has to do with our natural resources…or experience or learn something about the management that's going on out here or many research, or maybe all those things.		Integration of mission components
8. The recreation we do is primarily in the form of two things. One is college classes and school groups that come out.		Recreation + education

Proposition	Proposition Repeats	Category
9. And then the other pocket of that would be the public recreation offerings in general.		Recreation + outdoor experiences
10. We don't have a big touch and feel nature center, but we have 1400 acres of land and all these trails		Using available resources to further mission
11. That's probably what we do best - getting people outdoors and experiencing nature		Recreation + outdoor experiences
12. All of the school programs that have come in have some kind of a natural resource bent to it - they have something in their program that's either traditional environmental ed or recreational with a component of environmental ed or looking and exploring some of the research that we do. It covers all of the things that we can be and are about at Treehaven, the natural resource education pieces.		Integration of mission components
13. When we do it well we're also talking about the research that we're doing and we're integrating all of those pieces together in their educational experience.		Integration of mission components
14. The first thing you do if you're trying to create an environmental appreciation, which is often the level that we're getting people at, is to get them outside and into a fun experience…then you start building on it.		Environmental appreciation
15. Really try to have it be experiential and outdoors and hands-on		Recreation + education
16. The biggest mission is what we have going on right now with the undergraduate training all summer long	I	Education
17. I think that (research) will change now that we're a part of NEON and as we get newer faculty that might be interested in doing that	I	Expanding research opportunities
18. Recreation? Well that's the good side of it. That's where we bring a lot of the public in.	I	Recreation
19. The focus of the entire staff and the people there is to reinforce the mission. It's just done in so many subtle		Integration of mission components

ways.		
20. The land resource is a platform for learning. It's a classroom	I	Education
21. It's a place where people can think and get his or her life into a really cleansed way of living.		Recreation + outdoor experiences
22. Passive types of recreation - hiking, snowshoeing, cross country skiing.		Recreation + outdoor experiences
23. 99% of our communication right now is through oral experiences	IIII	Oral interpretive programming
24. We don't, right now, really have any interpretive media other than ourselves that help provide information and experiences to make those connections	I	Oral interpretive programming
25. What we don't have is our story and the story of the land management		Sustainable forestry/land management
26. I don't know if it's really a mission statement communication per se, but what I've been involved with mostly is that we're showing it.	I	Oral interpretive programming
27. The mission is referred to in all of the brochures for the programs		Written communication
28. It's an environmental center…not just academic, book learning or philosophical overviews - this is a place where you can put your hands in the dirt, where you can touch the trees, where you can smell the air.		Environmental appreciation

Notes:

COMPONENTS:	HOW COMMUNICATED:
-Education -Sustainable forestry/land management -Current research -Expanding research -Integration -Recreation + education -Recreation + outdoor experiences -Using available resources -Recreation -Environmental appreciation	Primary - oral interpretive programming Secondary - Written communication (not interpretive and mostly through brochures/newsletters)

RESOURCES

Sub-Problem C: Identify Treehaven's available resources.
Objective 1: Identify the physical resources available to Treehaven.

Interview question #3: What resources are available for: education, management, research, and recreation?

Proposition	Proposition Repeats	Category
1. Our primary resource for education is John Heusinkveld.	II	Human resources
2. In addition to human resources, we have a collection of everything from rope to animal mounts to you name it and everything in between that are used as props or subjects.		Physical props
3. Under land management, we have a full-time position…it's a people resource which is the primary thing.		Human resources
4. In terms of the other resources there's trails - ski trails, snow shoe trails, walking trails	II	Trail system
5. We have a couple of decks, some boardwalks, some bridges, the shelters, cordwood cabin		Out-buildings/structures
6. We receive zero funding from the university for education, zero funding from the university for management, zero funding from the university for research, and zero funding from the university for recreation.		University funding
7. The funds that we get from the university, which is about 25-27% of our overall annual operating budget, are for the overall operation of TH.		University funding
8. It's been a complete frustration for me about our presence on the internet and keeping that website updated and relevant. That's been a challenge, but it's a resource that we have.		Internet/Website
9. One of the big resources that we do have is the fact that we're connected to campus.	II	Connection to campus
10. The land base itself is the giant resource we have - it's the biggest thing of all.	III	Land base
11. The second biggest thing is the fact that we have this facility that has food and lodging available.	II	Facility
12. The timber values are a resource as well…it doesn't go to support TH overall it goes to support land management only and land management projects.	I	Timber values

Proposition	Proposition Repeats	Categories
13. But, through those dollars, this is how we get work study students	I	Human resources
14. When we do programs, what we've never had is a program budget where we said if we run a public program we're going to take these dollars and put a percentage back into program - reinvest it. Instead what we have is where all of our other costs are met first.		Program funding
15. Research is technically a part of our TH resident ecologist position	I	Human resources
16. From the education side, first you have to look at the people, which is our primary vehicle for communicating.		Human resources
17. We don't have a big touch and feel nature center, but we have 1400 acres of land and all these trails. (Question #1)		Land base
18. I pushed really hard to get a snowmobile groomer. And all the snowshoes and skis we got in the last 10 years or so, because that's probably what we do best - getting people outdoors and experiencing nature. (Question #1)		Equipment
19. The disc golf all the way up to the trail, trail management, or offering complete 4 season recreation packages to not only the staff and the students but to the general public. (Question #1)		Land base/recreation

Notes:

AVAILABLE RESOURCES:
-Human resources
-Physical props
-Trail system
-Outbuildings/Structures
(Garden, cordwood cabin,
boardwalks, bridges, overlook)
-University funding (minimal)
-Internet/website
-Connection to campus
-Land base (1400 acres)
-Facility (Main building + 2
dorms)
-Timber values
-Program funding

AUDIENCES
Sub-Problem B: Identify Treehaven's audiences.   *Objective 1. Identify **who** visits Treehaven.*   *Objective 2. Identify **why** people visit Treehaven.*   Interview question #4: Who visits Treehaven and why do they come?

Proposition	Proposition Repeats	Category
1. We have a 4th grade and above general policy		Minimum age requirement
2. The oldest formal groups that we work with are Elderhostels and learning and retirement groups		Retirees
3. This summer we'll go through 216 undergraduates from the College of Natural Resources	I I	Undergraduates
4. Why do they (the undergraduates) come? Because they have to.		Captive audience
5. All the other folks that come up here, come because they want to.	I I I	Voluntary audience
6. They see TH as providing good programming but they also see TH as providing an experience that they can't get anywhere else.	I	Quality/diverse programming and experiences
7. The public comes because of the trail system.	I	Use of trail system
8. We're kind of a weird breed of being a college campus, a natural resources education center, conference facility…but I think that's also the attractor of why people come, because we have a lot of different things to experience right here.		Quality/diverse programming and experiences
9. I think people come here because we've got all of these different interests that they have all in one place.		Quality/diverse programming and experiences
10. There are people who come here in a conference setting. And we try to get conferences and meetings here that have a natural resources bent to them.		Conferences/Trainings
11. And then the fourth one would be school groups that have come where we've created a program.		School groups

Proposition	Proposition Repeats	Category
12. People come for the college credit classes that we have throughout the year - that ends up being about 300 people a year from college programs and they learn something about us.		College-credit
13. All the way on the other end of the spectrum is conducting logger training on the property on different forest management techniques.		Conferences/Trainings
14. We are the segue-way between disparate groups.		Diverse audiences
15. Primary visitors are the local area residents mainly from Tomahawk and principally Rhinelander area.		Local residents
16. I would say a lot of retirees are using the property.		Retirees
17. We have an inner city program. An outside foundation supports the inner city students from Milwaukee who come up here for 5 days or so in the wintertime.		School groups
18. We also have high school students who come in from Illinois and Wisconsin.		School groups

Notes:

WHO VISITS:	WHY PEOPLE VISIT:
- Minimum age requirement (4th grade) - Retirees - Undergraduates - Captive audiences - Voluntary audiences - Conferences/trainings - School groups - College-credit - Local residents - Diverse audiences	-Use of trail system -Conferences/trainings -Required undergraduate courses -Quality/diverse programming and experiences(voluntary participants)

STORIES
Goal: Identify potential stories to be told at Treehaven. *Objective a. What should be told about the **past?*** *Objective b. What should be told about the **present?*** *Objective c. What should be told about the **future?*** Interview question #9: Are there any aspects of Treehaven's history (land and/or institution) that you find to be particularly interesting or unique? If yes, do you think this information should be communicated to Treehaven visitors? Interview question #10: Are there any aspects of Treehaven's future goals (land and/or institution) that you find to be particularly interesting or unique? If yes, do you think this information should be communicated to Treehaven visitors?

Proposition	Proposition Repeats	Category
1. I think based on our history it's really more about people than it is about natural resources		Human history
2. There's a history of the land and how it was used even before the Kummers. There's some history here somewhere in the files and then how that land began to change over time.		Land history - general
3. There's a really interesting story there so the public can help participate in the future vision of what this land will look like.		Public participation
4. And the restoration of the northern forests and I think that's what is unique or at least interesting. That we're trying to continue the development of the legacy of bringing this area back into a northern hardwood forest that would've existed centuries ago.		Restoration and change
5. The land itself, the property itself, there's nothing unique about it.		Lack of uniqueness on property (nothing endangered)
6. The uniqueness is in the story of restoration and change and the potential future of it versus what it is right now.		Restoration and change
7. If we look at the bigger picture, the fact that we house the summer session here and become a field station in the summer time is unique. There are nature centers all around the mid-west, but very few of them have such a well-defined program like this, so that's a huge part of the story.		Undergraduate program

Proposition	Proposition Repeats	Category
8. That whole forest management aspect, that we're sustainable forestry certified, that's a big part of the story, too.		Sustainable forestry/land management
9. The research that we're doing is just now becoming a big part of the story.		Current research
10. I try to impress upon starting at glaciation. We're at this tension zone where a couple of globes of glaciers met and I think that gives us an interesting landscape, which is part of understanding the land and the history.		Land history - glaciation to present
11. The Valliers are an interesting part because they had so many fingers in so many important environmental conservation stories across Wisconsin from the Schlitz Audubon. So that family history needs to be a big part of it, too.		Family history and legacy/ conservation for future generations
12. We had the glaciation, the rapacious logging from 1850-1920, and then we had forest fires which are a big part of our story. And then we had the re-plantings, which were in the late 40s.		Land history - glaciation to present
13. Today, we have active forest management on the property…the current one is that land management part of it.		Sustainable forestry/land management
14. Hey, we have this summer session program, we do public programs in these four areas, we have this glacial history, we have Native American use, we have logging, and now we have sustainable forest practices on the property, and the next big window is how far are we getting into research?		Integration of programs w/ land history, land management, and research
15. What we don't have, by the way, we don't have a critically endangered habitat. There's not like some strange kettle or a bog with extremely rare plants.		Lack of uniqueness on property (nothing endangered)
16. There are some tremendously unique things on the property - unique to me. Unique to other foresters. Unique to other land managers. They would consider that to be unique, although I don't know necessarily if that's going to be unique to everybody.		Unique forest types on property

Proposition	Proposition Repeats	Category
17. We've got a couple of very unique wetlands and vernal ponds on the property that are unnoticed by 99% of the people who come here.		Unique habitats
18. There are unique habitats.		Unique habitats
19. There are some unique forest types that are going through some unique changes from conversion of one forest type to the next.		Unique forest types on property
20. But the particularly unique things…the fire is an eye catcher. The scarification. People gasp when they see it because it's horrible and ugly, but the unique thing is that's the requirement of that tree to regenerate.		Current research
21. Most of our property was severely, severely burned, but if you look at the forestry type cover map you can see where the fire didn't burn on our property. You can see right by the forestry cover type - this side burned, this side didn't. Nobody sees that.		Land history
22. It's not that they're just unique to Treehaven - they're on everybody's property - but unique in the sense of "let's show people how to interpret that on their own property."		Public participation
23. I think the story of how the family donated the property and why they donated the property that became Treehaven is pretty interesting.		Family history and legacy
24. They're a family that was huge in the natural resource conservation movement in Wisconsin, and a little more information about that and the things they've done - not only at Treehaven but other conservation efforts they've been part of - would be a nice touch, a nice learning experience.		Family history and legacy/ conservation for future generations
25. It's hard to believe that when you look at the woods around us now that so much of it was field and so lightly covered at one time with grazing and farming.		Land history - farming
26. There was moonshining done on this property in the 1920s. Long time ago. The original road from Harrison to Tomahawk ran right through this property.		Human history
27. The early logging of this property.		Land history - logging

Proposition	Proposition Repeats	Category
28. The early fires of this property.		Land history - fires
29. We can make comparisons between what this road looked like then and what it looks like right now. What that first year plantation looked like as they were planting it in 1956 and what it looks like right now.		Restoration and change
30. Where the complex sits on the university side, that was going to be a runway for the family airplanes…*Gordon Kummer* had taken a bulldozer to it and then he died, so everything changed. The plane was sold, the order was cancelled, and the only tree that was on the property where the complex is is that big white pine by the White Pine Lodge. It's the only tree that was there. The whole area was an empty field.		Restoration and change
31.The whole land restoration, and we're not really using the term restoration, but that's what it is.		Restoration and change
32. I think the story or the unique aspect of the future goals is how do we bring along the public? How do we bring the public into that story and experience that along the journey? And how do undergraduates who come here get a sense of what's going on here?		Public participation
33. The future goals are not just about the land and the interpretation of the land, it's about the future vision of this as an organization and how do we communicate that?		Organizational vision
34. Visitors need to know that we do education. A person in Tomahawk has no idea that we bring kids from Milwaukee up here on a grant, and we do that two or three times a year. And that we provide that service for the citizens of the state.		Educational programming
35. I think we're just beginning to turn this corner with this interesting question of "what will research be here in the next 5 years?" Which could be a much larger part of our story than it has been.		Future research

Proposition	Proposition Repeats	Category
36. This is nation-wide that people look at the woods like it doesn't change. They change. That's why I like the thought of pictures - to be able to show what it looked like 40 years ago, 20 years ago, and maybe even some pictures of this is what we think it's going to look like in 10, 20, maybe 40 years from now.		Restoration and change
37. Because we're changing the landscape intentionally in a lot of different areas.		Restoration and change
38. The forest is changing all by itself and if you look at some old pictures you'll definitely see that.		Restoration and change
39. There's some specific things we're trying to do to this forest going to the future.		Restoration and change
40. If you think long-term planning in businesses, five years is long-term planning. Well in forestry we're talking 100, maybe 150 years is long-term planning. I won't even be here to see it. I'll be lucky if my grandkids see what we're planning on.		Sustainable forestry/land management
41. What we do today is for the next generations and that message really needs to be talked to folks.		Legacy/Conservation for future generations
42. We're interested in what happened 150-500 years ago on what happened on this property. That shows us why we're here now and then we're almost looking that far in the future - where do we want to take it? What are the small steps we take along the way to get there? This is very long-term, and how do you interpret that?		Restoration and change/ sustainable forestry
43. One of the things is going back to the forestry plan for the property. So many people hear a chainsaw and think that we're just destroying it and ripping it up and that there's no conservation involved in it.		Restoration and change
44. Information about that, about why we're cutting down these trees and why it's not left the way it is, why we're getting rid of invasive species that are out there. I think that the future goals for the property itself is a pretty exciting thing.		Restoration and change

Proposition	Proposition Repeats	Category
45. I mentioned NEON a couple of times. Being a part of a national environmental research that's going to be done for years and decades is an exciting part of looking forward to the future.		Future research
46. What happens on the land is an ongoing change. Change is constant.		Restoration and change
47. Make sure that we can have access to this property for all people…somebody who might want to just get out and quietly see the place in a wheelchair or what have you. We don't have that access right now.		Access for handicapped individuals
48. Just to feel and experience the wind, the sounds, the quiet, the beauty of the lake and the gentle breeze, and the beauty of an afternoon where you spend time reading a meditation or just thinking or writing.		Environmental appreciation
49. This property belongs to the world. I am the steward of it right now so I have certain responsibilities, but it's not mine.		Environmental stewardship
50. And then what do we envision this land base looking like 100 years from now?		Restoration and change
51. The story that we don't tell is, we're not a LEED energy facility but we've done some things - especially when we remodeled the two residential centers. There's a lot of energy stuff in there, including a heat exchanger. But we don't tell that story. Nobody knows we're using an interesting source of pre-heating air so that the furnaces don't have to go from outside cold air. We need to tell those kinds of stories. (Question #5)		Sustainable energy/green building
52. Interpreting the story of the land and what we do here. (Question #8)		Land History
53. More information so that they can understand what they're seeing. For instance, the garden right outside of the main office - what are all these plants? Why are they here? (Question #7)		Plant/wildlife

Proposition	Proposition Repeats	Category
54. It's an interesting place because we're not just a nature center, we also have land management and research and we also have this college summer session thing. Those are all worthwhile stories to talk about. So I think any time we can integrate the story of that into programming is great. (Question #8)		Integration of programs w/ land history, land management, and research
55. There's so much opportunity to go beyond what's in the classroom with the facility like they have at TH. It's being underutilized.		Using landscape to tell story
56. Now I see the benefits of what was planted 50 or 60 years ago when they were put in as saplings…they are now 50 feet high in many of the plantations. So you can see that growth and generation and now the regeneration that goes on. And that's exactly what my folks wanted. They wanted to maintain and develop a more productive type of land. They wanted a healthy forest, from all aspects. (Question #1)		Family history and legacy/ conservation for future generations
57. We're just stewards of a resource for now and in the future. Our job is to maintain it and to make sure that it's in better hands and as healthy as possible when it's moved from my tenure of keeping over it, as my folks did and then gave it to me to take care of, that it's left for the next generation to jump in an do better things with it. (Question #4)		Family history and legacy/ conservation for future generations
58. The people who are up at TH, they are stewards of the property. None of us owns this property. It's bigger than any one group or one individual. It's something more sacred. So I think that every student that comes on this property leaves this property with a part of it. There's a steward legacy, and they don't even know it. But by being here and using it and using it constructively they become part of that legacy. And I think that the group will hopefully help to ensure the stability and longevity of this property and this area in years to come. (Question #4)		Family history and legacy/ conservation for future generations

Notes:

Emphasis on Vallier's impacts on conservation efforts in Wisconsin and their role in restoring Treehaven's land to a northern hardwood forest.

Concept of a changing landscape - from glacial period through fires/logging to present as a sustainable tree farm.

Human history - Native Americans, loggers, moonshining, conservation, education. How has the landscape impacted the human population? How have humans impacted the landscape? How can the landscape be used to **tell** these stories?

Unique forest types and habitats on property, or at least unique areas of research and demonstration on property.

Role of undergraduates in education and research. Treehaven as a campus of UWSP.

Public participation in future research. Where are we going from here? Possibilities of NEON and the participation of general public in scientific research.

CURRENT INTERPRETATION
Goal: Identify current interpretive programming at Treehaven.
Objective a. How is interpretation currently used at Treehaven?
Objective b. What stories are currently being told?
Interview question #8: Currently, what kind(s) of interpretive programming is offered at Treehaven?

Proposition	Proposition Repeats	Category
1. We don't probably purposely design and develop interpretive programs. I think we have educational programs that may have some interpretive components to them.	I	Lack of interpretation/ Education as primary focus
2. The Birds and Brunch is an example of probably an interpretive program.		Oral interpretive programming
3. I guess we could put into that basket all of the school programs that we do and all of the LIFE programs that we do, which are closed public groups that come for a connection.		Education as primary focus
4. The 4th grade program is kind of an obvious interpretive block…there's the logging history one, Native American stuff.		Oral interpretive programming
5. I'd love…growing to accommodate that - to have it be interpretive. Because it fits so well our base mission of natural resources environmental education.		Mission-based interpretation
6. The wolf ecology (workshop) where they actually got out when the opportunity presented itself.	I	Oral interpretive programming
7. The media itself…now there's a display board, there are the tree cookie and the rings explained, the bear display, so little by little there's getting to be some material that is right there.		Interpretive Media
8. The programs, honestly, could be better focused on the interpretive side.		Lack of interpretation
9. The photography workshop that they offer on a yearly basis.		Oral interpretive programming
10. The Sex in the Garden program was a class interpretive program.	I	Oral interpretive programming
11. In the spring they're in waders and wading around the stream, they're canoeing around the pond, they're learning the features of the land.		Oral interpretive programming

Notes:
Lack of programming designed with interpretation principles in mind - focus is more on educational programs, and if they happen to have an interpretive bend to them that's great.

Almost all current interpretation is done through oral programming. There is some interpretive media, but hardly any.

There is a desire for increasing interpretive programming, but not having it be the focus of Treehaven.

INTERPRETIVE TRAILS		
Goal: Identify any desires for interpretive trails at Treehaven. Interview question #6: What do you think about the addition of interpretive trails on Treehaven property?		

Proposition	Proposition Repeats	Category
1. I think we need them. I think we have a story to tell.	I I	Desire for interpretive trails
2. One of the ways (to tell a story) is to have one or two interpretive trails on the property that would allow us or the visiting public to have another reason to come here.		Desire for interpretive trails
3. (Interpretive trails) would allow them to experience not only the recreation but a learning aspect to their self-guided visit.		Desire for interpretive trails
4. There's other interpretive experiences I think are important…spots on the property that people want to go to. Things that we think they might value. They pick and choose the areas on the property that they would like to go visit. It's not a specific trail, but a destination.		Desire for interpretive destinations
5. Can you do it in such a way that you still maintain the character of the landscape?		Maintain character of landscape
6. I think there are a couple of key spots that we at least need to have a marker, like a numbered marker that would be discreet that people could reference.		Desire for interpretive destinations
7. I don't think we'd want interpretive signage all throughout the property. I don't think that would be necessary.		Maintain character of landscape
8. If we did the whole property with signs all over, the downside is that if you have too much of that, too much manicuring of the system, or boardwalks and steps to everything and maps and signs it takes away the wild character that we try to give people.		Maintain character of landscape

Proposition	Proposition Repeats	Category
9. One of the trails that took a couple of years but it now loops around the old beaver pond…it was designed specifically as a nature trail and for hiking. It goes through some really beautiful habitats of TH and is much more aesthetically pleasing and interesting than walking on a logging road. So that's a prime candidate for an interpretive trail.	I	Beaver Pond as Interpretive Trail
10. Are you really walking in the woods? You've now gone to an educational, interpretive trail and that's a big distinction if there's signage all along the way.		Maintain character of landscape
11. Kevin actually had the idea where it would be identifying all the plants out there, which would be a very unique thing to actually walk along that trail and not only have something talking about forest succession but something saying "this is mullein" and then a little description about it.	I	Interpretive Plant Trail
12. Another idea, as you know, we're doing all of these different forest management activities on the property. I think it would be interesting, along the trails, to have a descriptive plaque of those basic things - when was this thinned, how was it thinned, why was it thinned, when is it going to be done again?	I	Forest Management Trail
13. To have people hiking for the sake of hiking and people doing the interpretive walk without ever running into each other. So having separate trails would be great.		Separate hiking and interpretive trails
14. I also think there should be a handicap accessible trail on this property. I think there should be an interpretive trail where someone who's handicapped can be driven out…and maybe there's a mile long trail out there that's manicured for that.		Handicap accessible trail
15. I think the beaver pond overlook is an ideal place for somebody who's in a (wheel)chair to go down there and view that magnificent wetland.		Handicap accessible trail

Proposition	Proposition Repeats	Category
16. As long as we don't ruin the idea of what TH is there for: being the natural resource it is.		Maintain character of landscape

Notes:

There is a desire for interpretive trails, specifically around the beaver pond, as long as there is not too much signage or distractions that take away from the natural character of the landscape.

There is also a desire for interpretive destinations on the property, probably marked with some kind of small marker or sign.

If possible, allow for visitors to choose hiking OR an interpretive walk.

Desire for a handicap accessible interpretive trail or trail to scenic overlook.

INTERPRETIVE MEDIA

Goal: Identify any desires for interpretive media on Treehaven property.

Interview question #7: What do you think about the addition of interpretive media (signs, waysides, exhibits, etc.) on Treehaven property?

Additional interview questions with answers pertaining to interpretive media:
#6: What do you think about the addition of interpretive trails on Treehaven property?

Proposition	Proposition Repeats	Category
1. Some very well done interpretive signage perhaps that would allow them (the visitors) to experience not only the recreation but a learning aspect to their self-guided visit.		Desire for well-made, professional signs.
2. I don't think we'd want interpretive signage all throughout the property. I don't think that would be necessary.		Maintain character of landscape
3. On some of the larger roadways out there it probably would not be good for us to put up a lot of signage on those because I don't want them to get knocked down by logging equipment.		Location of media - not on logging roads
4. I think we should be looking at apps.		Electronic media - Apps
5. I think maybe podcasts.		Electronic media - Podcasts
6. Other types of interactive electronic media that would be possible out there.	II	Electronic media
7. Maybe a GPS-guided experience.		Electronic media
8. Geocaching, make it interpretive.		Interpretive programming using media
9. Interpretive media may also include recommendations on how do we turn this building and the spaces we have within the physical buildings into an interpretive experience.		Media within buildings - sustainability
10. We need to get really tight, clean, and beautiful stuff on those kiosks. There's three kiosks in all…and those are just begging to have good quality information put up on them.	I	Signage on kiosks/Desire for well-made, professional media
11. I think those phone code things would be good on all three of them (kiosks).		Electronic media - Apps
12. Right here in the buildings either in the downstairs hallway or upstairs hallways is to have something educational…the potential might be in the hallway.	I	Media within buildings

Proposition	Proposition Repeats	Category
13. The third would be signs out on the trail.		Trail signage
14. I would subdivide that between posts, which we could have unlimited numbers of because they're very discreet, versus big signs.		Trail signage - posts vs. signs
15. And a sign with a story on it - I'd like one at the dock on Dragonfly Pond, I'd like one out the back door here on the back deck, and then at the Beaver Pond. All three of those sites already have unmistakable, imprinted elements - they've got a big wooden deck or dock, so why not use that because you're not changing the feeling of anything by adding a sign there.		Location of media - Specific Destination
16. Anything on the property has to keep in mind, "Let's not keep it in a spot where we have to continually pull it out of the ground and move it every time we have to have an operation going on here." So there needs to be some thought put into that.		Location of media - not on logging roads
17. I keep saying less is more. We could put signs all over the place out there, but is it going to be obtrusive? If we have too many signs we're not going to be exhibiting what we think we want to exhibit here.		Maintain character of landscape
18. If they are done well they can be a real asset to what is being taught and what is being displayed.		Desire for well-made, professional signs.
19. It needs to be professionally done, well-made, positioned media.		Desire for well-made, professional signs.
20. Down on the dock by Dragonfly Pond you have a good opportunity to have a kiosk and information there.		Location of media -Specific Destination
21. At the garden, this could be great talking about how it's done naturally and what its use is.		Location of media - Specific Destination
22. The only suggestion I make is that the signage be standardized. I think it's pretty hokey when you have multiple different types of designs and things that don't blend.		Standardized signage/Desire for well-made, professional signs
23. I think if you have a sign friendly type of a spot, you may have a bench put down - maybe a little bit bigger so people could sit down and rest for a bit.		Benches by trail signage/media

Proposition	Proposition Repeats	Category
24. An electronic web-based identification of spots on the property that people might want to go to.		Electronic media

Notes:

There is a desire for well-made, professional, standardized signs/media on the property. However, it is important that media is not overly abundant and overwhelming - must maintain character of the landscape.

Forests at Treehaven are "working forests" with research and logging operations taking place throughout the year. This should be taken into account when providing recommendations for media - do not recommend signs/posts/etc. on roads heavily used for logging operations.

There is a strong desire for interpretive media to be used in non-personal interpretation - interpretation that can stand alone.

Possible locations for larger interpretive signs/exhibits:
- Dragonfly Pond dock
- Listening Point overlook (by beaver pond area)
- Back deck of main building
- Garden
- 3 kiosks on property

There is a desire for use of interactive technology as type of media: phone apps, GPS, podcasts

INTERPRETIVE PLAN
Goal: Determine stakeholders' thoughts on Treehaven having an interpretive master plan.

Interview question #5: What do you think about Treehaven having an interpretive master plan?

Additional interview questions with answers pertaining to interpretive plans:
#6: What do you think about the addition of interpretive trails on Treehaven property?

Proposition	Proposition Repeats	Category
1. I think there's a wide range of things that we could do to help tell the story and provide unique and interesting experiences for the visitors		Wide range of interpretive possibilities
2. Create an institutional memory		Creating an institutional memory for continuation of plan
3. I think it's a great idea. I think we need to have it. We need to figure out what is the thing that we want the people to know about us and where are the places we get that information out?		Wide range of interpretive possibilities
4. We'd like people to know what it is we're all about and to be able to come here and not only get a good educational experience as part of a program, but they came NOT as part of a program would they still learn something about Treehaven?		Personal and non-personal interpretation
5. Everything that we put on this property has to be part of a maintenance plan. How are we going to replace it? Where's the money to replace it? Who's going to replace it? Where's the time allocated for this?	I I	Continuation and maintenance
6. So it's not creation that bothers me so much or worries me, it's how do we maintain this through time?		Continuation and maintenance
7. I think having a master plan, an interpretive master plan, will help getting better utilization of the property beyond the students and post-graduate students that are using it as part of a UWSP campus.		Better utilization of property
8. I think a well worked master plan could increase the usage on the property.		Increase utilization of property

Proposition	Proposition Repeats	Category
9. I don't think you can just have a forestry plan or just a wildlife plan or soils plan. I think you have to bring interpretation into it to understand the interactions of all the ecosystems which create the biosphere. It's an integral part of a solid, philosophic and operating comprehensive plan.		Wide range of interpretive possibilities
10. It's going to be a component of an on-going and upgrading of interpretation of this property.		Creating an institutional memory for continuation of plan
11. Interpretive master plan in my mind is how do we tell our story following the principles of interpretation so that it's truly meaningful and interesting to our constituency? And right now we have multiple disconnected inconsistent ways of trying to do that and we don't even really have a central theme on what we're trying to communicate. (Question #8)		Wide range of interpretive possibilities

Notes:
Stakeholders see an interpretive master plan as a means to develop and organize a wide range of interpretive possibilities (personal, but mostly non-personal) while simultaneously creating an institutional memory for the continuation of interpretation at Treehaven.

Stakeholders believe developing an interpretive master plan could potentially lead to better and increased utilization of Treehaven property.

Important to stakeholders that maintenance and upkeep of interpretive media be included in plan (maybe as appendix for possible recommendations?).

APPENDIX B – IRB SUBMISSION FORM

11-12.106

Protocol for Original Submissions

A complete protocol must be submitted to the IRB for approval prior to the initiation of any investigations involving human subjects or human materials, including studies in the behavioral and social sciences.

For all research protocols, please submit the following:

- **1 printed copy with Faculty Mentor and Department Chair signatures** of (1) the completed protocol; (2) project abstract; and (3) samples of informed consent forms. PROTOCOLS LACKING ANY ONE OF THESE THREE ELEMENTS WILL NOT BE APPROVED.
- **A second copy of this page, with signatures.**
  Printed materials should be submitted to: **IRB/Grants Office, 204 Old Main.**
- **Electronic copies of all submission materials (multiple files are acceptable)** emailed as attachments to Jason R. Davis, IRB chair: jdavis@uwsp.edu AND Sharon Courtney, Grants Office: scourtne@uwsp.edu

PLEASE TYPE

Project Title: The Development of an Interpretive Master Plan for Treehaven Environmental Learning Center

Principal Investigator: Jaime Bunting

Department: College of Natural Resources   Rank: Graduate Student

Campus Mailing Address: 5400 N. Black Oak Lake Rd.   Land O' Lakes, WI 54540

Telephone: (302) 542-2785   E-mail address: jbunt838@uwsp.edu

Faculty Sponsor (if required): Dr. Brenda Lackey

(Faculty sponsor required if investigator is below rank of instructor.)

Expected Starting Date: 12/8/11   Expected Completion Date: 05/2013

Are you applying for funding of this research? Yes _____   No X _____

If yes, what agency? _____

Please indicate the categories of subjects to be included in this project. Please check all that apply.

- __X__ Normal adult volunteers   _____ Minors (under 18 years of age)
- _____ Incarcerated individuals   _____ Mentally Disabled
- _____ Pregnant women   _____ Other _____ (specify)

(Faculty Member) I have completed the "Human Subjects Protection Training" (available at http://www.uwsp.edu/special/irb/start.htm) and agree to accept responsibility for conducting or directing this research in accordance with the guidelines.

(signature)

(Signature of Faculty Member responsible for research)

(Department Chair or equivalent) I have reviewed this research proposal and, to the best of my knowledge, believe that it meets the ethical standards of the discipline.

(signature)

(Signature of Department Chair or equivalent)

******************************** Do not write below this line – for IRB use only ********************************

IRB approval _(signature)_   EXEMPT Date 5-11-12
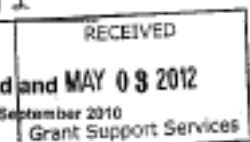
(Signature of IRB Chair)   RECEIVED

Approval for this research expires one year from the above date.
If research is not completed by this date, a request for continuation must be filed and MAY 0 3 2012
approved before continuing.   Revised form: September 2010

Grant Support Services

Proposal Abstract

Write a brief description of the purpose of the proposed research project. (100-200 words)

This research project will develop an interpretive master plan for Treehaven Environmental Learning Center that will coordinate the overall development of the site's interpretive goals using a planning process to recommend interpretive programming and services. Although a busy and successful environmental learning center and summer campus for College of Natural Resources undergraduates attending the University of Wisconsin-Stevens Point (UWSP), Treehaven does not currently possess an interpretive master plan. An interpretive master plan will benefit Treehaven by providing a consistent theme for personal and non-personal interpretation and programming, suggestions for programming ideas, and the development of new interpretive media. A complete interpretive master plan will determine what, how, and where interpretive information should be told through trails, programming, signage, and other interpretive media. Initial literature reviews suggest that interpretive master plans allow for cohesive, site-specific interpretive frameworks. This project will use qualitative research methods to collect the required data to propose necessary suggestions to create this framework. Data collection is underway and will continue throughout the year. The narrative data for this project will be collected through individual interviews, site observation, and relevant documents and articles. A thorough review of appropriate literature and site-specific background information, followed by interviews with Treehaven stakeholders, will assist in determining interpretive goals for the site. The collected data will be synthesized to develop a foundation for the interpretive master plan – the overall interpretive theme. Once the theme is decided additional efforts will begin to develop possible avenues in which to apply this theme to Treehaven's site, trails, and interpretive programming. The final project is scheduled for completion in May 2013.

Please complete the following questions for all research.

1. Describe the characteristics of the subjects, including gender, age ranges, ethnic background, health/treatment status and approximate number.

Interview subjects will be healthy adults between the ages of 30-70. Approximately 3-5 individuals will be interviewed.

2. Indicate how and where your subjects will be obtained. Describe the method you will use to contact subjects.

Subjects will be obtained through personal contacts of advisor and project contact person. Subjects will be contacted via telephone and/or e-mail.

3. What are you going to ask your subjects to do (be explicit) and where will your interaction with the subjects take place?

Subjects will be asked to answer 10 questions in a semi-structured non-formal interview over the telephone or in person. Subjects may be e-mailed the questions prior to the interview. Interviews will take up to one hour to complete.

4. Will deception be used in gathering data? Yes _____ No _X___
   If yes, describe and justify.

5. Are there any risks to subjects? Yes _____ No X_____
   If yes, describe the risks (consider physical, psychological, social, economic, and legal risks) and include this description on the informed consent form.

6. What safeguards will be provided for subjects in case of harm or distress? (Examples of safeguards include having a counselor/therapist on call, an emergency plan in place for seeking medical assistance, assuring editorial rights to data prior to publication or release where appropriate.)

Not applicable

7. What are the benefits of participation/involvement in this research to subjects? (Examples include obtaining knowledge of discipline, experiencing research in a discipline, obtaining course credit, getting paid, or contributing to general welfare/knowledge.)   Be sure to include this description on the informed consent form.

Subjects will contribute to general welfare and knowledge. As all subjects will be Treehaven stakeholders, their participation may have a positive impact on the Interpretive Master Plan at Treehaven.

8. Will this research involve conducting surveys or interviews? Yes __X_____   No_____
    If yes, please attach copies of all instruments or include a list of interview questions.

Below is a list of the research questions that will be asked during the semi-structured interviews.

   1) Treehaven's mission statement is: Treehaven, a campus of UWSP - College of Natural Resources is the Wisconsin center for integrating natural resources education, management, research and recreation. Please elaborate how you think Treehaven achieves or works toward each of these four components.
   2) How does Treehaven communicate the components of its mission statement (education, management, research, recreation) with its visitors, audiences, and students?
   3) What resources are available for: education, management, research, and recreation?
   4) Who visits Treehaven and why do they come?
   5) What do you think about Treehaven having an Interpretive Master Plan?
   6) What do you think about the addition of interpretive trails on Treehaven property?
   7) What do you think about the addition of interpretive media (signs, waysides, exhibits, etc.) on Treehaven property?
   8) Currently, what kind(s) of interpretive programming is offered at Treehaven?
   9) Are there any aspects of Treehaven's history (land and/or institution) that you find to be particularly interesting or unique? If yes, do you think this information should be communicated to Treehaven visitors?
   10) Are there any aspects of Treehaven's future goals (land and/or institution) that you find to be particularly interesting or unique? If yes, do you think this information should be communicated to Treehaven visitors?

9. If electronic equipment is used with subjects, it is the investigator's responsibility to determine that it is safe, either by virtue of his or her own experience or through consultation with qualified technical personnel. The investigator is further responsible for carrying out continuing safety checks, as appropriate, during the course of the research.
10. If electronic equipment is used, have appropriate measures been taken to ensure safety?
    Yes   X   No

An electronic tape recorder will be used to record some of the interviews; note-taking will be used in place of the tape recorder in other interviews. There will be no risk involved to the subjects by using this tape recorder.

11. During this research, what precautions will be taken to protect the identify of subjects and the confidentiality of the data?

Interviews will be recorded using a tape recorder or by note-taking. The researcher will transcribe each interview after they are completed. After the interviews are transcribed, the interview tapes will be destroyed. The data collected will be compiled and secured in a locked office to ensure that each subject's identity is kept confidential. Subjects will be identified by number rather than

name to ensure confidentiality.

12. Where will the data be kept throughout the course of the study? What provisions will be taken to keep it confidential or safe?

Data will be stored in a locked office. Audio data will be destroyed after transcription.

13. Describe the intended use of the data by yourself and others.

The data collected will be used to write an Interpretive Master Plan for Treehaven Environmental Learning Center.

14. Will the results of the study be published or presented in a public or professional setting?
    Yes ___X___   No _____
    If yes, what precautions will be taken to protect the identity of your participants?
State whether or not subjects will be identifiable directly or through identifying information linked to the subjects.

Information presented will be for background purposes. Names will not be mentioned and subjects will not be linked to specific details or information.

15. State how and where you will store the data upon completion of your study as well as who will have access to it? What will be done with audio/video data upon completion of the study?

The transcribed data collected by the researcher will be kept in a locked office. The audio tapes used to record the interviews will be destroyed as soon as they are transcribed by the researcher.

A completed protocol must include a copy of the Informed Consent Form or a statement as why individual consent forms will not be used.
                    Revised form: January 2001

APPENDIX C – INFORMED CONSENT FORM

Informed Consent Form

Informed Consent to Participate in Human Subject Research

The purpose of this project is to develop an Interpretive Master Plan for Treehaven Environmental Learning Center, located in Tomahawk, WI. For this project, the researcher will be interviewing 3-5 professional individuals with a vested interest in Treehaven's mission and goals. Interviews will be conducted either in person or using a telephone. Interviews will be in a non-formal semi-structured setting. The researcher will ask subjects about Treehaven's mission and goals, visitors, available resources, opinions on various methods of interpretation, and any particularly interesting information about Treehaven's history and/or anticipated future. Each subject will be asked to answer the same 10 questions to the best of his/her ability and volunteer one hour of time to complete the interview.

The researcher anticipates no risk to you as a result of your participation in this study other than the inconvenience of the time in being interviewed.

Each interview will be recorded using a tape recorder or with typed notes. When the interview is completed, the researcher will transcribe the interview and then destroy the tapes for that interview. All transcriptions and notes from the interviews will be kept in the locked office of the researcher and will not be available to anyone except her, except as aggregate information identified only by number.

It is hoped that with your assistance the researcher may gain valuable information that will result in the development of an Interpretive Master Plan. You are welcome to see the final product upon its completion.

Since participation in this project is voluntary, if at any point you feel uncomfortable answering a question you may choose to decline to comment. You may also decline further questions and drop out of the interview at any time you feel it is necessary.

If you have any questions, please contact:
>Jaime Bunting
>Graduate Fellow
>University of Wisconsin-Stevens Point
>5400 N. Black Oak Lake Rd.
>Land O' Lakes, WI 54540
>(715) 547-1341

If you have any complaints about your treatment as a participant in this study, please contact:
>Dr. Jason R. Davis, Chair
>Institutional Review Board for the Protection of Human Subjects
>School of Business and Economics
>University of Wisconsin-Stevens Point
>Stevens Point, WI 54481
>(715) 346-4598

Although Dr. Davis will ask your name, all complaints are kept in confidence.

I have received a complete explanation of the study and agree to participate.

Name_____ Date_____
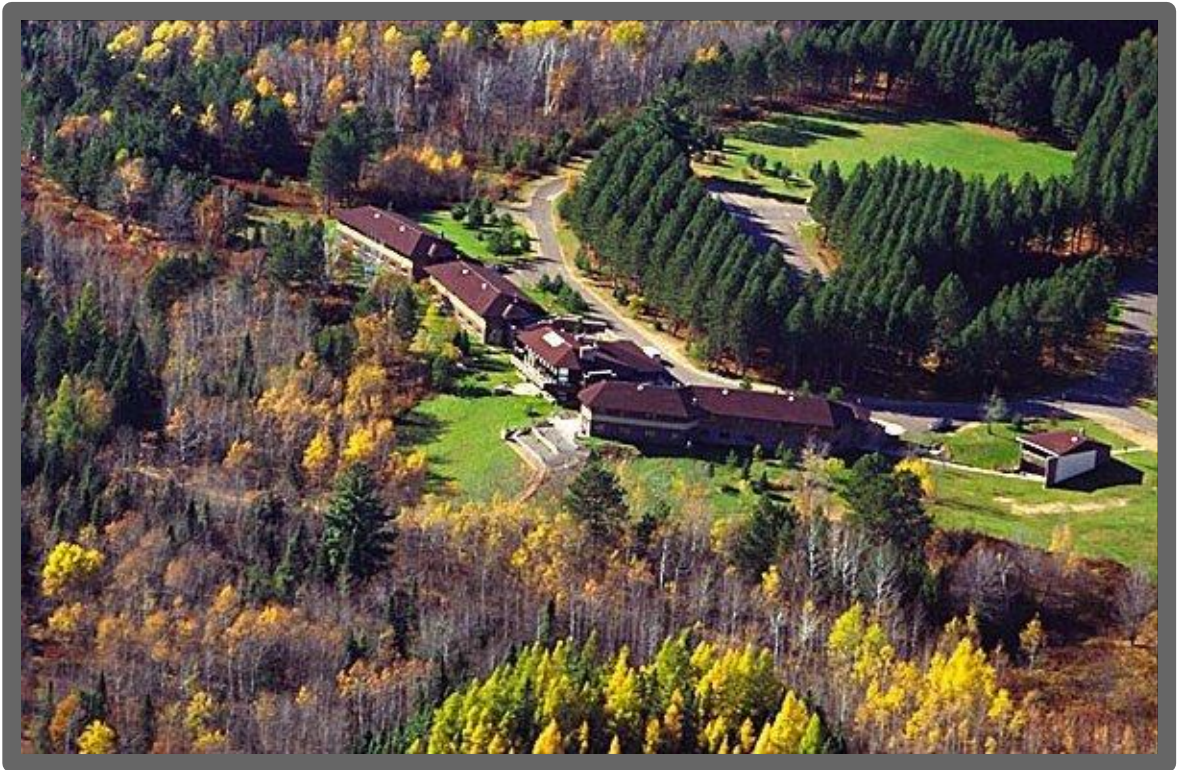   (Signature of subject)

This research project has been approved by the UWSP Institutional Review Board for the Protection of Human Subjects.

APPENDIX D – INTERPRETIVE MASTER PLAN
(On Following Page)

Treehaven Interpretive Master Plan

Tomahawk, Wisconsin
April 2013

Prepared for Treehaven by:
Jaime Bunting
UWSP Graduate Student – College of Natural Resources

Treehaven Environmental Learning Center
College of Natural Resources
University of Wisconsin – Stevens Point

Tomahawk, Wisconsin

Interpretive Master Plan

April 2013

Prepared for Treehaven by:
Jaime Bunting
UWSP Graduate Student – College of Natural Resources

Table of Contents

Chapter One: Introduction

Background

A busy and successful environmental learning center and summer campus for College of Natural Resources undergraduates from the University of Wisconsin-Stevens Point (UWSP), Treehaven provides a multitude of opportunities for natural resources education, management, research, and recreation for a wide array of groups and individuals. Treehaven is the home to the UWSP summer program for undergraduates in the College of Natural Resources. Each summer, hundreds of undergraduate students majoring in natural resources spend six weeks living and learning at Treehaven while taking classes about water resources, soil science, forestry, and wildlife management. Treehaven provides a unique experience in which students are immersed in the sprawling landscape and an outdoor classroom composed of 1,400 acres of sustainable tree farm. Every undergraduate who passes through the College of Natural Resources attends this nationally recognized program.

Before becoming Treehaven Environmental Education Center, the 1400 acres on which it sits was owned by Dorothy Vallier and her late husband, Gordon Kummer. When they first purchased the land, which sits halfway between Tomahawk and Rhinelander, WI, had undergone a lot of use and abuse – the timber was overharvested, farming had been attempted on much of the cutover land, and wildfires burned over many of the open areas for years until the 1930s. Dorothy and Gordon Kummer, and later Dorothy and her second husband Jacque Vallier, purchased the land for the purpose of practicing forestry, game management, and other land restoration related activities. The Valliers were early champions of conservation in the region, as they took land that no one else wanted and saw the long-term potential in it. Due to aggressive management

and conservation techniques over the last 60 years, along with a long-term land management plan, Treehaven is being restored to its original natural state.

Dorothy Vallier donated the Treehaven property to the University of Wisconsin-Stevens Point, College of Natural Resources, in 1979 to provide natural resource education, resource management demonstration, and environmental research opportunities for the CNR and public. The Treehaven Facility was also designed to be a stand-alone Environmental Learning Center with the goal of providing support to UWSP teaching, outreach programs for schools and groups, and an outdoor recreation area, which can be seen in the playing field, disc golf course, and miles of trails for skiing, snowshoeing, and hiking. Treehaven is a multi-use facility with many stories to tell.

Purpose

Interpretation is one vehicle for helping visitors connect with Treehaven's detailed history, present, and future goals. Treehaven does not currently possess an interpretive master plan. An interpretive master plan can benefit Treehaven by providing a consistent theme for personal and non-personal interpretation and programming, suggestions for programming ideas, and the development of new interpretive media. An interpretive master plan would allow for a cohesive, site-specific interpretive framework to enhance and organize the story-telling process at Treehaven through thematic relevance and interpretive media.

This interpretive plan has three purposes:

1. Identify the mission, target and anticipated audiences, and resources available at Treehaven.

2. Determine a central interpretive theme, sub-themes, and messages for Treehaven's site and programming.

3. Provide recommendations for types of programming and interpretive media to communicate the central theme to audiences.

Chapter Two: Planning
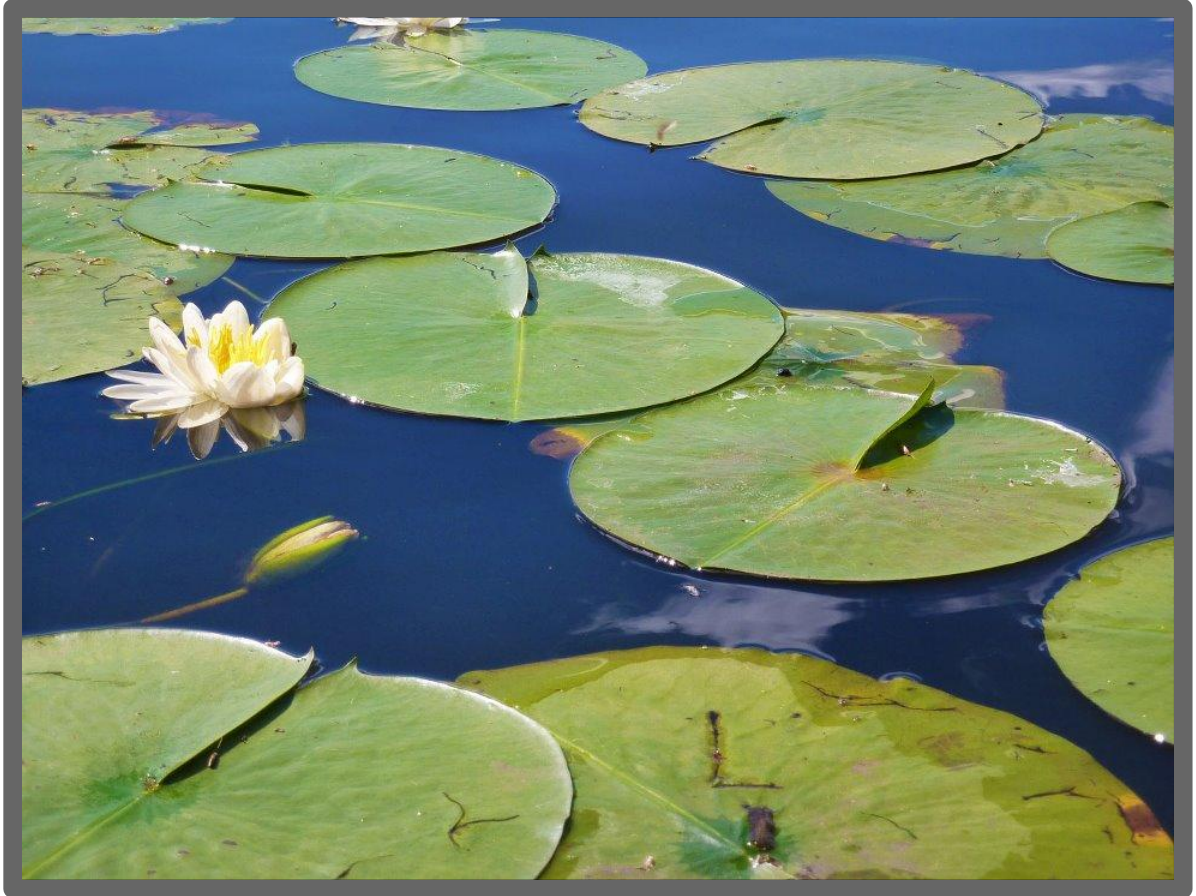
Interpretive Planning

Interpretation can be a very effective tool for helping visitors and audiences connect on both an intellectual and emotional level with a center, landscape, story, and/or message. The National Association for Interpretation defines interpretation as: "A mission-based communication process that forges emotional and intellectual connections between the interests of the audience and the meanings inherent in the resource." Interpretation builds a bridge between what a person physically sees in a landscape or object and what that person knows or feels about that same landscape or object. It is a story telling process that makes connections to the resources around an individual.

Site-wide interpretation can be detailed and organized through the interpretive planning process. Jim Buchholz defines interpretive planning as: "The process of consensus development, a shared perspective by all stakeholders on why interpretation is needed, who it will serve, and what significant stories it will tell." The interpretive planning process takes into account background information and history about the site – what are the important stories here and how should these stories be communicated? Interpretive planning looks at who visits the site. Are the majority of visitors to the site college students, school-aged children, retired adults, the general public, or all of those categories? The interpretive planning process also determines what visitors look to get out of the site and why they are there in the first place.

Mission-based interpretation is a key component in the interpretive planning process. It is crucial to decipher the mission of the organization and ask, how can interpretation help the organization achieve the goals and objectives of its mission? Taking into account visitor information, site-specific background information, the organization's

mission, and available resources, an interpretive plan provides recommendations for the most effective type of interpretive programming or media for the site, where exactly to use that interpretive media, and how it should be accomplished.

Data Collection

This interpretive plan relied on qualitative research methods to collect the data necessary to create an interpretive master plan for Treehaven Environmental Learning Center. Data was collected through individual interviews, observation, relevant documents and articles provided by Treehaven, and additional interpretive master plans used as references. A thorough review of appropriate literature, followed by semi-structured interviews with the Director, Assistant Director, Forest Ecologist, a member of the donor family, and an invested volunteer occurred to determine their interpretive goals for the site as well as to clarify information regarding Treehaven's mission, audiences, resources, history, and significant stories that should be told. Interview data was then analyzed and synthesized to determine statements of significance, which were then utilized to develop interpretive themes. The interpretive themes became the building blocks for the recommended types of interpretive programming, media, and trails found within this interpretive master plan.

Initial data collection began by developing a comprehensive understanding of the site's history, current uses, and future goals. Treehaven's Land Management Plan was reviewed to gain a thorough understanding of the site's land and family history, geological land cover, and current research, educational, and commercial uses. Documentation regarding audience/demographic information, available resources, and current interpretive and educational programming was also examined. Five additional

interpretive master plans, developed by Schmeeckle Reserve, Mary Bonnell, and the Pennsylvania Department of Conservation and Natural Resources, served as references for information necessary to the interpretive planning process, such as how to effectively and clearly organize a plan and some of the commonalities among interpretive plans.

After reviewing pertinent documents and artifacts to gather background information on Treehaven, as well as interpretive planning, individual semi-structured interviews were held with the Director, Assistant Director, Forest Ecologist, and other stakeholders to collect additional data. These interviews gathered personal input from Treehaven's stakeholders while also researching the resources of potential stories to be told with interpretive themes and methods. This information, along with the prior background research, was synthesized to develop statements of significance used to determine a central theme, sub-themes, and the most helpful interpretive resources available to Treehaven.

Upon finalizing a central interpretive theme, recommendations were determined to tell *what* should be told and *how* and *where* the information should be told through trails, programming, signage, and other media.

Mission

An organization's mission is the foundation for a successful interpretive plan. There were two main objectives regarding Treehaven's mission: identify the key components of the mission statement, and identify current methods of communicating the mission statement. The first step in identifying Treehaven's mission was to identify the key components of the official mission statement, which reads: "Treehaven, a campus of

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UWSP – College of Natural Resources, is the Wisconsin center for integrating natural resources education, management, research, and recreation." Regarding the mission statement itself, most of the respondents said in their individual interviews that the main component of Treehaven's mission is some form of education, whether that is working with school groups, undergraduate students from the University of Wisconsin-Stevens Point, or various other groups that utilize Treehaven's property. One respondent noted that, "Education has always been our primary focus," while another emphasized attempts at keeping education at Treehaven "experiential and outdoors and hands-on." Education was often mentioned with ties to the physical landscape, as one respondent noted, "The land resource is a platform for learning…it's a classroom."

In addition to a broad mention of education as a key component of the organization's mission, sustainable forestry and land management was also a recurring topic among Treehaven stakeholders. "The second major part of what we do is really focused on sustainable forestry," was a recurring comment from respondents. Three of five respondents mentioned this as a major component of Treehaven's mission, and yet the following was also mentioned regarding sustainable forestry and land management – "What we don't have is our story and the story of the land management here."

The topic of research, both current research efforts and expanding research in the future, was also mentioned by multiple respondents. The consensus appeared to be that "very, very little actual research has been done on the property," but that "there's a lot that Treehaven could do with research." There was an interest among all respondents that, although research is already found within Treehaven's written mission statement, future research endeavors should play a more critical and focal role in Treehaven's mission.

Recreation, the last of the four components listed within Treehaven's official mission statement, was frequently addressed by respondents when discussing both education and outdoor experiences. Recreation was rarely mentioned as a stand-alone topic – as it appears in the mission statement – but rather as a vehicle that attracts people to Treehaven for specific educational, professional, and outdoor experiences. As one respondent noted, "That's probably what we do best – getting people outdoors and experiencing nature." Another respondent said, "This is a place where people can think and get his or her life into a really cleansed way of living…with passive types of recreation – hiking, snowshoeing, cross-country skiing."

According to interview data, these outdoor experiences driven by recreational and educational opportunities help visitors create a sense of environmental appreciation within themselves. One respondent stated, "The first thing you do if you're trying to create an environmental appreciation, which is often the level that we're getting people at, is to get them outside and into a fun experience…then you start building on it." A different respondent built on this same premise, "It's [Treehaven] an environmental learning center…not just academic book learning or philosophical interviews…this is a place where you can put your hands in the dirt, where you can touch the trees, where you can smell the air." Despite not being written in the official mission statement, the idea of environmental appreciation was routinely brought up by interview respondents when discussing Treehaven's mission.

The final recurring component from mission statement discussions was the concept of integrating the separate mission components. One respondent mentioned, "The key part of the mission statement is the integration of all those things…even though they're [visitors] not being guided by us, what can we provide for them? What experience can

they discover on their own to help them learn something that has to do with our natural resources…or experience or learn something about the management that's going on out here, or maybe research, or maybe all of those things?" There were varying opinions on the level of success Treehaven is currently achieving with its mission-integration efforts. Some of the respondents felt that "the focus of the entire staff and the people there is to reinforce the mission…it's just done in so many subtle ways," and others thought, "when we do it well…we're integrating all of those pieces together in their educational experience." The general consensus was that Treehaven does a fine job of integrating the components of the mission, but there is still room for improvement to help maximize the Treehaven experience for visitors.

Although Treehaven's mission statement has four official components (education, management, research, and recreation), interview data resulted in the following key components of Treehaven's mission: education; sustainable forestry and land management; current and future research endeavors; recreation and education; recreation and outdoor experiences; environmental appreciation; and integration of mission components. While many of these are indeed similar to the components found within the official mission statement, interview results show additional depth to Treehaven's mission than what is currently written; namely, there is also a desire to build environmental appreciation through educational and outdoor pursuits at Treehaven.

Beyond identifying the key components of Treehaven's mission, it was also necessary to determine how Treehaven currently communicates its mission to visitors. All interview respondents agreed that, "99% of our communication right now is through oral experiences," and that "we don't right now really have any interpretive media other than ourselves that help provide information and experiences to make those connections." It

was also mentioned that "the mission is referred to in all of the brochures for the programs." Interview results showed that Treehaven primarily communicates its mission through oral programming, with written communication (such as brochures and newsletters) as a secondary communication technique.

Audiences

Interview results showed a wide range of audiences that visit Treehaven. The most common response referred to the undergraduate program hosted by Treehaven every summer. One respondent said, "This summer we'll go through 216 undergraduates from the College of Natural Resources," which was echoed by multiple individuals. Interview results showed additional audiences at Treehaven: retirees, captive audiences (referring to the undergraduate students), conferences and training groups, a diverse socioeconomic range of school groups (all with a 4th grade minimum age requirement), individuals seeking college credit from the University, and local residents. It was noted by 4 out of 5 respondents that individuals not falling into the above categories "come because they want to," and are simply voluntary audiences.

But *why* do individuals and groups want to visit Treehaven? Identifying Treehaven's audiences required not only investigating *who* visits Treehaven, but *why* people visit Treehaven; the reasons for visiting Treehaven are telling about the types of people that visit the site. It was noted by several respondents that "the public comes because of the trail system." There was also frequent mention of Treehaven's quality and diverse programming and experiences that draw people in. A common interview response was, "They see Treehaven as providing good programming, but they also see Treehaven as providing an experience that they can't get anywhere else." Likewise, another

respondent mentioned, "We're kind of a weird breed of being a college campus, a natural resources education center, a conference facility; but I think that's also the attractor of why people come, because we have a lot of different things to experience right here. I think people come here because we've got all of these different interests that they have all in one place." Treehaven's use as a conference and training facility was frequently mentioned in interview data, as was the required summer program for undergraduates in the College of Natural Resources. Overall, results showed that the majority of individuals visit Treehaven for required undergraduate courses, to attend a conference or training, for quality and diverse programming and experiences, and to use the trail system.

Resources

Regarding Treehaven's available resources, responses were consistent among stakeholders. Each respondent referred to the importance and availability of human resources. For example, one respondent noted, "From the education side, first you have to look at the people, which is our primary vehicle for communicating." However, the use of human resources at Treehaven expands beyond education. According to interview data, "Research is technically a part of our Treehaven resident ecologist position." The topic of people as the "primary resource" was continually mentioned by all respondents during the interview process, whether they mentioned specific staff members, work study students, or volunteers.

In addition to available human resources, the land base itself was another common response to the question of resources. One respondent stated, "We don't have a big

touch and feel nature center, but we have 1400 acres of land and all these trails." This sentiment was echoed by the following statement made from a different stakeholder, "The land base itself is the giant resource we have – it's the biggest thing of all." Each respondent mentioned the 1400 acres of Treehaven land and property as an available resource. Situated throughout the land is Treehaven's trail system, another resource mentioned frequently throughout the interviews. Several respondents said, "In terms of other resources, there's trails – ski trails, snowshoe trails, walking trails."

According to interview data, Treehaven not only relies on its staff and land as resources, but also on the facility and structures. It was noted by many that, "We have a couple of decks, some boardwalks, some bridges, the shelters, the cordwood cabin." Many felt that "the second biggest thing is the fact that we have this facility that has food and lodging available."

Another major resource noted by most respondents is Treehaven's affiliation with the University of Wisconsin-Stevens Point. Several respondents pointed out that, "One of the big resources that we do have is the fact that we're connected to campus." Those connections bring with them potential new human and capital resources.

Additional resources mentioned include: physical props and equipment, minimal university funding, Treehaven's website, timber values, and program funding. However, the available resources to Treehaven most commonly mentioned in interviews were human resources, the land base and trail system, the facility itself, outbuildings and structures, and connections to the University.

Chapter Three: Themes and Sub-Themes

Importance of Themes and Messages

Themes play a critical role in interpretation and the interpretive planning process, as they lay the foundation for connections between audiences and the resources or stories at a specific site; themes accomplish this through universal concepts and tangible resources. A universal concept is just that – an idea that connects with almost everyone, regardless of personal background. These universal concepts are intangible, as they cannot be physically touched and may contain different meanings to different individuals. However, most individuals can relate a universal concept to their own lives in one way or another. Universal intangible concepts cross human boundaries and rely on distinctly human emotions, ideas, struggles, and values. Examples of universal intangible concepts include love, death, survival, life, friendship, and morals, just to name a few. These terms may not conjure up the same images or emotions for every individual, but that's the point. Universals concepts can be targeted in an interpretive message for the reader to apply to their own life in ways that make sense to them.

A theme or sub-theme requires an intangible universal concept to build emotional and intellectual connections between audiences and resources, but it is the tangible resource(s) within a theme that provide a sense of grounding and context for the audience. The tangible resource is what the audience can physically see, touch, hear, smell, or even taste. If the universal intangible resource draws on grand, sweeping, human concepts, then it is the tangible resource that provides specificity and points to a particular object, landscape, building, creature, etc. The tangible resource presents the audience with facts about the physical resource, while the universal concept allows audiences to explore the meaning of the physical resource as it relates to the human condition and, most importantly, to the individual.

Interpretive themes are a tool that can unify a site's important stories and messages by connecting universal concepts to tangible resources in statements that grab interests and ideas. Themes not only help organize a site's important stories, but they also help identify and explain the meaning within those stories and resources while still allowing audiences to arrive at their own conclusions. The purpose of a theme is not to spell out everything about a site in glaring, obvious terms; rather, it is to engage the visitor in an experience, to provoke thoughts, and to encourage the visitor to look at the resource in a new light.

When used for organizational purposes, a central theme introduces the main idea for the site. Whether personal interpretation or non-personal interpretive media, all interpretation should draw from the central theme statement as a single, unifying concept. A central theme statement, beyond organizing stories and ideas with a cohesive message, also organizes stories and resources in ways that can be clearly communicated to audiences through planned interpretive programming and media. Themes are the building blocks of both interpretation and interpretive planning.

Beyond the central theme statement, sub-themes may also emerge as a way to break the central theme into more specific ideas throughout a site. Sub-themes, like the central theme, contain universals and tangible resources, while providing an interpretive plan with more specific, individualized information about a particular aspect of the central theme. One central theme may result in a number of sub-themes. Because sub-themes are more specific than the central theme, sub-themes are especially useful when deciding where and how to use interpretive media and programming to convey stories and messages.

Sub-themes may be broken down further into specific messages and ideas through interpretive methods. Whereas themes and sub-themes organize the stories and are crucial to planning, it is often the messages that provide the bulk of the text in non-personal interpretive media, such as signs, waysides, exhibits, and brochures. However, it is important to remember that the messages are pulled from the sub-themes, which are in turn pulled from the central theme. Together, the central theme, sub-themes, and messages create a framework for how to most effectively communicate a cohesive and unified story to audiences.

Central Theme

Determining a central theme was one of the purposes for this document. Based on interview results, the following universal concepts continually emerged: change, past, present, future, family, legacy, ethics, sustainability, and need. Just as the universal concepts emerged, so did the following tangible resources: landscape, Wisconsin, and citizens. With these universal concepts and tangible resources at hand, it was determined that Treehaven's central theme statement should be:

> ***Treehaven's changing landscape offers a window to Wisconsin's past, a bridge to a sustainable future, and a snapshot of a present day shaped by family legacy, land ethic, and the need for environmentally literate citizens.***

As discussed again and again in interviews, much of Treehaven's story comes from the changing relationship between people and the land; both the universals and tangible

resources within the central theme are heavily influenced by the concepts of time, people, and the landscape.

Sub-Themes and Messages

The central theme was broken down into the following four sub-themes and messages, based on the central theme itself, with additional consideration from interview responses about the mission, audiences, resources, and important stories:

Sub-Theme 1: Treehaven is the living legacy of the Vallier family's desire to conserve and protect Wisconsin's natural places.

Messages:
1. Dorothy Vallier and her husband Gordon Kummer, and later Dorothy and her second husband Jacque Vallier, were pioneers in environmental conservation efforts throughout Wisconsin.
2. Decades of reforestation and conservation efforts by the Kummer and Vallier family restored a once barren and abused landscape to the thriving mixed hardwood forest now known as Treehaven.
3. The Vallier family generously donated Treehaven to the College of Natural Resources at the University of Wisconsin-Stevens Point to be used as a platform for natural resource education, management, and research in Wisconsin.

Sub-Theme 2: Treehaven forges lasting connections between visitors and the natural world through memorable outdoor experiences on the Treehaven landscape.

Messages:

1. Miles of trails and 1400 acres of forested land provide a unique outdoor classroom for visitors.

2. Passive recreation allows visitors to explore the land on their own time and at their own pace.

Sub-Theme 3: Treehaven's landscape reveals a complex and changing relationship between humans, wildlife, and the land throughout history in northern Wisconsin.

Messages:

- Treehaven rests on an ancient glacial ridge, providing many forest and wetland habitats for an abundance of wildlife.

- Humans heavily influenced the northern Wisconsin landscape during the late 19th century and early 20th century through logging activities, farming, and forest fires.

- Modern forestry practices are restoring Treehaven's landscape to the mixed hardwood forests and wildlife habitats of centuries past.

Sub-Theme 4: Treehaven provides a unique venue to discuss and promote sustainability through land management practices, forestry research, and natural resources education.

Messages:

1. Sustainable land management requires understanding the landscape's past while developing long-term plans for the future.
2. A variety of research is conducted on Treehaven's property to gain a better understanding of sustainable forestry.
3. Undergraduate students play a crucial role in research and education at Treehaven.

Chapter Four: Recommendations for Interpretive Media, Trails, and Programming

Overview of Recommendations for Interpretive Media and Technology

Treehaven stakeholders expressed concern about the landscape being "signed out to the max" and the possibility of media taking away from the character of the landscape. There was also concern about sign maintenance and putting signs on active logging roads where they could be easily knocked over by trucks and equipment. There was a suggestion for putting signs where a distinct human footprint already exists, such as a dock, overlook, boardwalk, etc. Stakeholders felt that adding a sign to an area that already has a clear human presence would not detract from the landscape; rather, it is an opportunity to help people connect with the landscape. There are many areas on Treehaven's property that lend themselves to a professionally made interpretive sign; namely, the back deck of the main building, the dragonfly pond deck, the garden, listening place overlook, the start of the proposed Wisconsin Plant Identification Trail, and several of the hallways in the main building complex. These are all areas that have a dock, deck, or clear human presence; signs and waysides in these locations would not detract from the natural feeling of the landscape.

The locations recommended for interpretive panels and wayside exhibits will probably not see many changes in the near future, so a permanent sign detailing a particular sub-theme and message is appropriate, whereas active research and demonstration areas require information and interpretation updated more frequently through the use of QR, or "quick response," codes for smart phones. Smart phones scan the QR code, which looks like a bar code; the code opens the phone's internet browser and takes the individual to a website or video with additional information. QR codes could be especially useful for the forest research and demonstration sites, as well as sensitive

habitats, around Treehaven. Stakeholders were very clear about limiting interpretive

signage, especially on active logging roads, and maintaining the character of the

landscape. As the research changes for a particular site, it is easy to update a website

(linked to a QR code) to accommodate changes in research and results and interpret

that information to the public. Most of the codes can be placed on existing trail markers,

with the exception of a few destinations that require adding a wooden post. This is cost

effective and low maintenance compared to designing, building, and maintaining

interpretive signs and wayside exhibits. The QR codes allow visitors to connect to the

resources and landscape through technology, which stakeholders desired.

While QR codes are a tool to combine interpretation and technology, not everyone has a

smart phone. Relying solely on QR codes has the potential to alienate visitors who do

not have smart phones, whereas interpretive panels may reach a broader audience.

Also, while stakeholders desired increasing the use of technology for interpretation,

there was still a strong desire for interpretive signs. The recommendations in this plan

aim to strike a balance between traditional interpretive signs and technology.

Beyond QR codes and smart phones, there are many other interpretive venues that

Treehaven may explore through technology. There is a lot of potential for Treehaven's

website and Facebook page to use videos (especially YouTube videos, which do not

have a cost and can be embedded into websites), podcasts, slideshows, etc. A weekly

or monthly podcast, video, or slideshow on Treehaven's website or Facebook would be

an effective way to help previous visitors stay connected to and interested in Treehaven.

The podcast, video, or slideshow could be about anything of interest at Treehaven, and

the particular sub-theme could vary with each episode.

Some potential examples of podcasts, videos, or slideshows include: update on research sites, trail conditions/things to do on the trails, Kummer/Vallier family history, interesting habitat information, phenology, stream and pond watches, etc. The podcast/video/etc. could be made and uploaded by a Graduate Fellow or undergraduate student, providing a tie to the university. Developing interpretive videos or podcasts allow for more personal interpretation without increasing actual face-to-face interpretation.

Overview of Recommendations for Interpretive Trails and Programming

This plan does not currently recommend the addition of interpretive trails at Treehaven. Although Treehaven stakeholders expressed interest in interpretive trails, they also expressed concern about upkeep and maintenance of interpretive signage and how signs could potentially impact the character of the landscape. In addition, there was concern about putting signs on active logging roads – which are most of the trails on Treehaven's property. The researcher concluded that an interpretive trail on an *existing* trail is probably not likely. If there is to be an interpretive trail at Treehaven an entirely new trail will have to be built somewhere on the property.

After interviewing Treehaven stakeholders, there seemed to be a greater desire for interpretive *destinations*, rather than entire interpretive trails. While Treehaven has an extensive trail system, it does not currently have any list or markings on the trail maps showing places of interest on the property. Likewise, as one travels the trails it is common to stumble upon areas with fences, flags, or even entire swaths of forest that are burned with no information as to what's going on in that particular area. There are

also some unique forest habitats, such as the hemlock grove and cedar bog, that are easy to walk past without noticing.

Instead of recommending an interpretive forestry trail, it seems more fitting for Treehaven, based on its audiences, resources, and needs, to recommend Forest Habitat and Research Destination sites. There are at least 8 sites that can be included – the deer fence, burn site, white birch regeneration site, red pine plantation, aspen stand, cedar bog, and hemlock grove – with potentially even more sites than those listed. These sites would be tied together with a marker on Treehaven's trail map that denotes them as Forest Habitat and Research Destination sites. QR codes attached to trail markers and posts would allow visitors to receive interpretation and information about these sites via cell phone. As the results and research changes, the websites linked to the QR codes can be updated and changed as well.

The majority of the proposed Forest Habitat and Research Destination sites have existing trail markers either at the exact site or very nearby. Only a few additional posts and/or markers would need to be added. QR codes would be attached to the trail marker or post. The codes could take visitors to videos of the Forest Ecology or undergraduate/graduate students explaining the research/demonstration or habitat site, providing more in-depth information than could be included on an interpretive panel. This also allows the visitor to receive some personal interpretation while out on the trail without requiring a staff member to be present at any particular moment.

Several stakeholders brought up the idea of an interpretive plant walk on the existing Beaver Pond trail by the Listening Place. Every summer, the undergraduate students must be able to identify more than 100 plants found along this trail. And every summer,

Treehaven staff and undergraduate teaching assistants go out on the trail and flag the individual plants. Stakeholders expressed a desire for a more permanent plant walk. However, the concerns remained the same: too many signs would require too much maintenance and would take away from the character of the landscape. Upon further thought, it became clear that stakeholders did not necessarily desire an *interpretive* plant walk, but rather an *identification* plant walk. With so many plants to cover, and a "less signs is better" mentality, the volume of information on such a short trail (roughly 1 mile) make it almost impossible to interpret. However, it *is* possible to combine a small amount of interpretation at the beginning of the trail head with an identification walk.

An interpretive sign is recommended to mark the trail head of the proposed Wisconsin Plant Identification Trail. This sign should address the message from sub-theme 2 about Treehaven trails acting as an outdoor classroom. This sign would most likely be the end of interpretation on the trail, though. There are three options for identifying plants along the trail itself:

- Cell Phone Tour/App: There are many options for companies that will design a tour or app for a cell phone, as seen in Technology Recommendations on Page #38.
- QR Codes: Small markers along the trail with attached QR codes take visitors to websites or videos detailing specific plants. However, this particular method requires an abundance of markers and staff vigilance to make sure markers are not damaged and remain in correct locations. It is also important to take into account that the large volume of markers may detract from the natural feeling of the trail.
- Brochures: Small markers along the trail correspond to numbers within a color, high resolution brochure detailing specific plants. However, this particular

method requires an abundance of markers and staff vigilance to make sure markers are not damaged and remain in correct locations. It is also important to take into account that the large volume of markers may detract from the natural feeling of the trail.

Summary of Recommendations for Media – Wayside Exhibits/Signs

LOCATION	MODE OF INTERPRETATION	SUB-THEME(S)	ADDITIONAL RECOMMENDATIONS/NOTES
Main Building – Back Deck	Set of interpretive panels	Sub-Theme 1, Sub-Theme 2, Sub-Theme 3, Sub-Theme 4	There is enough space on the back deck for an interpretive panel for each sub-theme, if desired. Developing interpretive panel on back deck for each sub-theme would provide visitors with a good overview of all aspects of Treehaven, without having to leave main building complex. Interpretive panel(s) should be set low enough not to obstruct view of pond.
Dragonfly Pond Deck	Interpretive panel	Sub-Theme 3	Interpretive panel should be set low enough not to obstruct view of pond.
Garden	Interpretive panel	Sub-Theme 4	Interpretive panel should be mounted by garden fence and easy to spot by visitors casually walking past the garden.
Listening Place Overlook	Interpretive panel	Sub-Theme 3	Interpretive panel should be set low enough not to obstruct view of pond.
Right or Left of Listening Place Overlook	Trailhead Sign	Sub-Theme 2	Serves as trail marker for Wisconsin Plant Identification Trail with interpretive message about the trail as an outdoor classroom. Includes QR code and/or information about cell phone tour.
Main building – Downstairs hallway	Interpretive panel	Sub-Theme 4	Explain existing timber panels on downstairs hallway walls.
Main building – Dining Room	Interpretive panel	Sub-Theme 4	Connect produce from garden, composting system, food service.
Main building – Upstairs hallways	Set of interpretive panels	Sub-Theme 1	Detail Vallier family's contribution to Wisconsin conservation efforts and Treehaven's history.

Summary of Recommendations for Media – QR Codes

LOCATION	MODE OF INTERPRETATION	SUB-THEME(S)	ADDITIONAL RECOMMENDATIONS/NOTES
Deer Fence – Trail Marker #24	QR Code	Sub-Theme 4	Forest Habitat and Research Destination. QR code attached to trail marker.
White Birch Regeneration Site – Trail Marker #36	QR Code	Sub-Theme 3, Sub-Theme 4	Forest Habitat and Research Destination. QR code attached to trail marker. Codes take visitors to video of Forest Ecologist or undergraduate students explaining the research/demonstration/habitat site.
Burn Site – Trail Marker #7	QR Code	Sub-Theme 3, Sub-Theme 4	Forest Habitat and Research Destination. Photos from the burn, in addition to a video or text interpreting the burn site, should be included. QR code attached to trail marker. Codes take visitors to video of Forest Ecologist or undergraduate students explaining the research/demonstration/habitat site.
Hemlock Grove – Trail Marker #34	QR Code	Sub-Theme 4	Forest Habitat and Research Destination. QR code attached to trail marker. Codes take visitors to video of Forest Ecologist or undergraduate students explaining the research/demonstration/habitat site.
Cedar Bog – Between Trail Markers #39 and #37	QR Code	Sub-Theme 4	Forest Habitat and Research Destination. *A post would need to be added to this spot to display the QR code.* Codes take visitors to video of Forest Ecologist or undergraduate students explaining the research/demonstration/habitat site.
Red Pine	QR Code	Sub-Theme 3, Sub-	Forest Habitat and Research

Plantation – Near parking lot		Theme 4	Destination. *A post would need to be added to this spot to display the QR code.* Codes take visitors to video of Forest Ecologist or undergraduate students explaining the research/demonstration/habitat site.
Aspen Stand – Trail to the right of Dragonfly Pond	QR Code	Sub-Theme 4	Forest Habitat and Research Destination. *A post would need to be added to this spot to display the QR code.* Codes take visitors to video of Forest Ecologist or undergraduate students explaining the research/demonstration/habitat site.
Garden Shed	QR Code	Sub-Theme 4	QR code, attached to garden shed, should take visitors to images/greater detail of cordwood construction process, including photos from garden shed construction. Include information on how this ties to sustainability.
Cordwood Cabin – Marker #17	QR Code	Sub-Theme 4	QR code, attached to Cordwood Cabin sign, should take visitors to images/greater detail of cordwood construction process, including photos from Cordwood Cabin construction. Include information on how this ties to sustainability.
Kiosk – West end of property	QR Code	Sub-Theme 2	QR code takes visitors to Treehaven trail map and/or website.
Kiosk – Parking lot	QR Code	Sub-Theme 2	QR code takes visitors to Treehaven trail map and/or website.
Kiosk – Ski trailhead	QR Code	Sub-Theme 2	QR code takes visitors to Treehaven trail map and/or website.

Summary of Recommendations for Interpretive Programming, Media, and/or Trails

LOCATION	MODE OF INTERPRETATION	SUB-THEME(S)	ADDITIONAL RECOMMENDATIONS/NOTES
Various destinations on Treehaven property (Forest Habitat and Research Destinations): • Deer Fence • Burn Site • White Birch Regeneration • Red Pine Plantation • Aspen Stand • Cedar Bog • Hemlock Grove	QR Codes	Sub-Theme 3, Sub-Theme 4	Destinations noted with marker on trail maps symbolizing "Forest Habitat and Research Destination" sites. These destinations have either pre-existing trail markers or require newly built posts with attached QR codes. The codes take visitors to video of Forest Ecologist or undergraduate students explaining the research/demonstration/habitat site, providing more in-depth information than could be included on an interpretive panel. Also allows the visitor to receive personal interpretation.
Treehaven website and/or Facebook page	Podcast/video	Sub-Theme 1, Sub-Theme 2, Sub-Theme 3, Sub-Theme 4 (May vary from week-to-week or month-to-month)	Weekly or monthly podcast or video on website/Facebook page about something of interest at Treehaven. Examples include: update on research sites, trail conditions/things to do on the trails, Kummer/Vallier family history, interesting habitat information. Podcast or video could be made and uploaded by Graduate Fellow or undergraduate student – provides tie to university. Allows for more face-to-face interpretation without increasing interpretive programming.
Beaver Pond Trail (Proposed name change to Wisconsin Plant Identification Trail)	Cell Phone Tour *OR* QR Codes	N/A	Wisconsin Plant Identification Trail would *not* be an interpretive trail, but rather a plant identification trail with an interpretive sign marking the

			trailhead. A cell phone tour/app is one method for identifying plants along the trail.
Beaver Pond Trail (Proposed name change to Wisconsin Plant Identification Trail)	QR Codes	N/A	Wisconsin Plant Identification Trail would *not* be an interpretive trail, but rather a plant identification trail with an interpretive sign marking the trailhead. Small markers along the trail with attached QR codes take visitors to websites detailing specific plants. However, this particular method requires an abundance of markers and staff vigilance to make sure markers are not damaged and remain in the correct locations.
Beaver Pond Trail (Proposed name change to Wisconsin Plant Identification Trail)	Brochure	N/A	Wisconsin Plant Identification Trail would *not* be an interpretive trail, but rather a plant identification trail with an interpretive sign marking the trailhead. Small markers along the trail correspond to numbers within a color, high resolution brochure detailing specific plants. However, this particular method requires an abundance of markers and staff vigilance to make sure markers are not damaged and remain in the correct locations.

Overview of Recommendations for Interpretive Panel Materials

There are a multitude of potential materials for interpretive panels; however, based on Treehaven stakeholder interview responses, two particular materials are recommended for interpretive panels at Treehaven: high pressure laminate and porcelain enamel. Treehaven stakeholders expressed concerns about interpretive signage requiring lots of maintenance and issues with cost. For these reasons, high pressure laminate and porcelain enamel signs may be a good option for Treehaven for a variety of reasons.

High Pressure Laminate:

High pressure laminate is considered durable, very resistant to weather and vandalism, and usually comes with a 10-20 year warranty against fading and delaminating. Another benefit of high pressure laminate signs, in addition to its durability and good graphic detail, is its versatility. Whereas some panel materials require the additional expense of framing, high pressure laminate can be produced in a variety of thicknesses that do not require additional framing. Framing is not required if the sign is at least ½ inch thick, which cuts down on both cost and additional maintenance for the frame.

Very little maintenance is needed for a high pressure laminate sign itself. Marker can be removed easily, and scratches can be buffed out with car wax. However, it should be noted that some maintenance is necessary to keep high pressure laminate signs in good shape for the duration of their life expectancy; it is recommended that high pressure laminate signs be washed and waxed twice per year for long-term durability.

Porcelain Enamel:

Porcelain enamel is another material to consider for signs at Treehaven, as sign durability was a concern amongst stakeholders. It is important to note up front that porcelain enamel signs carry a high initial cost (up to six times as much as high pressure laminate) and are expensive to duplicate and/or replace; however, porcelain enamel signs provide better graphics, color retention over time, graffiti removal, abrasion resistance, and cracking/peeling resistance. Signs made from porcelain enamel can last longer than forty years with the proper maintenance of an annual wash and wax. Porcelain enamel signs also require framing.

Summary of Recommendations for Interpretive Panel Materials

Chart contents from Signs, Trails and Wayside Exhibits *by Michael Gross, Ron Zimmerman, and Jim Buchholz*

	High Pressure Laminate	**Porcelain Enamel**
Graphics and Color		
Graphics Capability/Resolution	Very good	Excellent
Color Capability	4-color digital	4-color screen
Image/Color Retention Over Time	Good	Excellent
Photo Reproduction Capability	Very good, full color	Excellent, full color
Material Durability		
Life Expectancy in Serviceable Condition	Good, 10-20 years	Excellent, 40+ years
Scratch/Abrasion Resistant	Very good	Excellent
Cracking/Peeling/Warping Resistant	Good	Excellent
Maintenance Needed	Bi-annual wash/wax	Annual wash/wax
Framing Needed	Equal to or less than ½ inch, no	Yes
Impact Resistance (Hard Blows)	Very good	Poor
Graffiti Removal	Very good	Excellent
Replaceability/Durability	Very good, inexpensive	Poor
Typical Applications		
Wayside Exhibits/Trail Panels	Very good	Excellent
Site and Facility Identification	Good	Good
Memorials/Plaques	Poor	Poor
Identification Labels	Good	Good
Cost Range per sq. ft. (2006 prices)	Low: $50-$70	High: $300-$600

Recommendations for Design Mediators and Fabricators

Recommendations for Design Mediators:

Schmeeckle Reserve
University of Wisconsin-Stevens Point
2419 North Point Drive
Stevens Point, WI 54481
Phone: 715-346-4992
Fax: 715-295-8918
E-Mail: schmeeckle@uwsp.edu
Website: http://www.uwsp.edu/cnr/schmeeckle

Recommendations for Fabrication Companies:

Media:
iZone Imaging
2526 Charter Oak Drive
Suite 100
Temple, TX 76502
Phone: 888-464-9663
E-Mail: info@izoneimaging.com
Website: http://www.izoneimaging.com

Or

iZone Imaging
Michael Dean, Western and Northeast US Region Sales Representative
Phone: 254-778-0722 Ext. 116
E-Mail: michael.dean@izoneimaging.com

Media frames, posts, plant stakes, pedestals:
Best Exhibits
DRM Diversafab
820 Industrial Court
Baraboo, WI 53913
Phone: 877-867-6884
       800-356-4882
Fax: 608-356-4883
E-Mail: ruth@best-exfab.com
Website: http://www.best-exfab.com

Recommendations for Technology Companies and Generators

Recommendations for QR Code Generators:

QR Stuff
Website: http://www.qrstuff.com

Kaywa QR Code
Website: http://qrcode.kaywa.com

GoQR
Website: http://www.goqr.me

Guide By Cell
Website: http://www.guidebycell.com

Note: These sites generate QR codes free of charge. There are options for QR code management and website development for monthly or yearly fees.

Recommendations for Cell Phone Tour/App Builders:

BarZ Adventures
Website: http://www.barzadventures.com

Tour App Builders
Website: http://www.tourappbuilder.com

Every Trail
Website: http://www.everytrail.com

Note: BarZ Adventures and Tour App Builders require an initial start-up fee, in addition to a monthly or annual fee as long as the app is available. There may also be a fee for users to download the app onto their smart phones. Every Trail is a free app that creates an interactive GPS-guided trail. Users may download the trail to their phone and use their phone as a trail guide with additional information along the way.

Recommendations for General Technology/Media Resources:

New Media for Interpretation
Website: http://newmediaforinterpretation.weebly.com/index.html

This website provides additional information on websites and companies that provide: file format conversions, screen captures, slideshows, video and multimedia, publishing, podcasting and music, map tools, broadcasting, and QR code generators.

Suggestions for Further Research

Suggestions for Further Research

Interpretive Sign Design:

Because Treehaven is part of the College of Natural Resources at the University of Wisconsin-Stevens Point, it makes sense to use the university as a resource if Treehaven moves forward with implementing components of the interpretive plan, especially interpretive media. It is important to note that there is an Environmental Education and Interpretation major within the College of Natural Resources, as well as a class entirely devoted to interpretive media design. One suggestion would be for Treehaven to host an annual interpretive media design competition, in which there would be a call for EE/I undergraduate/graduate students to design an interpretive panel or wayside exhibit for a particular location (the Dragonfly Pond dock, for example) using the central theme, sub-themes, and messages detailed in this project. A student group from the interpretive media design class could also design a series of the ideas outlined in this project.

This would be mutually beneficial for both Treehaven and the winning student, as Treehaven would only have to pay for the sign's fabrication, but not pay for a professional designer, and the winning student would be able to put the sign's publication on his or her resume. One or two signs may be made per year in this particular relationship, until all 8-11 signs recommended in this project are constructed.

Social Media, Video, and Podcasts:

Additional research can be conducted regarding social media's growing importance in natural history interpretation and how these forms of technology can be used to deliver interpretive messages to audiences.

Cell Phone Apps, Tours, and QR Codes:

Additional research can be conducted regarding the use of cell phones and technology for interpretation and how these forms of technology can be used to deliver interpretive messages to audiences. It is suggested that a UWSP student design and implement a cell phone tour and/or app for Treehaven.

Wisconsin Plant Identification Trail Plan:

The initial idea for the Wisconsin Plant Identification Trail is outlined in this project. However, this not an interpretive trail and therefore designing this trail was outside the scope of this project. It is suggested that a UWSP student design and implement the Wisconsin Plant Identification Trail along the current Beaver Pond trail.

Interpretive Trail Plan:

The design of an interpretive trail was outside the scope of this project; however, stakeholders expressed a desire for interpretive trails on the property and there is enough acreage to build a new trail. It is suggested that a UWSP student design and implement an interpretive trail at Treehaven using the central theme and sub-themes from this project.