



A Comprehensive Plan for an Ecological Restoration-Based Eco-tourism Program at Glacial Park

by

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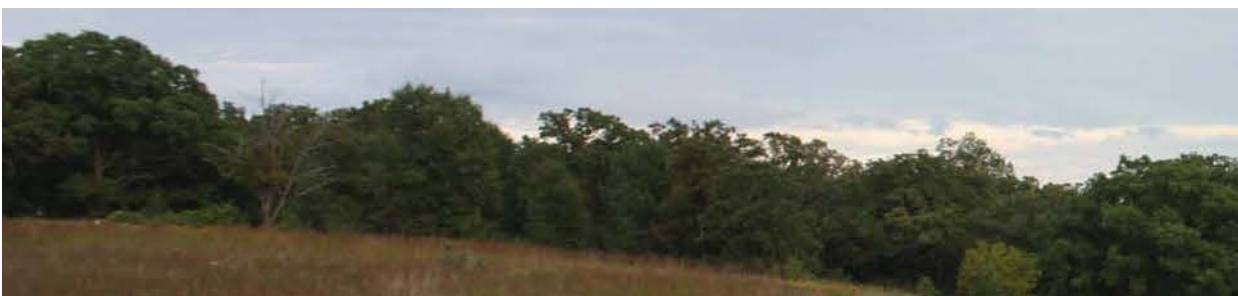
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Abstract

McHenry County Conservation District (MCCD) manages 25,000 acres of open lands in northern Illinois, including Glacial Park, a 3,273-acre park and conservation area. Dr. Tom Simpson, Research Field Station Ecologist for MCCD, approached the School of Natural Resources and Environment at the University of Michigan with the proposal that a master's project team join him and MCCD in reestablishing a weekend-long event, called the Weekend of Restoration, and analyzing ways to turn the event into a sustainable annual or semi-annual program at Glacial Park. To guide the project's activities, objectives and research, the team formulated a fundamental question: What elements of event planning, marketing, implementation, and evaluation can best create a successful, repeatable weekend restoration program at Glacial Park? The team developed a set of recommendations based on a combination of personal observations, evaluation findings, background research on relevant topics, and conversations with MCCD and other conservation professionals. Additionally, site analyses were conducted to inform future restoration projects by providing educational resources via maps, teaching points, references, and activities. The project resulted in the establishment of a 2012 event, complete with outside funding as well as staff and volunteers registered to help plan, market, implement and evaluate the event.



Acknowledgements

We would like to thank Dr. Tom Simpson from our client organization, McHenry County Conservation District, for his vision and dedication to the incredible Weekend of Restoration event that formed the centerpiece of our University of Michigan School of Natural Resources and Environment master's project. From his hospitality during our Glacial Park visit to his feedback and leadership throughout our 18-month master's project, we are grateful to have had the opportunity to work with Tom to create such a wonderful and inspiring event.

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Above all, we would like to thank the 17 participants of the Weekend of Restoration, without whom we would not have had the opportunity to work on such a unique project. Your genuine and active participation and feedback helped us, together with McHenry County Conservation District, build a future for the Weekend of Restoration program at Glacial Park for many years to come.



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Introduction to Glacial Park

Glacial Park is a 3,273-acre park and conservation area in northern Illinois. Its landscape boasts numerous trademark glacial features, including kames and kettles, as well as restored prairies, oak savannas, and wetlands. McHenry County Conservation District (MCCD), formed in 1971, manages a combined total of 25,000 acres of open lands at 32 sites, including Glacial Park. MCCD seeks to “preserve, restore, and manage natural areas and open spaces for their intrinsic value and for the benefits to present and future generations” (“Mission and History,” n.d.).

Glacial Park provides a perfect setting for a variety of recreational activities, including canoeing, kayaking, fishing, hiking, skiing, snowmobiling, horseback riding, and picnicking. It also offers numerous educational opportunities, from self-guided walks along the interpretive nature trail to environmental education programs and workshops housed within the newly constructed Lost Valley Visitor Center (LVVC) and on the grounds of the park itself. The majority of the land that now constitutes Glacial Park was used for agriculture through the mid-20th century. Since acquiring the land, MCCD has performed considerable restoration work to reestablish native northern Illinois ecological communities through invasive species removal, prescribed burns, and wetland recreation (Glacial Park brochure, n.d.).

Ecological restoration on such a large scale is necessarily an ongoing process, and one in which Dr. Tom Simpson, Research Field Station Ecologist for MCCD, is heavily involved. In particular, he developed the Ecological Restoration Certificate Program (ERCP), which seamlessly blends MCCD’s dual aims of restoration and education. The ERCP consists of nine courses that cover a breadth of ecological restoration skills and background knowledge.

Description of the history of retreat program

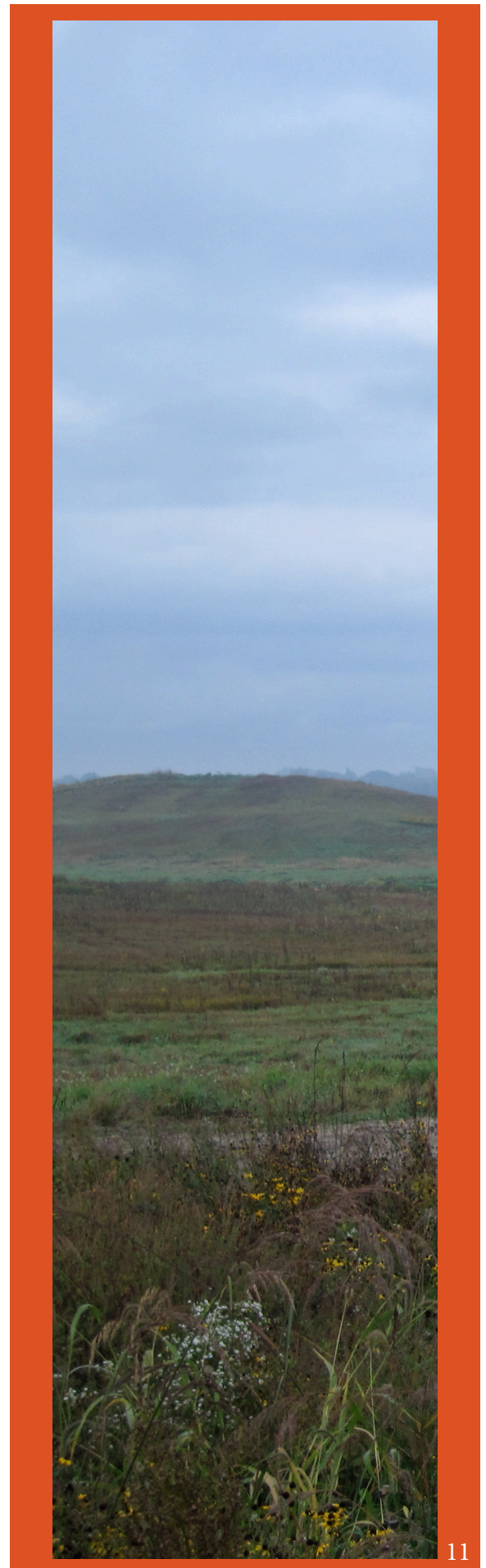
The ERCP enjoys large success, but it was not the first educational program at MCCD to focus on ecological restoration. In 2004, Tom Simpson and other MCCD staff members first introduced an ecological restoration weekend retreat program open to the public. The first weekend program, which consisted of a savanna restoration, successfully attracted 17 participants in fall of 2004. However, interest in the program began to dwindle the following year. A second program during the summer of 2005, which focused on restoring part of Nippersink Creek, drew a total of six participants. Unfortunately, interest continued to wane, and the third attempt, scheduled for 2006, failed to secure enough participants – only three people registered – leading to its cancellation. Although the weekend restoration program did not run again after 2005, MCCD continued to believe in the program’s value.

Problem Statement

Tom Simpson approached the School of Natural Resources and Environment at the University of Michigan with the proposal that a master’s project team join him and MCCD in reestablishing a weekend-long event and analyzing ways to turn the event into a sustainable annual or semi-annual program. The master’s project team and Tom Simpson developed the following problem statements:

- MCCD wishes to improve its ability to make informed decisions regarding the planning and effectiveness of its ecological restoration weekend program at Glacial Park.
- MCCD is eager to update and expand its marketing and communications strategies and enhance its understanding of and ability to reach a larger, more diverse audience.
- The regional community lacks knowledge of the importance of ecological restoration and lacks awareness of the opportunity to engage in it through the restoration program at Glacial Park.

For the two previous retreats, MCCD had not gathered program evaluation data beyond informal feedback, so essential insights gleaned from a pilot event and subsequent analysis would inform future program planning, marketing, implementation, and evaluation.





Goals and Objectives

Based on the identified problems, the master's project team and Tom Simpson developed a series of broad project goals and specific objectives to achieve them:

Goal #1: Improve upon the previous ecological restoration retreats offered at Glacial Park.

- Objective #1: Help plan and execute a three-day retreat at Glacial Park during the fall of 2011 to use as a pilot study for analyzing event planning, marketing, implementation, and evaluation.
- Objective #2: Assess the park's needs and opportunities for future retreats.
- Objective #3: Create a handbook using the results of this study that MCCD staff at Glacial Park can use to plan, market, implement, and evaluate future weekend events.

Goal #2: Raise awareness of the park and its offerings.

- Objective #4: Develop communications and marketing materials and establish ties with other organizations to facilitate promotion of the 2011 retreat and future retreats.

Goal #3: Foster environmental stewardship and create a sense of connectedness with nature among the people of the greater Chicago area.

- Objective #5: Create and execute a formal pre-event, post-event, and longitudinal survey after the retreat to gauge participants' satisfaction, pro-environmental behavior change, and environmental attitudes and knowledge.
- Objective #6: Create recommendations based on the survey results to effect pro-environmental behavior change.

Project Question

To guide the project's activities and research, the team formulated a fundamental question: What elements of event planning, marketing, implementation, and evaluation can best create a successful, repeatable weekend restoration program at Glacial Park? This question addresses the main concerns of environmental educators and ecological restoration planners and sets them within the context of Glacial Park. It is important to note, however, that while the research, pilot event, and resulting recommendations are tailored to Glacial Park, other nonprofit organizations and environmental volunteer managers could easily adapt the insights from this project to fit their particular programs.

Introduction to the Project and Turtle Marsh

The master's project team, in collaboration with Tom Simpson and with guidance from faculty advisors Dr. Rachel Kaplan and Professor Bob Grese, sought to answer the project question and pursue the aforementioned goals through a pilot event in the fall of 2011. The event, set for the weekend of September 23-25, 2011, consisted of the restoration of a wetland situated in a small kettle basin 70 meters south of a much larger kettle bog. The selected site was originally an ephemeral wetland, which dried each summer, but it gradually filled with sediment and ultimately was converted to agricultural land by 1872. It was farmed, together with the surrounding field, until MCCD purchased it in the 1970s. From the 1980s until the 2011 restoration weekend, it was dominated by invasive reed canary grass, which choked out most other plant life.

Shortly before the 2011 event, "Weekend of Restoration," MCCD excavated the site, removing much of the accumulated sediment and reed canary grass. The weekend's project then consisted of participants spreading a total of 30 pounds of seeds and planting 340 plants over the 0.63-acre site. Finally, participants spread 20 bales of straw over the scattered seeds to prevent excessive runoff and applied 50 gallons of water to the newly planted plugs. By the second morning of field work, a baby snapping turtle had found its way to the center of the newly restored wetland, earning it the name "Turtle Marsh."



Report Layout

The 2011 Weekend of Restoration at Turtle Marsh served as the pilot event from which the team derived its recommendations for planning, marketing, implementation, and evaluation. A chapter about ecological restoration opens this report, providing context for the event. The following chapters describe the methodology involved in planning, marketing, implementing, and evaluating the 2011 event. Since the event itself necessarily preceded the team's research, the outcomes from the pilot program informed the direction of research topics, raising questions about how best to approach issues that arose during the pilot weekend and how to improve upon the outcomes of the 2011 event. In each report chapter, this research – which informs both the event's existing format and possible future directions – is followed by a set of recommendations that MCCD can use to develop future events. The team developed these recommendations based on a combination of personal observations, limited survey results, some background research on relevant topics, and conversations with MCCD and other conservation professionals. The final chapter focuses on future weekend events and includes site analyses to inform future restoration projects.





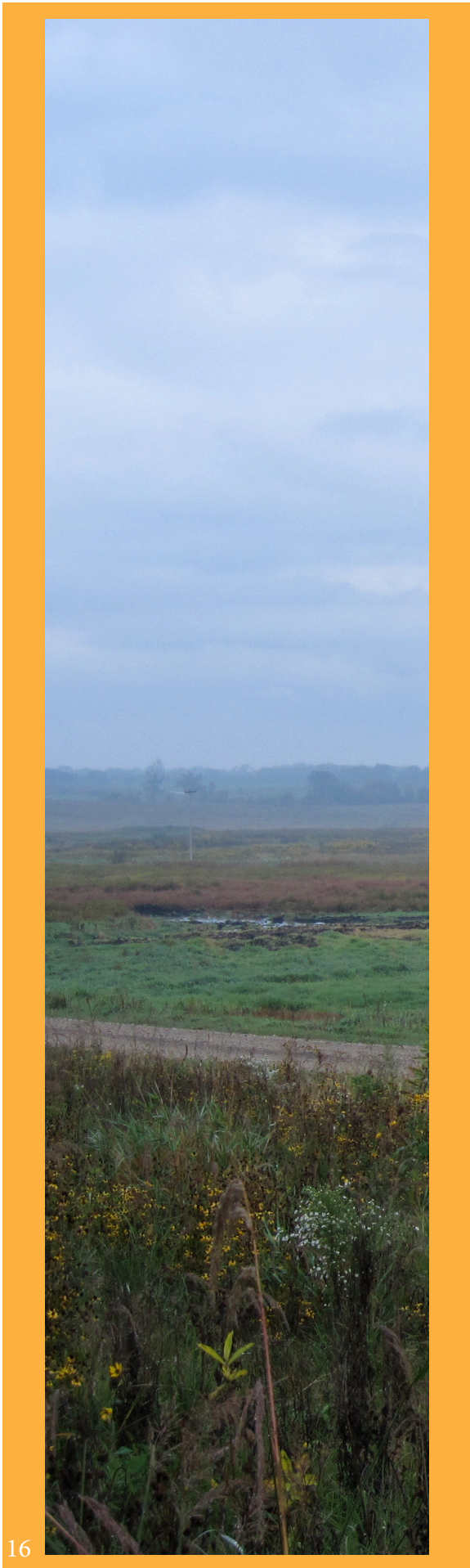
I. Ecological Restoration

1.1 Definition and Complexity

The Society for Ecological Restoration International defines ecological restoration as “...the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed” (SER, 2004). This definition, however, does not reveal the many layers of morality, culture, and controversy involved in the practice of ecological restoration.

In terms of morality, the environmental ethicists Erik Katz (1992) and Robert Elliot (1997) view ecological restoration as immoral. They argue that restoration projects will never be able to create true “nature” because the former value of the balanced ecosystem will never again be achieved and, therefore, the site remains an artificial manipulation of the natural environment. Katz warns that a belief in humanity’s ability to re-create “nature” will lead to unhindered destruction and development as any ecosystem may be viewed as replaceable (Katz, 1992).

Not all view restoration so negatively, however. Light argues that engaging in restoration projects provides a crucial opportunity for a person to form a relationship with a place and develop stewardship tendencies. Light goes on to suggest that even if the end products of restoration projects only amount to artifacts of “nature,” the means of restoring the relationship of humans to the natural world is invaluable, making ecological restoration projects imperative (Light, 2006). This relationship is further compounded by the inability to classify ecological restoration as either “nature” or “culture.” Jordan argues that forming this relationship is only possible once humans have given back to nature in the form of restoration, in recognition of the damage done in the past (Jordan, 2001). Nature is not “re-created.” Instead humans must grapple with the contradiction of being a part of and apart from nature (Jordan, 2011).



A common critique leveled against ecological restoration is the traditional opinion that this work involves restoring back to a previous ecosystem state. In exploring the history of ecological restoration, Eric Higgs discovered a crucial divide between restoring to historical fidelity and restoring for ecological integrity. The former may be more true to the cultural context of a site, however the latter goal is more likely to result in the ecosystem's sustainability (Higgs, 2003).

Winterhalder, Clewell, & Aronson (2004) agree with Higgs in that the goal of restoration should not be to restore to some static, pristine state in the distant past. Instead, they argue for the realignment of the site to its former trajectory—a trajectory, based on sound scientific research, that then allows the ecosystem to adapt and evolve in the face of change (Winterhalder et al., 2004). A closer look at two of the main benefits of ecological restoration further emphasizes the enhanced adaptability afforded by restoration.

1.2 Benefits of Ecological Restoration

1.2.1 Climate Change Mitigation

The first benefit involves the crucial position of ecological restoration in terms of climate change mitigation. The practice of restoring ecosystems helps aid in increased biodiversity and resilience. Ecosystem adaptation to climate change will result in new ecosystems that must be studied in order to not upset the new balance. Simpson explains that it is crucial that we continue studying ecosystems of today so that we are that much better prepared for the uncertainty of the future (Simpson, 2009). The higher the resiliency of both species and ecosystems, the more likely they are to adapt and survive in the future. However, even if ecosystems are resilient, several climate stresses may undermine this fortitude. Habitat fragmentation, invasive species, and air and water pollution are just a few such stresses that can threaten an ecosystem's sustainability and lead to degradation (The World Bank, 2010).

1.2.2 Ecosystem Services

The second main benefit is ecosystem services. Humans rely on ecosystem services for food and the materials necessary to create built environments. The importance of Turtle Marsh and other wetland restorations, in part due to the crucial ecosystem services provided, cannot be overstated. Wetlands provide protection from extreme floods and storm surges, store and filter freshwater that is used for drinking or irrigation, enhance water quality, and provide spawning habitat and thus

serve as a source of juvenile fish for adjacent aquatic ecosystems. Additionally, peatlands serve as a net carbon sink (Bobbink, Whigham, Beltman, & Verhoeven, 2006).

Wetlands, both natural and constructed, also act as filters, removing nutrients and toxins from fresh water. As water flows through wetlands, plants absorb and recycle human-caused nutrients, such as nitrogen and phosphorus, through their roots, stems, and leaves. Wetland microbe and sediment processes also breakdown many contaminants and rid water of excess nutrients (Chivian, 2003).

However, human impacts are degrading wetlands. Harmful actions have included drainage for agriculture to tap fertile wetland soil, construction of flood control structures, river straightening for navigation, and floodplain intrusion and conversion. Globally, more than half of all wetlands have been lost, and in densely populated regions—including some in North America—more than 80 percent have been lost or severely degraded. The state of Illinois ranks 6th in overall percentage of wetland loss (Dahl, 1990). In hopes of restoring biodiversity and ecosystem services, conservation practitioners are working to restore or recreate wetlands (Bobbink et al., 2006).





2. Planning the Weekend of Restoration

2.1 Introduction

The first step in realizing the Weekend of Restoration was planning the event. In order to effectively market the event and then run it, the agenda for the Weekend of Restoration had to be finalized. Once the content and format of the event had been created, they provided a platform to market the event, prepare for it and ultimately run it. This chapter looks at the planning process and describes the outcomes of planning, discussing strengths and weaknesses. It also identifies opportunities for improvement through research and recommendations provided by the team.

2.2 Site Visit

In order to create an agenda and content for the 2011 Weekend of Restoration, the team conducted its first site visit to Glacial Park in May, 2011. There the team met Tom Simpson and toured the Park, including the proposed restoration site for the program. During the three-day visit, the team met with MCCD staff members from various departments and became familiar with the facilities and resources at MCCD's Lost Valley Visitor Center, which participants would use during the event. The team also discussed the philosophy behind the event with Tom Simpson, Dr. William Jordan, Director of the New Academy for Nature and Culture and Co-Director of DePaul University's Institute for Nature and Culture, and Dr. Gavin Van Horn, Director of Midwest Cultures of Conservation at the Center for Humans and Nature. The team also worked with Tom Simpson to create an itinerary for the 2011 event (now officially called the Weekend of Restoration), which would occur in September and focus on a theme of change.

2.3 Climate Change Panel

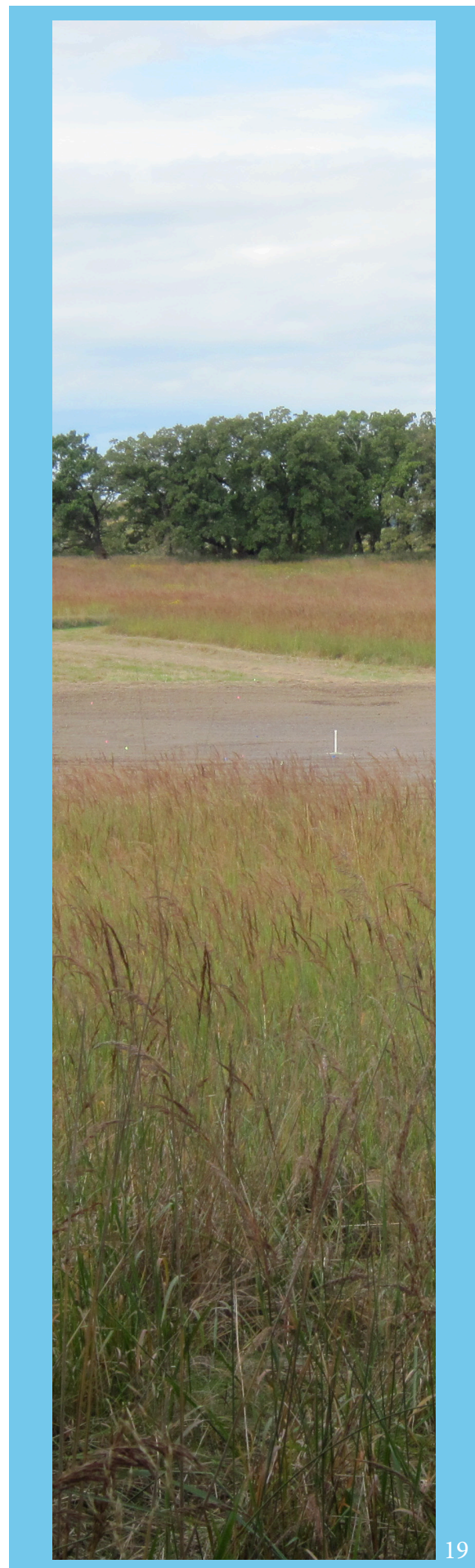
In addition to an itinerary, the team organized a discussion panel about climate change adaptation and ecological restoration that would take place during the event. This included reaching out to potential panelists based on the client's and advisors' recommendations. Once three panelists had been confirmed, the team developed questions for moderators to ask the panelists and use to facilitate discussion with the audience. These were sent to the panelists, along with a background of the event, ahead of the Weekend to allow them time to prepare and understand the goal and focus of the discussion.

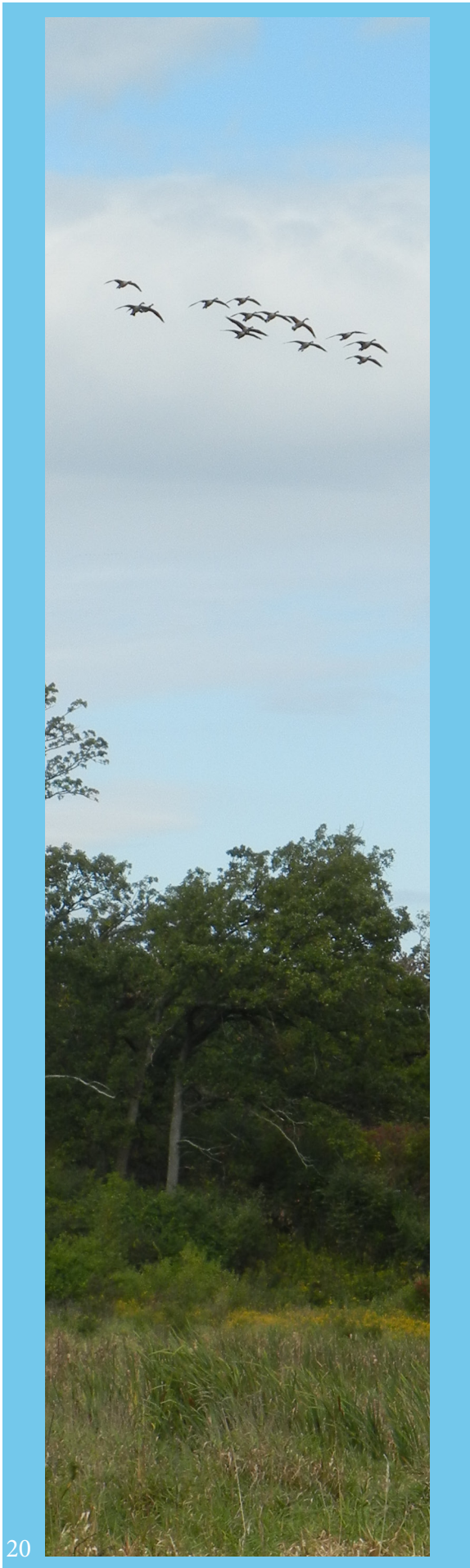
2.4 The Weekend: Strengths and Weaknesses

The Weekend of Restoration ran successfully in the fall of 2011. A total of 17 participants attended the weekend and they reported being highly satisfied with the overall event. The focus of the weekend, restoration of a marsh that had been filled in with agricultural sediment, was completed by the conclusion of the program on Sunday morning. As the Weekend of Restoration concluded with a "graduation" ceremony, the participants were able to look at Turtle Marsh and see their weekend's work right in front of them. This tangible accomplishment created a lasting impression for everyone, marking the end of a successful pilot program for Glacial Park.

The amount of time and effort dedicated to planning the Weekend of Restoration was apparent during execution of the event in September of 2011. A theme – "change" – and a guiding philosophy had been thought out and discussed thoroughly prior to the event, with many experts, from MCCD and elsewhere, weighing in on the focus and importance of the Weekend of Restoration. These discussions were at the forefront of the creation of the agenda, which strove to balance education and restoration work for the participants.

In addition to the time spent planning the Weekend of Restoration, preparations just prior to the event, which included gathering supplies and excavating the site, created a fluid and relaxed atmosphere within which to explore ecological restoration. Upon entering the restoration site, participants were greeted with a striking sight of bare soil that they would become responsible for. It was a powerful message made clear with the presence of the materials already at the site, indicating that they would be able start their work right away and have a direct impact on the site.





Commitment to the restoration site was a lasting impact for many of the participants. This was strengthened by the sense of community that they shared having worked on the project together. Many participants returned to it after the weekend was over, sending emails to others about what had changed. Keeping this strong connection alive was the event organizer, Tom Simpson. His dedication to the Weekend of Restoration and to Turtle Marsh helped connect the participants to the restoration they had taken part in and continued to unite them.

The success of the Weekend of Restoration was not without some problems, however. Throughout the planning process and into the pilot event, gaps in planning and preparation were revealed that had not been taken into account. It became clear that a lack of communication between MCCD departments regarding this event caused some issues with getting the word out about the Weekend of Restoration. The event was not posted on the MCCD Facebook page during the marketing phase of the event. Even though it was eventually posted on the MCCD website, participants were unable to register online for the event, which limited registration to phone. Even after the marketing phase and during the pilot Weekend of Restoration, many of the MCCD staff members that were at Glacial Park that weekend were unaware of the event and what was going on. This created an image of disconnect and fragmentation within MCCD for the participants.

Disconnection was a large issue during the Weekend of Restoration event. While the agenda that was set up for the event was well-developed and provided a variety of activities, it was not always followed. There were instances of confusion in which the participants were not sure where to go, and even one instance of participants being left behind due to deviation from the planned itinerary. In addition, many of the breaks set into the agenda were not taken, which caused participants to take their own at different times, resulting in a lack of continuity.

While the lack of communication between departments and deviation from the agenda were within staff power to fix, the lack of budget was an outside factor that made planning difficult. Because of the timing of the event and its planning timeline, it was impossible to seek outside grants or other funding. As a result, there was very little funding for the event. This made things like catering and supplies limited. It also meant that the Research Field Station Ecologist was unable to hire any staff, from within MCCD or otherwise, to assist with the Weekend of Restoration. Much of the work at the event was done by the ecologist himself or the master's project group, who were not as familiar with Glacial Park as another MCCD staff mem-

ber would have been. Although the event ran well and participants rated it as a success, additional staff members would have made planning and running the event easier, which would have provided an even richer experience for participants.

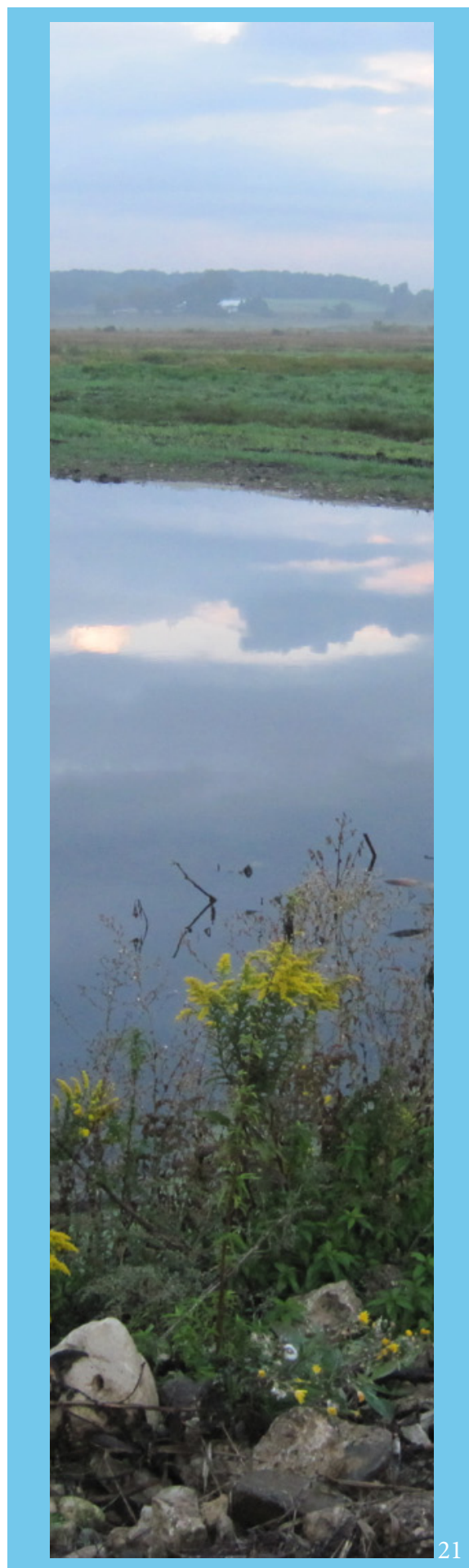
2.5 Opportunities through Research

The participants of the 2011 Weekend of Restoration reported that they very much enjoyed their experience at Glacial Park that weekend. It is important to note that many of these participants were very familiar with and committed to Glacial Park and ecological restoration in general (see Marketing: Demographics for the participant breakdown). This being the case, many of the planning challenges that presented themselves at the Weekend of Restoration were not felt or noted among the participants. This provided a unique opportunity to run an effective pilot program that participants enjoyed while still being able to pinpoint areas of opportunity in the planning process. As the Weekend of Restoration seeks to expand and draw in participants from different demographics who might not be as comfortable with restoration work or some of the improvisation that occurred in the pilot program, it is worthwhile to look into ways to improve planning for the event.

2.5.1 Departmental Communication

Lack of communication and staff support within MCCD resulted in many staff members being unavailable or even aware of the Weekend of Restoration as it occurred. In order to provide recommendations that would aid future Weekend of Restoration event planning, research was done to find methods of successfully integrating MCCD departments and stakeholders into the planning process for a more effective Weekend of Restoration.

It is critical that staff members from the various departments in an organization (e.g. education, natural resources, public outreach) work together when organizing an event or program promoting environmental education or ecological restoration. These players collectively bring invaluable expertise, perspectives, and time to a program. Research on stakeholder engagement recommends creating cross-functional teams (CFTs) to tackle any multifaceted program involving environmental education (Webber, 2002). A CFT consists of a small group of individuals from various sectors of an organization, each with a valuable and unique set of skills and knowledge, often brought together by a singular need to organize a program or event. An ill-developed CFT could lead to tensions and hostility among group members instead of har-





monious cooperation. Therefore, following certain guidelines can ensure the success of this process.

2.5.1A- Strategies for Assembling an Effective CFT

At the outset, a systematic stakeholder analysis needs to be conducted to guarantee that the CFT contains the most highly capable and most appropriately trained personnel from each department (Reed, 2008). A leader for this CFT, who will likely have the most experience in managing past Weekend of Restoration events, should secure the cooperation of organization leaders who can help increase the project's visibility and contribute financial resources. This high profile will create a greater sense of value and credibility for the program, attracting talented people to the collaborative effort. Once the CFT has collected a list of interested individuals, the leader of the CFT will need to decide who will best contribute to the group. The leader should choose members who work on equal levels and hold similar ranks within their own departments. This will limit potential tensions surrounding power inequalities and differing degrees of decision-making authority, and instead nurture an environment of trust. The leader may also consider whether any interested individuals have worked together successfully in the past, since these past experiences may serve as a foundation for future effective group work. This notion is also supported by other researchers who state that CFT participation is “underpinned by a philosophy that emphasizes empowerment, equity, trust and learning” (Reed, 2008, p. 2417).

In order to create an effective CFT, and in turn an effective program, it is crucial that the the CFT's objectives for the team and the program be determined early in the process. All members of the CFT should agree with the objectives (Webber, 2002). These objectives need to be explicitly articulated at the beginning of the process so no confusion complicates negotiations later in the process. During such negotiations and decision-making, the CFT needs an impartial, trusted, and approachable facilitator to oversee the group's meetings. Ideally, this facilitator is a third-party to the CFT and is highly experienced in program organization and possesses skills in communicating effectively with a variety of professionals in a respectful and unbiased manner. During meetings, a successful facilitator will help CFT members – who bring a variety of perspectives and suggestions – make collaborative decisions that incorporate various viewpoints (Webber, 2002).

In order to effectively organize the Weekend of Restoration with an extended amount of individuals involved, it is important that members of a CFT begin their collaboration early

in the planning process (Webber, 2002). From the early stages of program development through implementation and even evaluation, a CFT is most effective, and its members most satisfied, when it is included in all aspects of an organization's program process. If all members of the CFT feel they are equally heard, represented, and effective in the team, a more successful program will naturally develop. It is important, however, to realize that an effective CFT does not necessarily equate to constant consensus among team members.

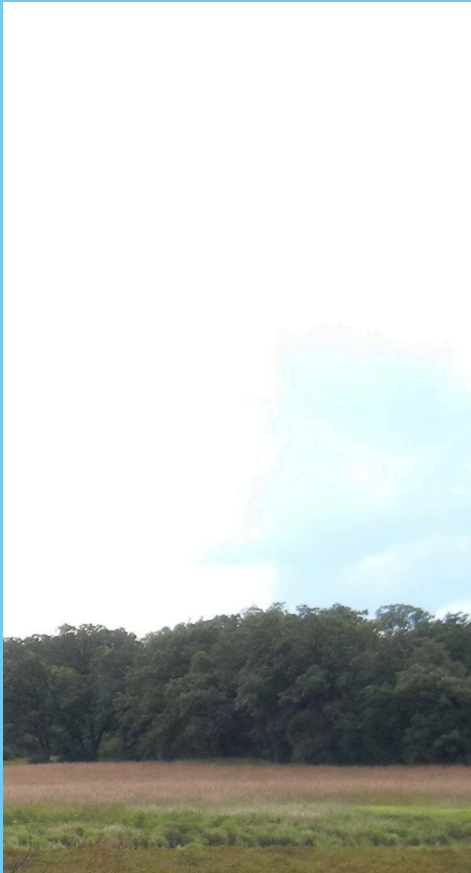
In summary, for a CFT to successfully serve the program and accomplish its objectives, a stable and productive balance of participation needs to exist among its members. According to Cornwall (2008), engaging all members of a CFT at each step throughout the program process ensures a deep level of participation; the process can remain too narrow if it involves only a handful of people that do not represent all of the relevant departments. It is important to note that even in a CFT that consists of a wide selection of people, members may only participate in a shallow manner. Therefore, an effective program leader should strive to strike a proper balance of participation among members of a CFT where a combination of depth and inclusion are incorporated, leading to optimal participation (Cornwall, 2008).

2.5.2 The Importance of Sticking to an Agenda

In planning the event, a great deal of attention was placed on creating the itinerary. This would not only facilitate running the weekend program, but is necessary to anticipate steps needed to make the event run smoothly. When actual events during the Weekend of Restoration deviated from the agenda, confusion resulted among the participants and detracted from their enjoyment of the experience.

A great deal of anecdotal information exists about the benefits of creating an agenda and allowing as few deviations from it as possible during an educational program. Agendas organize objectives, materials, and volunteers during an event and help a program run fluidly. Research shows that agendas, going beyond aiding program organizers, actually allow program participants to better absorb information given to them. In one study, Falk and Dierking (1992) observed three groups of school children during a zoo visit and tested their knowledge of animal behavior afterward. The authors explain that when participants enter an event, such as an environmental educational program, they encounter two simultaneous agendas: their own and that of the event's organizers. A more educationally effective situation arises if organizers understand and reconcile these two agendas, by anticipating the visitors' expectations. In the study, program





leaders told one of the three student groups what concepts they would learn at the zoo. This factual approach prepped students for the information covered on the post-event test. Leaders showed the second group of students what observation skills they may need when visiting the zoo, aligning with the idea that the children would obtain information through careful observations of the animals and their behavior during the trip. Lastly, leaders told the third group only what to expect as a visitor to the zoo, specifically logistical information relating to lunch times, bathroom breaks, and potential visits to the gift shop. They did not discuss any information related to zoo animals with the third group. Throughout the zoo visit, leaders closely followed the logistical plan, or agenda, described to the third group. Surprisingly, test scores after the zoo trip showed that the third group of students outperformed the other two groups of students on questions related to animal behavior knowledge. Researchers hypothesized that, for students in the third group, possessing expectations about the agenda for their trip freed their attentional resources from distracting logistical concerns. They then devoted their attention to learning about the animals when at the zoo. These findings strongly suggest that sticking to an agenda and orienting participants to some of the program basics allows one to focus on the task at hand and thus absorb more information.

2.6 Recommendations

Based on the research and the team's personal observations, the following planning recommendations focus on improving upon the planning process that is already in place for the Weekend of Restoration. Communication among departments, increasing staff involvement, and sticking to an agenda are key components to effective planning and implementation.

2.6.1 Cross-functional teams

The Weekend of Restoration should **1) have a program director that creates a cross-functional team (CFT)** composed of MCCD staff members from the following departments: Departments of Natural Resources, Education and Communications & Marketing before planning the event, to help develop, implement and evaluate the Weekend of Restoration. Committed participation from the staff members on the CFT will naturally engage the entire department from which they come. This comprehensive support will help keep the Weekend of Restoration a project seen as worthwhile by higher management.

2.6.2 Interns

In addition to the program director, MCCD should **2) assign at least one full-time intern or staff member for the duration of the planning, marketing, implementation and evaluation** of the Weekend of Restoration.

An intern or staff member (preferably more than one) will be needed to devote a considerable amount of their resources and time to the Weekend of Restoration planning preceding the event and implementation during the event. Responsibilities should include, but are not limited to: the revision and distribution of printed and social media marketing materials, overseeing the completion and data collection of the marketing surveys by the participants at registration as well as the event satisfaction survey (*See Chapter 5*) at the end of the event, the prepping of supplies and materials for ecological restoration work, and the setting up and cleaning of dining facilities. The pilot Weekend of Restoration had five graduate students working on the planning, marketing, implementation and evaluation of the event over a 15 month period. The roles that were once filled by these students, regardless of how small, will need to be replaced by committed and educated staff.

2.6.3 Communication with Staff

In addition, **3) the agenda for the Weekend of Restoration needs to be explicitly communicated with all staff members that will be interacting with the participants for the duration of the event.** This especially holds true for the staff and volunteers that are not part of the CFT.

During the Weekend of Restoration, staff in leadership positions need to give consistent information to participants about everything from the meals to the order of the activities that are to take place that day. This will reduce confusion amongst the participants, resulting in less frustration and prompt starting times for all activities. The MCCD should finalize and communicate the agenda to all staff a few days prior to the event. This includes staff working at the front desk during the event.

The MCCD should place a large marketing poster about the Weekend of Restoration and the weekend agenda at the entrance and cafeteria of the visitor center for participants to refer to throughout the event. The poster can also serve as a marketing tool for visitors during the event. Receiving important information at key landmarks throughout their environment will result in a reduction in stress and confusion as to what is expected of the participants.



2.6.4 Agenda and Itinerary

To ensure that future Weekends of Restoration run smoothly, MCCD should **4) make sure to have a detailed agenda (including locations, alternate activities, and adequate breaks throughout) finalized a few days before the program, distribute the agenda to participants upon their arrival, and deviate from it as little as possible.**

Research suggests that learners are better able to absorb information and enjoy their time when they are informed in advance of the logistical dimensions of an event, such as the planned sequence of events and location and accessibility of facilities, like the restroom. Because a written agenda was not made available to participants at Glacial Park, and because deviations from the agenda occurred sometimes with very short notice, there was some confusion that resulted in a couple of participants missing much of one session. One participant also indicated that ending the weekend's activities behind schedule was the worst part of the event, because of a long drive home. Avoiding deviations from the itinerary can greatly improve participants' ability to anticipate and prepare for activities.

Along with agenda deviations, a lack of breaks during the event distracted participants from the activities at hand. Participants expressed a need for more frequent and longer breaks on the event satisfaction portion of the post-event survey. Though breaks were planned in the agenda, none were taken as scheduled. Participants therefore seized time for individual breaks as needed. This meant that they sometimes missed part of an activity or its introduction. One participant complained of being tired as the worst part of the weekend, and the team observed several other participants noticeably fatigued during lectures and discussions. Adhering to the scheduled break times may have allowed some of the participants to recover their energy, and their directed attention.

2.7 Summary

While the Weekend of Restoration event of 2011 was a success, especially as a pilot program, its planning process had room for improvement. Lack of communication, between departments, between staff members, and between staff and participants, created confusion and disconnect that degraded the quality of the event for participants. These recommendations backed by research aim to improve this communication and the quality of future Weekend of Restoration events. Successful planning is the first step in running a successful event and the Weekend of Restoration is no exception.





3 Marketing

3.1 Introduction

Since marketing plays a crucial role in generating interest in an event, the master's project team sought to improve and expand MCCD's marketing campaign for the Weekend of Restoration. MCCD had organized similar events in the past, with 17 people attending a 2004 event and six attending a 2005 event (T. Simpson, personal communication, May 11, 2011). A planned 2006 event attracted only three people, resulting in its cancellation because of lack of participation. After the failure of the third event, MCCD in 2007 created an Ecological Restoration Certificate Program to replace the multiday event format (T. Simpson, personal communication, May 5, 2011). The new program – a series of workshops culminating in a certification – proved more popular than the weekend-long event, drawing approximately 200 participants in the four years after its creation. However, because of the different types of benefits derived from a multiday event, such as community building, camaraderie, and ownership over a restoration project, MCCD hoped to revive the Weekend of Restoration.

MCCD had marketed the three previous weekend events largely through its own distribution networks – including brochures, news releases, and emails – and to some extent through email subscription lists managed by Chicago-area environmental volunteer organizations (T. Simpson, personal communication, May 5, 2011). These events drew registrants from within MCCD's jurisdiction, as well as some family or friends of participants, indicating that the marketing campaign reached primarily people already involved in MCCD activities.

The project team's revamped marketing campaign for the 2011 event aimed to attract enough people so the event had sufficient registrants to avoid cancellation and to broaden and diversify the participant group.

3.2 Approach

To gain a better understanding of effective marketing techniques in the greater Chicago area, the team met with several Chicago conservation professionals: Bob Porter, Natural Areas Manager at the Chicago Park District’s North Park Village Nature Center; Laurel Ross, Urban Conservation Director at the Field Museum’s Environment, Culture, and Conservation department; and three Field Museum staff members who also are alumni of the University of Michigan School of Natural Resources and Environment. The team discussed with these professionals the possibility of promoting the Weekend of Restoration through their organizations’ marketing channels and received recommendations about other groups to contact for similar marketing assistance. This also marked the team’s first opportunity to hear initial impressions from other professionals in the field about the event’s unique design and characteristics that might help attract various audiences.

Seventeen environment- or nature-related organizations in the Chicago area, elsewhere in Illinois, and in Wisconsin (See Table 3.1) agreed to partner with the master’s project team and assist with distribution of marketing materials for the Weekend of Restoration.

Table 3.1

Organizations that distributed marketing materials about the Weekend of Restoration

Chicago area	Illinois	Wisconsin
Field Museum	Peck Farm Interpretive Center	Nature Net
North Park Village Nature Center and other Chicago Park District properties	Willowbrook Wildlife Center	Aldo Leopold Nature Center
Peggy Notebaert Nature Museum	Openlands	Milwaukee Public Museum
Forest Preserve District of Cook County nature centers	Volunteer Stewardship Network	Milwaukee County Zoo
Chicago Wilderness		Boerner Botanical Gardens
Chicago Center for Green Technology		International Crane Foundation
Brookfield Zoo		

The team developed a suite of marketing materials that would appeal to diverse audiences, including people already interested or involved in environmental issues, newcomers to the field, those who prefer traditional print marketing materials, and people who prefer digital modes of communication. Print

materials included 4x6-inch postcards, 8x10-inch fliers, 11x17-inch posters, and trifold brochures, and electronic materials included e-newsletter items, email and website announcements, and social media posts.

MCCD printed 1,000 postcards, 1,000 brochures, and approximately 15 posters. About two months before the event, MCCD disseminated the materials among its own facilities and mailing network, as well as the 17 external partner organizations, which then distributed them in Chicago, Illinois, and Wisconsin (See Table 3.1).

3.3 Outcomes and Survey Findings

The 2011 Weekend of Restoration attracted 17 participants – the same number of participants as the initial 2004 event, and almost six times as many people as the 2006 canceled event. The majority of participants lived within MCCD’s jurisdiction, but several came from farther away. In these ways, the master’s project team accomplished its goals of drawing a substantive number of participants and diversifying the participant base.

3.3.1 Effectiveness of Marketing Campaign

The marketing survey participants completed when they registered for the event determined the effectiveness of the marketing and communications campaign for the Weekend of Restoration. In particular, this survey asked participants how they heard about the event, what motivated them to sign up, and how familiar they felt with Glacial Park before the event.

Table 3.2 provides a summary of the ways in which participants heard about the event.

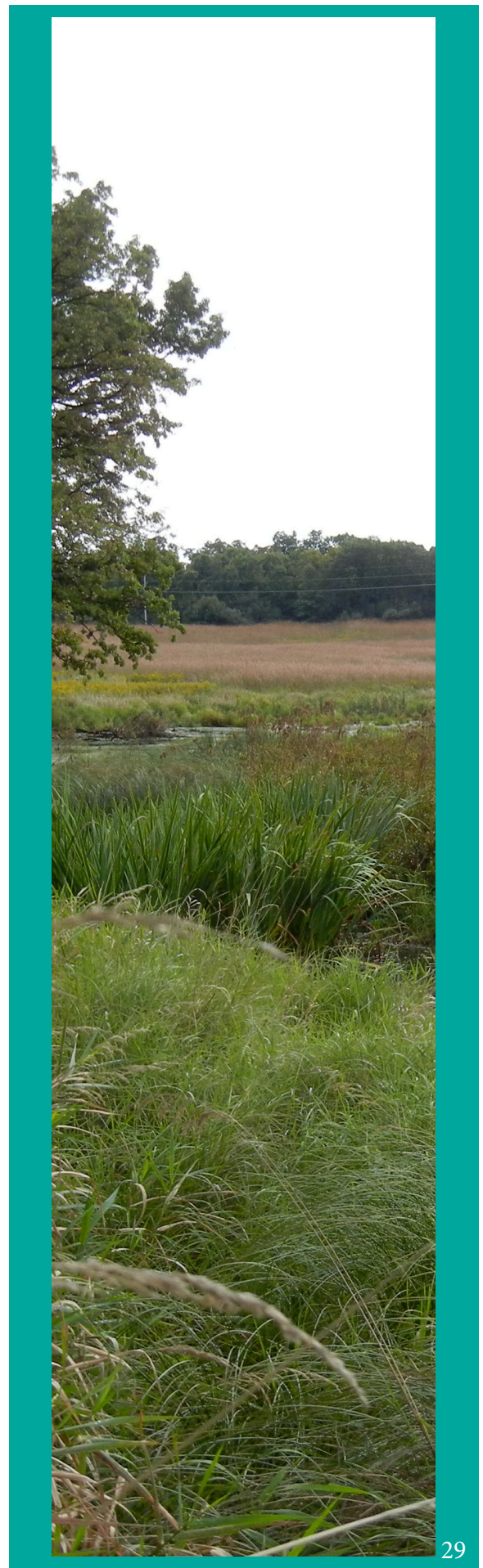


Table 3.2

Number of Participants Who Encountered Various Marketing Methods

Marketing Method	Number of Participants*
MCCD "Landscapes" magazine	7
Word of mouth	6
MCCD website	5
Postcard	4
MCCD programs	4
Email	2
Poster	1
Brochure	1
Digital flier	1
Employment at MCCD	1

**Survey respondents were counted more than once if they heard about the event from multiple sources.*

Only three participants – about 17% – indicated they had not previously heard of Glacial Park. One of these found out about the event from a Weekend of Restoration brochure at Peck Farm Interpretive Center in Geneva, IL, which is 45 miles south of Glacial Park. The other two without prior knowledge of Glacial Park learned about the event from a friend or family member. The other participants had previously visited Glacial Park family outings, classes and trainings, meetings, hiking, fishing, cross-country skiing, volunteering, ecological restoration, plant monitoring, and the MCCD's Trail of History event.

Participants reported learning about the Weekend of Restoration from a variety of sources, most of which were related to MCCD-related initiatives, including its Ecological Restoration Certificate Program and other volunteer programs (four participants), MCCD's "Landscapes" quarterly magazine (seven), MCCD's website (five), and an MCCD postcard (four). One person worked for MCCD and learned about the event through her employment there.

In addition, some participants reported seeing information about the event through other sources. Since other envi-

ronmental and nature organizations in Illinois and Wisconsin promoted the event to a limited extent through formats that included email, brochures, posters, digital fliers, and social media, some participants may have learned about the event from a non-MCCD organization. The marketing survey did not require participants to list the specific source of the various formats encountered. However, some reported hearing about the event through an email (two participants), a digital flier (one), a poster (one), a brochure (one), and through word of mouth (six).

The three attendees who had never heard of Glacial Park did not hear about the event through MCCD but instead learned about it through the Peck Farm brochure, from a friend, and from a family member. All 14 of the other attendees had been to Glacial Park in the past and may have had opportunities to speak with employees, attend classes, see promotional materials at MCCD facilities, and sign up to receive MCCD email newsletters, the “Landscapes” magazine, or other MCCD mailings. Therefore, those who learned about the event through email, a digital flier, and a poster likely did so through their affiliation with MCCD.

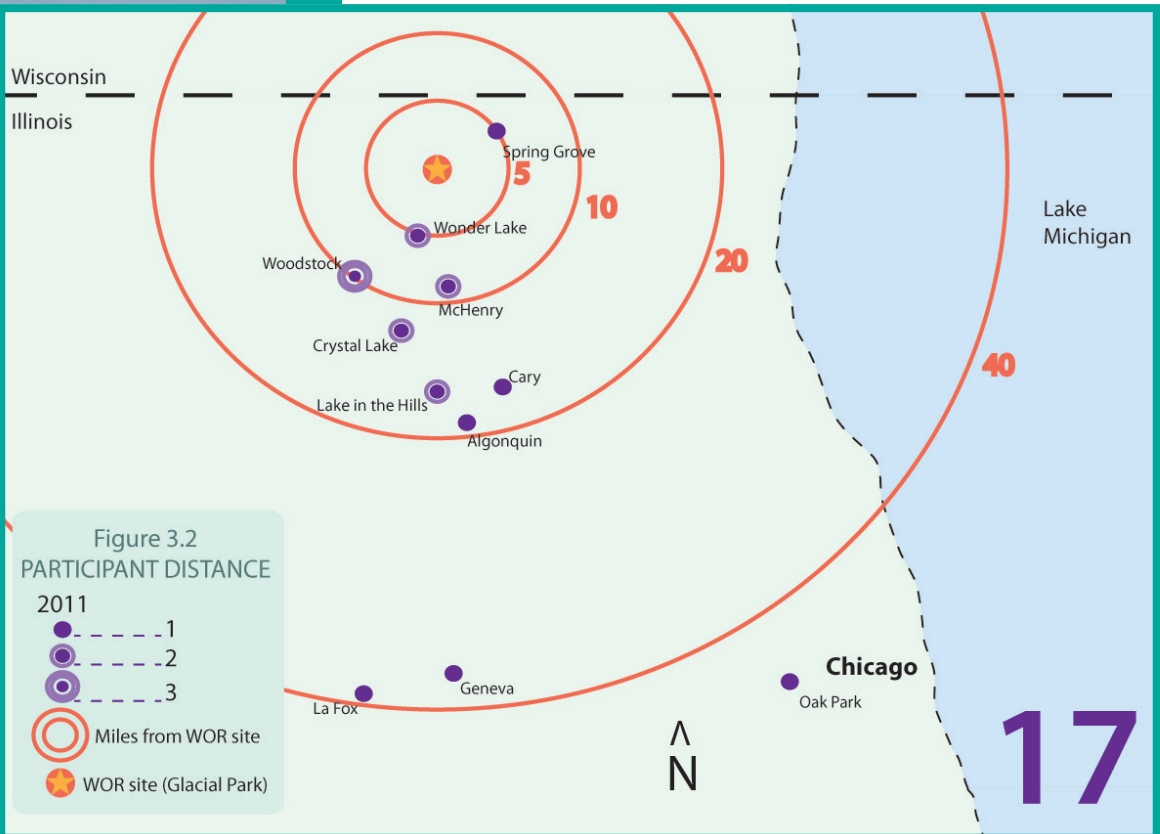
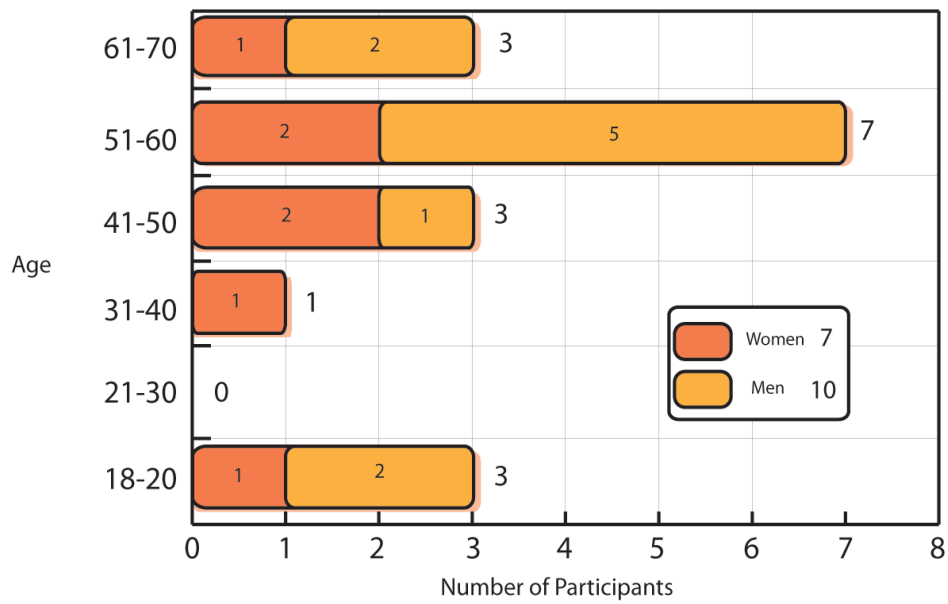
3.3.2 Characteristics of Participants

Before leaving the 2011 Weekend of Restoration, participants each completed a survey that measured, in part, the demographic makeup of the group. The results from this survey shed light on the types of people the marketing campaign attracted to the event.

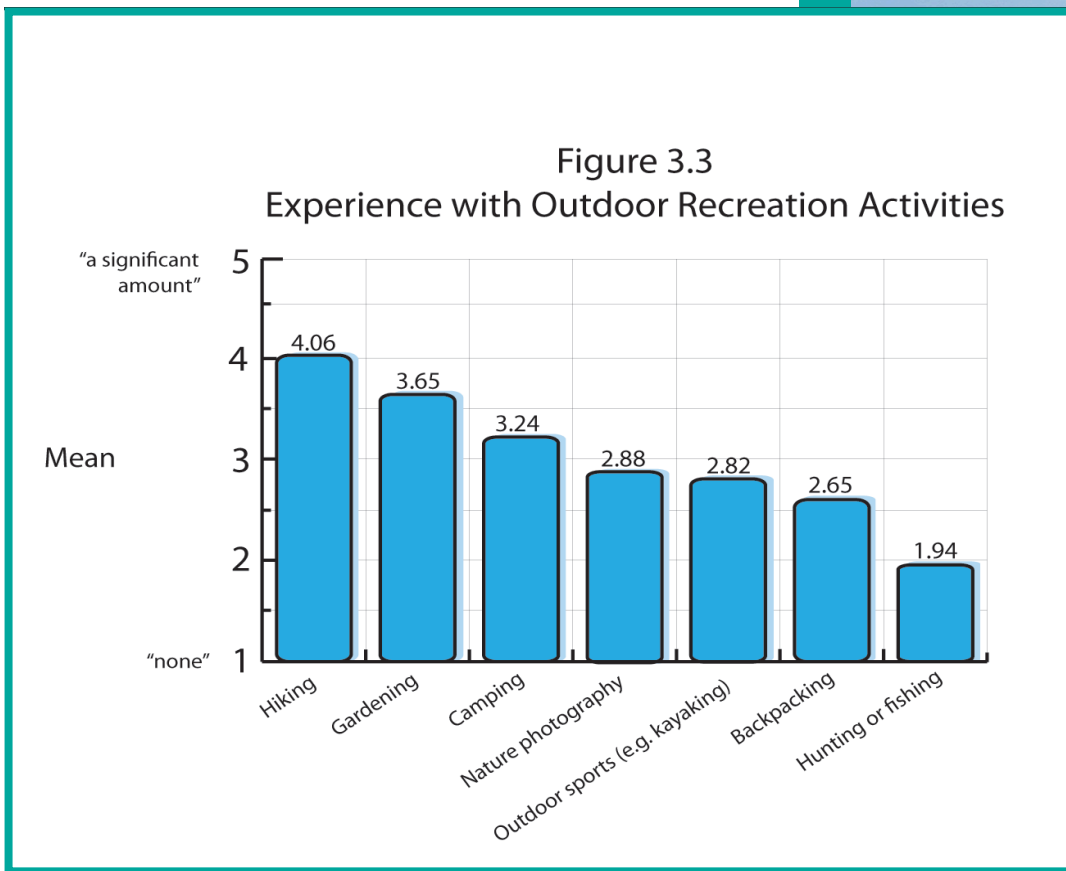
Seventeen participants attended the 2011 Weekend of Restoration. The majority (58.8%) were males older than 50 (See Figure 3.1 for gender and age distribution). The group included three individuals younger than 30, all of whom were either college or high school students. Participants varied widely in terms of their occupations, with three individuals indicating they were retired from their occupations (two as teachers and one as school bus driver). Very few occupations were related to ecological restoration – participant occupations included property and park manager, maintenance technician and CAD drafter, insurance account manager, and database administrator. In terms of current residence, the group listed eleven different ZIP codes, representing a range of roughly 50 miles around Glacial Park. Most participants lived in close proximity to Glacial Park, with many living within less than one hour’s driving distance (see Figure 3.2 for origin of participants). The majority (52.9%) of participants had lived at their current ZIP codes for more than 14 years and only one individual for less than 5 years.



Figure 3.1
Participant Age and Gender Distribution



Participants also represented a wide range in terms of their current involvement in outdoor recreation activities: one to 25 hours per week, with a median of 7 hours per week. While all participants reported having experience hiking (mean 4.06 on a 5-point scale, where 5= “a significant amount”), their experience with respect to other outdoor activities – such as backpacking, camping, nature photography, hunting, or fishing – was, on average, considerably lower. Based on participant responses, it is clear that the event attracted individuals who strongly preferred spending time outdoors (See Figure 3.3). Seven participants also indicated that they had a specific site in mind where they hoped to conduct ecological restoration in the future.



3.3.3 Motivations for Attending the Event

Attendees rated various aspects of the event according to how much each motivated them to register for the event, using a Likert scale ranging from 1 (“not at all compelling”) to 5 (“very compelling”).

Table 3.3 provides a summary of how compelling each factor was in motivating participants to sign up for the event.

Table 3.3

How Compelling Various Factors Were in Motivating Participants to Attend the Event

Factor	Mean*
Opportunity to learn from experts in the field	4.82
Chance to participate in ecological restoration	4.76
Opportunity to work within a group setting	4.24
Event location	4.18
Event price	3.35
Someone else they knew was attending the event	2.41
Chance to get away for a weekend	2.38
Opportunity to vacation while contributing to a cause	2.35

**1= "not at all compelling" ... 5=very compelling"*

Participants most highly rated the opportunity to learn from experts in the field (mean 4.82) and the chance to participate in ecological restoration (4.76). They also highly endorsed the opportunity to work within a group setting (4.24) and the event's location (4.18). This suggests that participants felt very drawn to the quality of the event's instructors, the program's hands-on field work, and the chance to work with other people. Participants also found the event's location very attractive, but it is unclear whether this relates to Glacial Park's geographic location in northeastern Illinois, its proximity to participants' residences, the quality of Glacial Park, or, for newcomers, a curiosity about the park because of its history of successful restoration projects.

The participants' moderate rating (3.35) for the event's price has several possible interpretations. It may mean there is room for improvement in terms of the attractiveness of the price or perhaps the quality or quantity of what the price includes. On the other hand, it could also mean most participants did not view the cost as a determining factor.

The fact that participants knew someone else attending the event (2.41) did not strongly motivate them. However, the three attendees who had not previously heard of Glacial Park



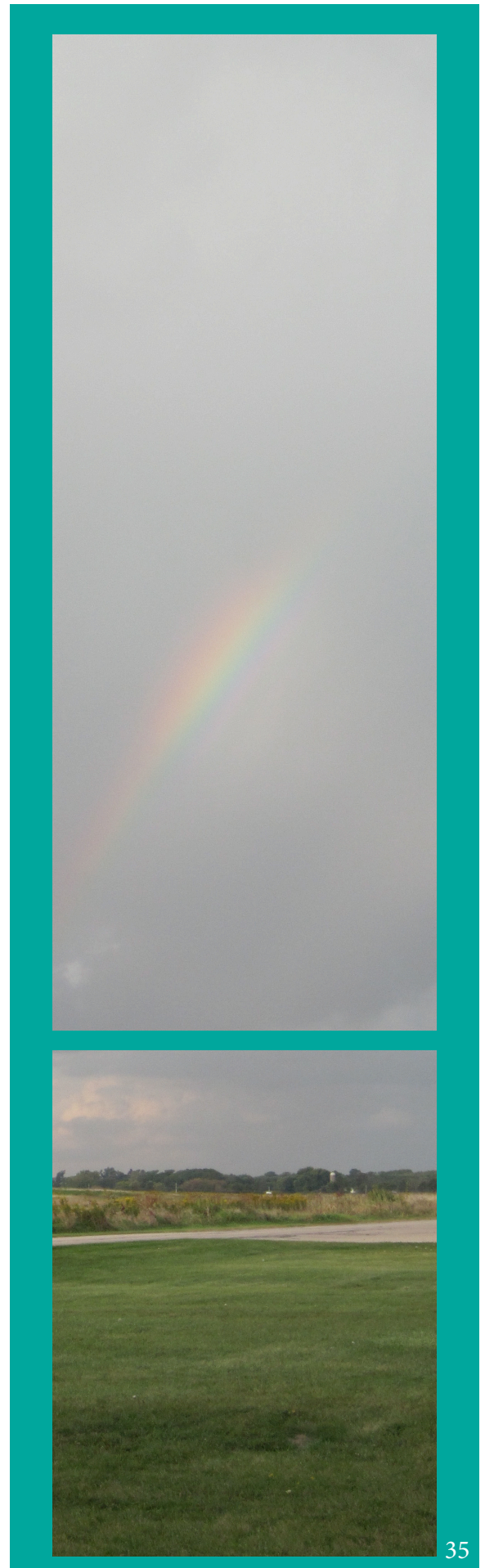
cited this as a very compelling reason for signing up. This suggests that people new to Glacial Park may be more likely to attend events there as part of a group, rather than on their own.

Participants rated the chance to get away for a weekend (2.38) and the opportunity to vacation while contributing to a cause (2.35) as the least motivating factors. This shows that, despite branding the event as a weekend getaway and an opportunity to make a difference during a vacation, participants did not view the event as such. Instead, they seemed to view the event as a way to learn from experts and work with a group to engage in ecological restoration field work.

3.4 Background Research: Volunteer Motivations and Benefits

Although the marketing survey results provide useful insight into what attracted participants to the 2011 event, the master's project team sought a better understanding of what might motivate volunteer-minded individuals to attend an event such as this and how they might benefit from it. Some Weekend of Restoration attendees had histories of environmental volunteering and had previously participated in MCCD volunteer projects. Although the Weekend of Restoration included a variety of activities, its ecological restoration field work – a common volunteer task – lent a community service feel to the event. Research about environmental volunteer motivations and benefits can help inform future Weekend of Restoration marketing efforts.

Ecological restoration projects, while serving as valuable opportunities for non-formal learning, are more often marketed as opportunities for volunteerism or community service. Volunteers are drawn to ecological restoration for a variety of reasons, only some of which entail deliberate attempts to seek out learning. Much like ecological restoration education, environmental volunteerism also has a rich history. For centuries, volunteers have contributed substantially to ecological understanding, through collection of botanical specimens, participation in wildlife monitoring programs, and natural resource management (Measham & Barnett, 2008; O'Brien, Townsend, & Ebden, 2010; Grese, Kaplan, Ryan, & Buxton, 2001). Environmental volunteerism, specifically the volunteer ecological restoration movement, has gained significant momentum in recent decades in part because of the younger generation's exposure to catastrophic natural disasters and concerns about climate change. An attitude shift is evident in the fact that 85% of adults younger than 30 – more than ever before – identify as environmentalists (McDougle, Greenspan, & Handy, 2011; Kaiser, Ranney, Hartig, & Bowler, 1999). Though the link between attitudes and





behavior is tenuous, there appears to be some connection: in the United States, adults ages 20 to 24 volunteer for environmental organizations at nearly double the rate of the general population (McDougle et al., 2011).

Nonprofit environmental organizations and public agencies charged with natural resource management must understand what motivates volunteers in order to retain their commitment and contributions to conservation or restoration efforts (Hartig, Kaiser, & Bowler, 2001). Environmental organizations without large staffs that rely significantly on volunteers need assurances of future volunteer commitment to demonstrate the viability of proposed projects on funding applications (Grese et al., 2001; Bramston, Pretty, & Zammit, 2000). Insights into volunteers' motivations can help managers more efficiently recruit and retain volunteers, thereby reducing the costs and effort invested in this process (McDougle et al., 2011). In particular, because satisfaction with volunteer experiences increases with the frequency of participation, determining what motivates volunteers to be regularly involved may prove especially valuable (Miles et al., 1998). Additionally, veteran volunteers can often assist with the recruitment and training of new volunteers, further reducing costs (Grese et al., 2001).

3.4.1 Connection to Nature

Concern for the environment by itself may not be enough to motivate ecological behavior, especially for long-term projects like restoration. This seems likely in cases in which a person is concerned about the environment without feeling a connection to it. Humans have become disengaged from nature over the course of the last few centuries, coinciding with increasing urbanization (Maller, Townsend, Pryor, Brown, & St. Leger, 2005). Industrialization during this period also shifted society's focus from the community to the "object self" as detached from the surroundings, thus emphasizing the individual rather than the environment. This view of the individual as distinct from the world means a lessened sense of resonance, or connectedness to the natural world. Indeed, heightened objective self-awareness has been shown to decrease connectedness to nature. Recent literature has suggested a link between this changing conception of the relationship of humans with the natural world and humans' destructive effects on the environment (Frantz, Mayer, Norton, & Rock, 2005). Therefore, a connection with nature may be the source of motivation for many pro-environmental behaviors.

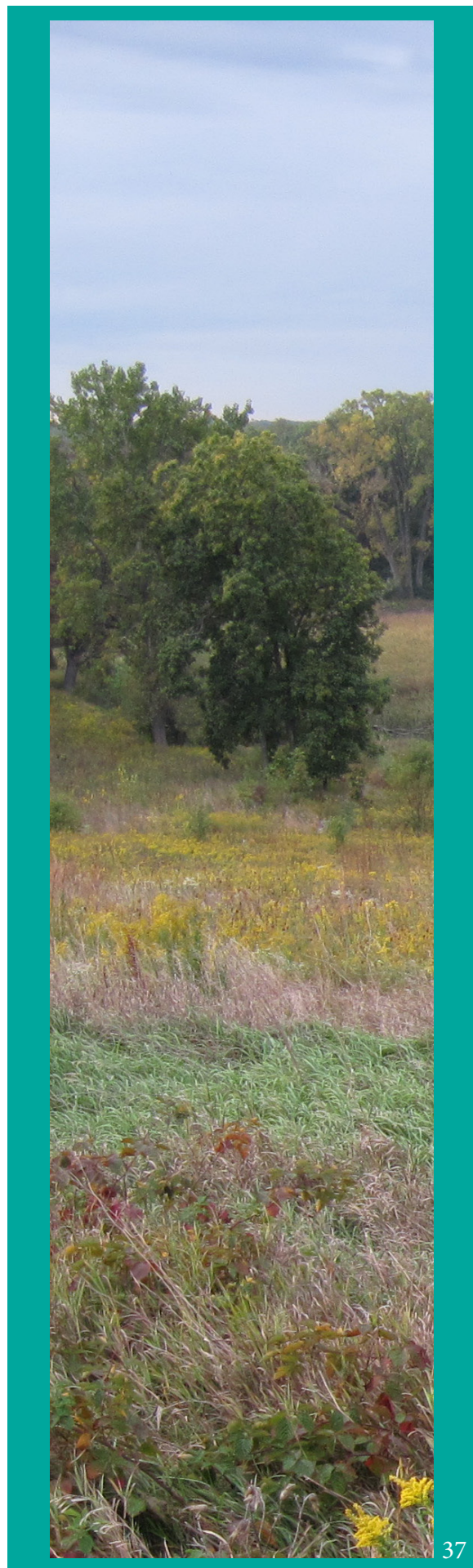
A sense of connection with nature is a meaningful motivator for environmental volunteering. Environmental volunteers typically feel much stronger emotional connections with the en-

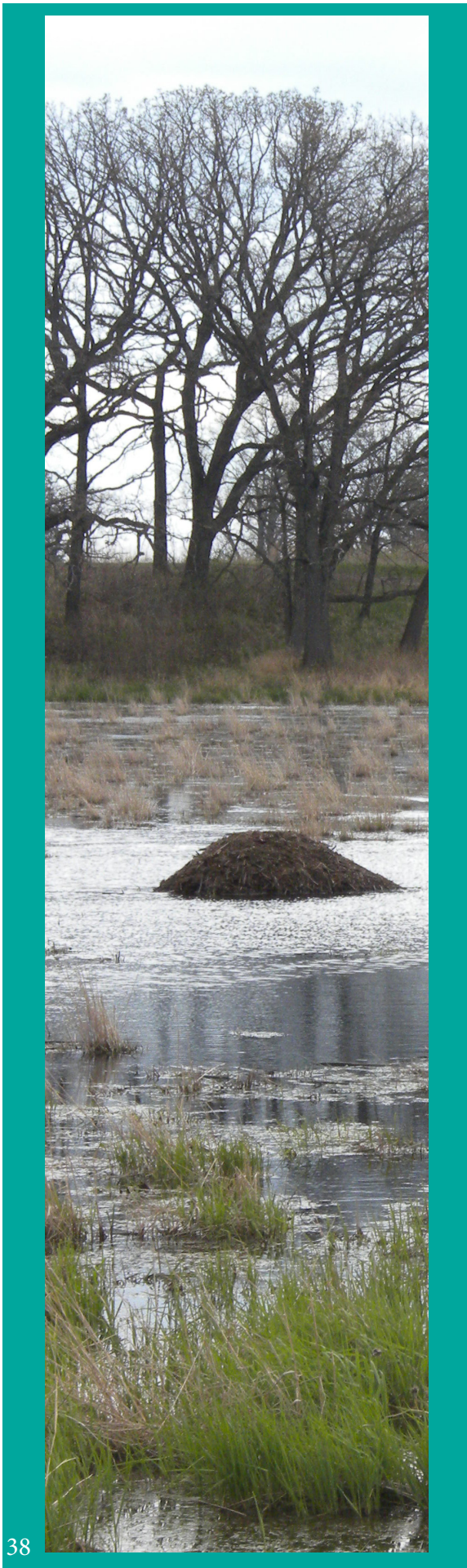
vironment than non-volunteers (McDougle et al., 2011). The motivational power of feeling a connection to nature may be a useful way to keep volunteers involved, since participation in restoration as part of a community can itself help engender a relationship with nature (Light, 2001). Some volunteers who consider themselves to be part of nature have suggested that they developed that connection in part by engaging with nature, through spending recreational time outdoors or behaving environmentally responsibly (Vining, Merrick, & Price, 2008). People can experience a connection with nature in a number of ways through ecological restoration projects. These include appreciation of the aesthetic beauty of restoration sites, by which volunteers may be particularly touched or inspired; a special affinity for nature, involving the personification of ecosystems and a sense of friendship toward nature; or feelings of loss related to vanishing native plants and animals, which may lend a sense of urgency to their work (Schroeder, 2001).

The fact that individuals may believe they are part of nature, yet define “nature” as being free of human interference, presents a potential conflict when conservation organizations seek to engage people with nature and actively alter it through ecological restoration. Resolving this conflict may lead to an increase in environmentally responsible behaviors and greater involvement in community restoration activities (Vining et al., 2008). A more enlightened view of humans’ relationship with nature is re-emerging – one that encompasses awareness of the interconnectedness of humans and all other organisms within a larger ecosystem. Inherent in this view is the fact that humans are both dependent (materially and psychologically) on this interconnectedness and fundamentally a part of it (Maller et al., 2005). This view’s greatest promise for applicability to volunteer recruitment is that it may generate long-term, committed volunteers who experience a greater sense of connection to the environment during the course of their volunteer work.

3.4.2 Sense of Obligation

Perhaps inseparable from the motivations already described is a feeling of obligation to engage in activities or behaviors that are ecologically sound. Some environmental volunteers view nature’s current state as small, isolated remnants under pressure from development and nonnative species. Their impression is that nature needs help, and their role is to preserve, protect, and restore nature; protect or restore the original, native landscape; and preserve and restore biodiversity. They feel an obligation to perform ecological restoration to counter the destruction wrought upon the landscape by development and free it from the human forces that have degraded and altered it





(Schroeder, 2001). This suggests that a sense of obligation may motivate volunteers who already feel strong concern for the environment or an emotional connection to nature.

Feelings of obligation may still motivate those who do not have pre-existing feelings about the environment, since people are more inclined to volunteer when asked because of the moral obligation implied by the request (McDougle et al., 2011). People are also more likely to engage in behaviors that benefit others if they feel responsible to do so and are aware of the consequences. Incorporating feelings of responsibility into conceptualizations about ecological behavior can more accurately predict ecological behavior intention: in one study, feelings of responsibility were shown to explain an additional 5% of variance above the 40% explained by environmental knowledge and values (Kaiser et al., 1999). Thus, a sense of personal obligation increased the probability of a particular intention for ecologically responsible behaviors, even among volunteers who were already informed and morally invested. This sense of obligation could be understood as an altruistic motivation.

Beyond attitudes, a plethora of other factors motivate environmental volunteers. Project organization is a powerful motivator because in addition to the content of the work, volunteers also want well-organized projects; to feel that their time was used well, not wasted; clear expectations; and to work with good leaders. Therefore, projects or organizations with well-run volunteer programs – in terms of organization, communication, and leadership – will have greater success in encouraging continued volunteer participation (Grese et al., 2001).

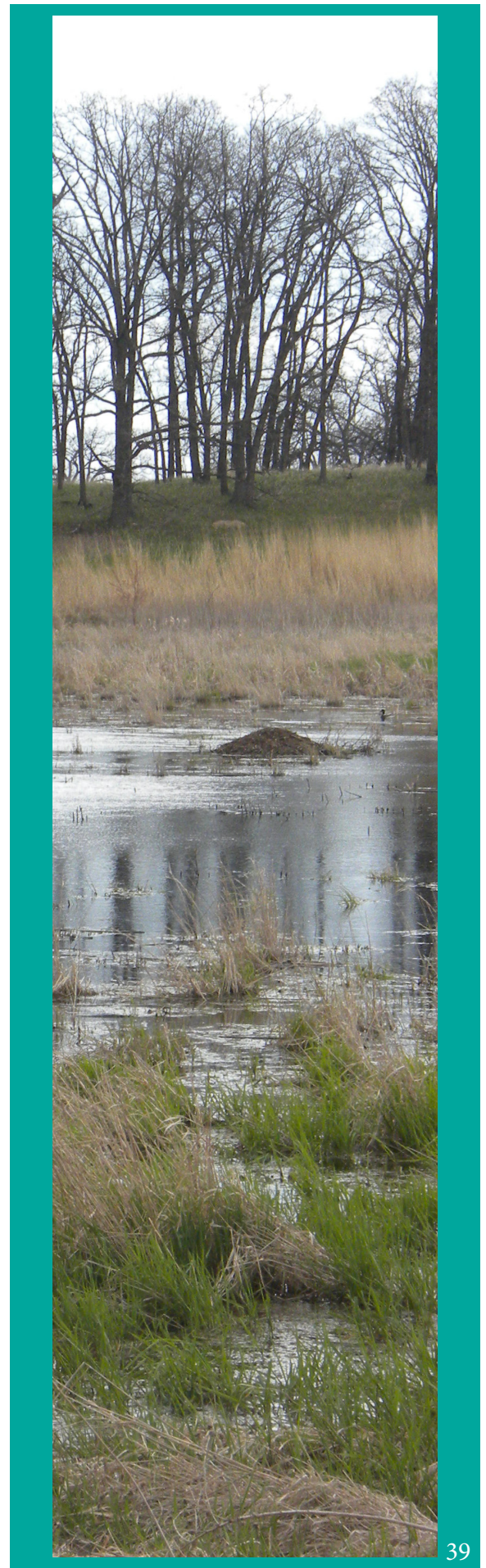
Seeing tangible progress from their work and learning through observations of the restoration process also motivates volunteers. Thus, volunteer projects that allow participants opportunities to engage in these aspects of ecological restoration work will prove most effective (Schroeder, 2001; Grese et al., 2001; Bramston et al., 2000).

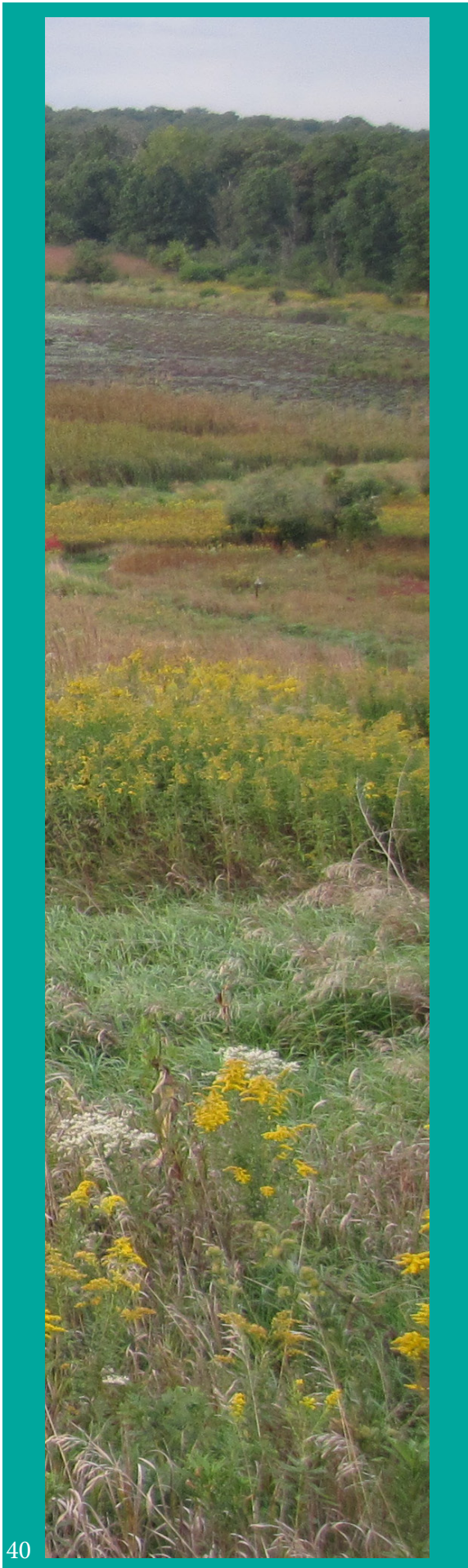
Other environmental volunteer motivations include a sense of urgency related to nature's fragility and the impending loss of native sites and species (Schroeder, 2001; Grese et al., 2001; Bramston et al., 2000); general volunteer proclivity, which is associated with a sixfold increase in the likelihood of volunteering for environmental causes; social norms; and maintaining a consistent self-identity (McDougle et al., 2011).

3.4.3 Benefits to Volunteers

Although appealing to volunteers' motivations may prove useful when promoting a volunteer-oriented event, such as the Weekend of Restoration, another effective strategy for encouraging volunteerism may include framing volunteer opportunities in terms of the benefits experienced through active engagement with nature (Miles et al., 1998). Appealing to self-interest may seem at first glance like a stretch when seeking volunteers, but in fact, numerous benefits of spending time in nature and volunteering in nature have been documented. In addition, it has been suggested that while altruism motivates some people to begin volunteering, self-interested reasons typically keep them coming back (Grese et al., 2001; Measham & Barnett, 2008). Environmental volunteering provides rewarding experiences from which volunteers derive holistic improvements to well-being, valuable relationships with nature, and countless other benefits (Schroeder, 2001; O'Brien et al., 2010; Light, 2001). While the relationship between environmental concern and pro-environmental action is quite weak, the benefits for volunteers involved in restoration work have increased the prominence of environmental volunteering (Measham & Barnett, 2008). Not only might promoting the individual benefits of environmental volunteering prove effective in recruiting new volunteers, it may also help retain existing volunteers: the dual benefits to the environment and the individual may reinforce volunteers' motivations, converting new volunteers into repeat volunteers (Grese et al., 2001).

Because volunteer-based ecological restoration projects nearly always occur in a group setting, the work necessarily involves social aspects that have important benefits. When community members from the surrounding area perform restoration at a local natural site, contact with nature together with others from the community can improve cohesion while also reducing prejudice. Social benefits may also entail satisfaction from working together as a team toward a common goal and the accompanying sense of accomplishment (Maller et al., 2005; Miles et al., 1998; O'Brien et al., 2010). Social contact is a benefit in itself, with opportunities to network or to make friends motivating some volunteers (Schroeder, 2001; O'Brien et al., 2010), most of whom also believe that volunteering together leads to stronger friendships (Measham & Barnett, 2008). Young people in particular invest a significant amount of time in volunteering for environmental organizations as a way of developing or enhancing social ties (McDougle et al., 2011). Social interaction can clearly be an important motivator in terms of the friendships and sense of community developed, but it may also factor into volunteers' perceived sense of safety. The company of others may be a criti-





cal factor in getting people to visit natural areas, where they may feel uncomfortable or unsafe alone (Staats & Hartig, 2004). Because restoration work sometimes entails time spent in less accessible locations and may require using unfamiliar equipment, one may expect that the social dynamics of restoration projects lend them feelings of safety and comfort, thereby freeing volunteers to appreciate the potentially meditative quality of their work and the magnitude of their accomplishment.

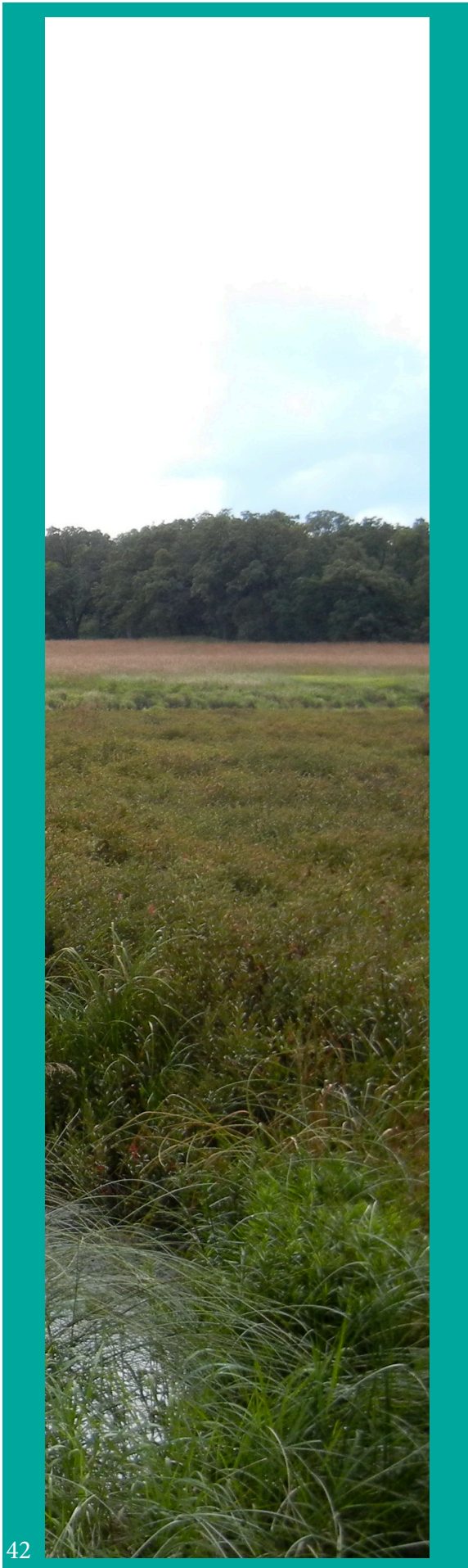
Socializing through restoration work might lead to discovery of a volunteer's community, and the collaborative work presents many opportunities to learn a variety of skills and new information. The educational content of volunteer restoration work has dual value, in its usefulness to both volunteers and volunteer managers. Because humans are naturally inclined toward learning, the opportunity to explore through new experiences or through deeper immersion in a local area may strongly motivate volunteers (Kaplan, 2011). Among the opportunities for learning through environmental volunteering, Measham and Barnett (2008) list the following: "technical knowledge and skills (e.g. for animals, plants, and bush restoration); social skills such as community engagement, effective activism, media engagement; and sustainable living skills such as energy efficiency in the home" (p. 547). Perhaps intuitively, learning also has ongoing benefits apparent through the transformations exhibited in volunteers' lives outside of their volunteer work – most notably, that volunteers equipped with new knowledge often incorporate it into their backyards and gardens through the creation of native landscapes or wildlife habitats there. Nonprofit organizations and volunteer managers can use volunteering to educate the public, potentially creating advocates for ecological restoration and furthering organizations' missions (Grese et al., 2001). It is not unreasonable to expect that these better-informed volunteers who act as advocates for restoration might also be more committed volunteers with more frequent involvement in volunteer restoration work. Thus, education has important dual benefits, and in many circumstances could certainly be drawn on in motivating volunteers.

In tandem with the opportunity to learn, volunteers derive great satisfaction from the feeling of having done something meaningful, in terms of knowledge or skills learned or work performed (Miles et al., 1998). A universal desire to make a difference is evident in the work of thousands of individuals who volunteer their time and skills through ecological restoration and other stewardship activities (Kaplan, 2011). Particularly for those who feel great concern about the state of the environment and its rate of degradation, a sense of having participated in meaningful action can prevent a feeling of helplessness. The benefit of meaningfulness is available to volunteers immediately; however,

it increases only marginally with long-term involvement, perhaps because frustrations with the ongoing uphill battle (of invasive species eradication and other efforts) may increase over time. On the other hand, a deeper level of involvement, such as a greater responsibility leading volunteers as a site steward, is associated with greater satisfaction from meaningfulness (Miles et al., 1998). In particular, involvement in the decision-making process enhances volunteer commitment to the organization (Grese et al., 2001). Meaning in ecological restoration volunteer work comes from both engaging with local natural areas and the nearby community, while also feeling like the work is part of a larger effort, spatially and temporally (Schroeder, 2001). To make the most of this particular motivation, volunteer managers can point out the progress volunteers made in a day's work and explain how their accomplishments relate to ongoing or larger-scale efforts (Miles et al., 1998). Changes in the landscape are often visible after a relatively short time and can be rewarding for volunteers to observe (Schroeder, 2001). Given that many ecological restoration results take longer to appear, however, long-term volunteers might be more likely to stay motivated if provided with continued updates of ongoing projects or of the improvements made at a site after project completion.

In addition to deriving meaning from their work, volunteers may participate in ecological restoration or other pro-environmental behaviors because of other psychological gains from spending time in nature. This, too, can be self-reinforcing, since positive experiences in nature may encourage future ecological behaviors. Positive feelings toward the environment may increase environmental concern, thereby generating more environmentally responsible intentions, which in turn guide actions (Hartig, Kaiser, & Strumse, 2007). Chief among the psychological benefits of spending time in natural settings is the opportunity for restoration of directed attention (Staats and Hartig, 2004). Substantial literature supports the distinction between two types of attention: voluntary, or directed, and involuntary, sometimes referred to as fascination (James, 1962/2001). People use directed attention when concentrating on most types of tasks – both those that are interesting and those that are repetitive, uninteresting, and detailed, as much of modern life requires (Kaplan & Berman, 2010). Though the capacity to direct attention is essential for effective functioning, it is not a limitless resource, and its overuse is associated with directed attention fatigue, characterized by irritability, distractibility, and other symptoms (S. Kaplan, 1995; R. Kaplan & S. Kaplan, 1989). It is therefore of considerable importance to restore fatigued attention through resting of tired cognitive pathways and reflection, for which natural environments are especially well suited (Hartig et al., 2007; S. Kaplan, 1995). It is worth noting, however, that volunteering





for ecological restoration is likely to provide only the first of these psychological restoration components. Specifically, reflection is likely to be inhibited by the social nature of the work (Staats and Hartig, 2004). In particular, a restorative environment must have the following four components: fascination, being away, extent, and compatibility of the setting with one's intentions (Maller et al., 2005). Natural environments are more likely to comprise all four of these characteristics, and volunteer restoration work can be especially rich with these qualities. Fascination in particular may increase with long-term commitment to environmental volunteering, perhaps as a result of recognizing and experiencing greater richness in the environment (Miles et al., 1998).

Despite the importance of directed attention restoration, people frequently fail to recognize when they are fatigued, even if they are familiar with the common symptoms. Still, research has demonstrated an intuitive link between directed attention fatigue and a preference for natural areas, as those who most need attention restoration most strongly prefer to spend time in natural areas over urban areas (Hartig et al., 2007). People often refer to reduced mental fatigue or the related topic of stress reduction as the psychological benefits experienced after volunteering in nature (O'Brien et al., 2010; Staats and Hartig, 2004). Perhaps related to directed attention restoration, spending time in nature and, specifically, feeling a part of nature are also most highly associated with positive emotions (Vining et al., 2008). In fact, environmental volunteers can experience statistically significant positive emotional shifts during the course of their participation (O'Brien et al., 2010). Experiences in nature that result in positive emotions, together with restored attentional capacity, can certainly serve as powerful motivators for volunteers.

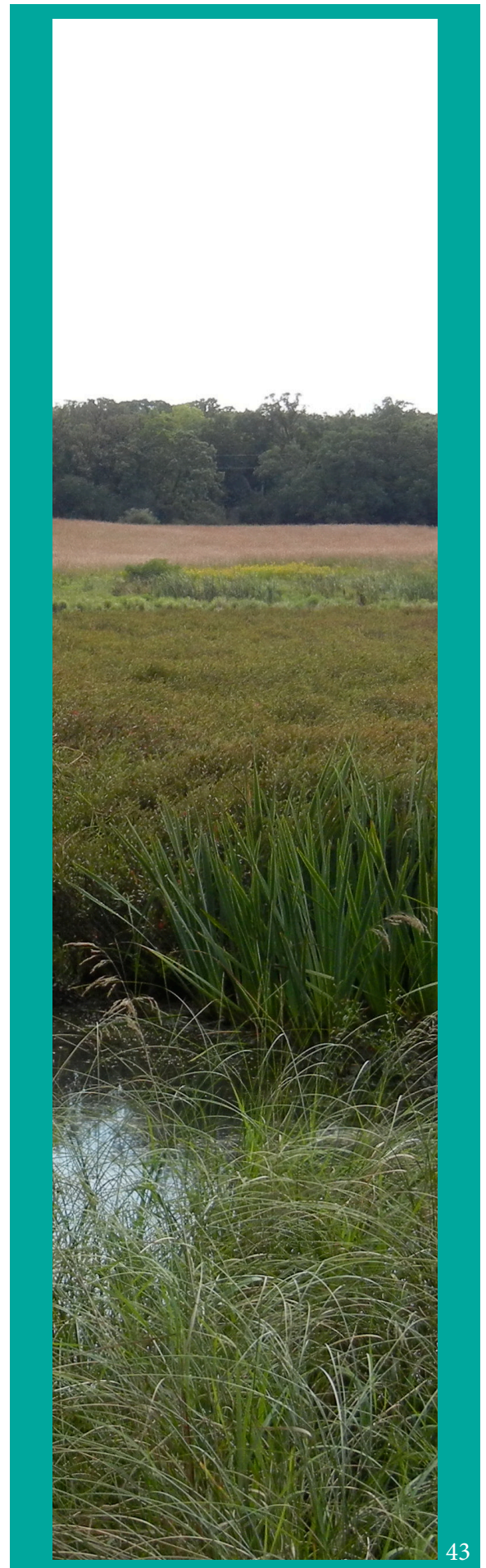
Together with these mental health benefits, working outdoors also provides substantial physical health benefits (Maller et al., 2005). While volunteers may feel sore or tired after a day of participating in ecological restoration, they often also report how well they sleep and a sense of satisfaction with the level of activity and feeling of accomplishment involved. As a bonus, volunteers note that they get their exercise through ecological restoration, rather than going to the gym or dedicating other time to fitness (O'Brien et al., 2010). Health is a holistic, interdisciplinary field, and there is increasing support for the role of natural areas in improving and maintaining health. In fact, it is possible that ecological inequality, or the lack of opportunity to experience contact with nature, is as significant a determinant to health as the better established social and economic inequalities, such as access to healthful foods. Further investigation is required to more firmly establish the likelihood and magnitude of physical health benefits from participation in ecological restoration, and these are certain to vary according to the frequency and duration

of engagement (Maller et al., 2005). Nonetheless, particularly for select demographics, such as people whose lives are sedentary by nature, the physical health and fitness motivation is likely an important one.

3.4.4 Impact of Long-term Volunteering

An additional outcome of environmental volunteering is that many long-term volunteers become environmental advocates, which is a logical result given their years of effort toward restoration. Especially when commitment is focused over an extended period of time on a particular, local site, restoration projects can play a vital role in reconnecting volunteers to their local natural areas. Working on a local environmental project allows volunteers the opportunity to have a more profound and observable effect than would dedicating resources to causes that promote protection of nature in remote or exotic places. It also focuses their efforts on environmental issues by which they are more immediately affected and therefore is more likely to engage them for a longer period. Long-term environmental volunteerism leads to greater appreciation of nature generally (including increased recreational use, or viewing environmental volunteer work itself as a recreational activity), attachment to the volunteer site (encompassing a sense of loss if one moves away from it, or a greater inclination to defend it if threatened by development or degradation), and a deeper involvement in environmental activism on a broader scale (including writing or talking to others about environmental issues and a greater interest in protecting natural areas across the country) (Grese et al., 2001). Experiencing many of the benefits described in earlier sections at a volunteer site may also promote attachment to that site and a greater willingness to act in favor of its protection. This often translates into supporting protection of any natural area and pro-environmental behaviors not specifically tied to the site, such as recycling (Hartig et al., 2007).

Additionally, involvement in restoration (in contrast to the more passive act of preservation) may inspire volunteers to spend more time creating wild places and native habitats in their own backyards and neighborhoods. This reconnection with the local environment means that people will spend less time and resources traveling to experience nature in remote wilderness areas, while still politically or financially supporting the conservation of these places because of their enhanced understanding of their ecological value. At the same time, refocusing on local nature also promotes community building with far-reaching benefits (Jordan, 2001). Attachment to a nearby nature area is both an outcome of working to restore it and a motivation for future volunteer restoration work. The sense of ownership that comes





from working on a site serves as incentive to maintain that site and see to its continued improvement (Measham & Barnett, 2008). When volunteers consider how they would feel about a decision that would negatively affect a site they worked to restore, many feel that the decision would reduce their quality of life and that they would experience a sense of loss, more often spurring them to environmental activism than leading them to simply search for a substitute site in which to recreate or volunteer (Grese et al., 2001).

While the environmental movement gains an immeasurable amount of value from the work of volunteers, it is clear that volunteers also benefit tremendously from their work in ecological restoration. Indeed, these benefits have the greatest long-term motivational power. While many volunteers are initially motivated by environmental concern and an altruistic sense of obligation to get involved, they are more likely to stay involved if they experience some of the benefits described here. Indeed, long-term volunteers tend to maintain their commitment to a cause or project more so because of self-interested reasons (i.e. benefits gained) than because of a continued sense of altruism or obligation. Appealing to volunteers' self-interest has promise not only in terms of keeping existing volunteers involved but also possibly in terms of diversifying the volunteer demographic. While understanding volunteer motivations is substantially easier than leveraging them in volunteer recruitment, the MCCD can tailor the marketing of its volunteer programs toward the most likely motivations of its target demographic. In the end, motivating volunteers is a complex process, and volunteer managers will experience the greatest success when utilizing a multifaceted approach that combines an expression of environmental need with illustration of volunteers' progress at a site and that allows volunteers to fulfill their various needs through their work.

3.5 Recommendations

Research about what motivates environmental volunteers can shed light on what may compel future Weekend of Restoration participants to engage in the program's restoration work, a form of community service that volunteers often perform. This research, combined with results from the 2011 Weekend of Restoration marketing survey and observations from the master's project team, can inform MCCD's future marketing efforts. Using these resources, the following recommendations for were developed future Weekend of Restoration marketing campaigns.

3.5.1 Existing Audiences

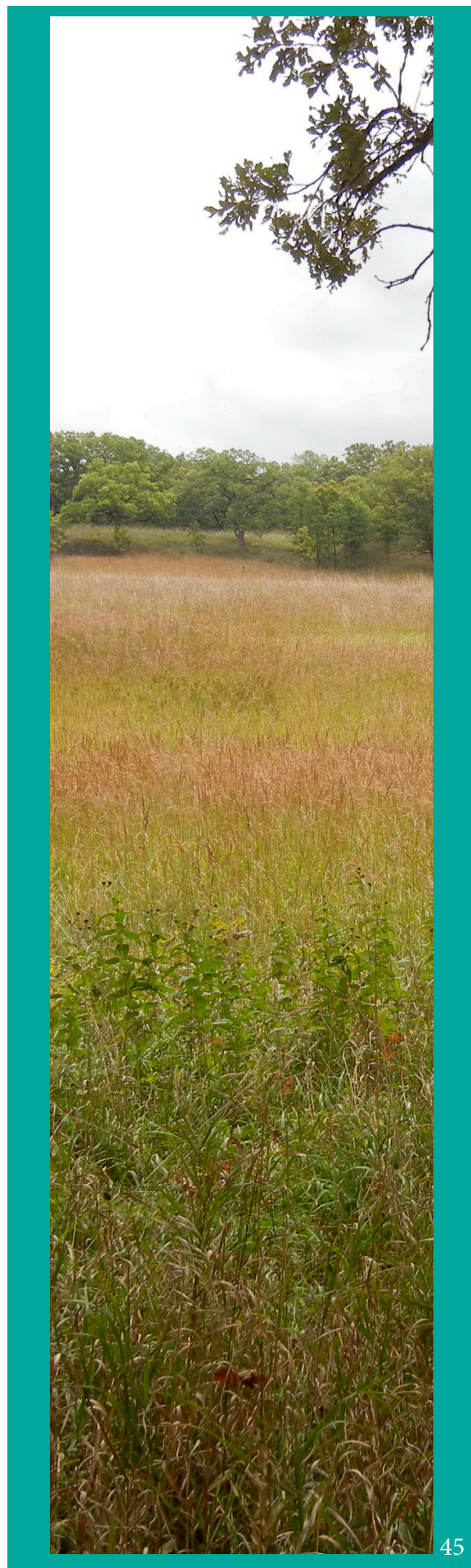
Focusing a large portion of the Weekend of Restoration marketing effort on MCCD's existing audience will continue building the program's foundation and ensure event participation. To do so, MCCD should **1) promote the event through its print and electronic distribution networks, advertise it during the popular Trail of History program and other events, and suggest that participants invite others to the event.**

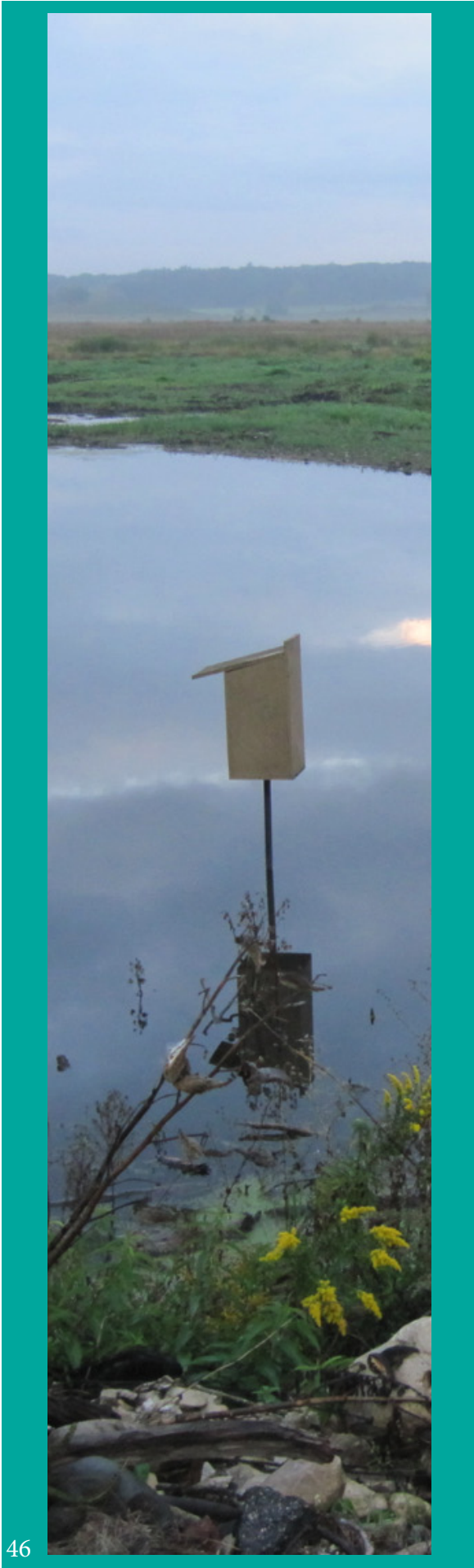
More than three-quarters of the 2011 Weekend of Restoration's 17 participants had previously visited Glacial Park. They likely learned about the event through their affiliation with MCCD in ways such as the "Landscapes" magazine, website, postcards, activities, and word of mouth.

MCCD should **2) encourage its employees to attend the event.** Besides the event leaders, only one other MCCD employee attended the event as a participant. In an article she wrote for MCCD's "Landscapes" magazine, that employee described the event as a very positive experience (Pettrak, 2011). Therefore, opportunity exists for more employees to participate in future Weekend of Restoration events, which will raise awareness about the program and could increase employees' interest and involvement in the planning process for future events.

3.5.2 New Audiences

Despite distributing more than 2,000 printed marketing materials to MCCD facilities and 17 outside organizations, only six participants reported seeing printed marketing materials: four saw a postcard, one saw a poster, and one saw a brochure. This demonstrates that perhaps MCCD should **3) produce fewer printed materials and target distribution locations more strategically.**





To reach new audiences outside McHenry County, MCCD should **4) distribute printed marketing materials within a 45-mile radius from Glacial Park and in Chicago.**

The three event participants who had never heard of Glacial Park learned about the Weekend of Restoration through marketing external to MCCD: a brochure at a nature center 45 miles south of Glacial Park, from a friend, and from a family member. Although MCCD distributed marketing materials as far away as Madison, Wisconsin, which is 90 miles from Glacial Park, perhaps the best way to begin building new audiences is through printed materials distributed within a 45-mile range.

Additionally, one of these Glacial Park newcomers lived in Chicago, where there is a preponderance of well-known nature-related organizations with the ability to reach large audiences interested in environmental topics. In fact, nine nature organizations in Chicago, as well as six in Wisconsin and four elsewhere in Illinois, helped MCCD distribute marketing materials promoting the 2011 Weekend of Restoration. They likely would agree to help promote future events.

MCCD also should **5) leverage the traditional marketing channels it uses for other large-scale events**, such as the Trail of History, which draws thousands of attendees every year. These marketing tools may include press releases sent to regional newspapers or items posted in local event listings, for example.

In addition, MCCD should **6) suggest that people involved with MCCD invite friends, family, and coworkers who may not have experience with Glacial Park, offer an incentive to those who bring someone to the event, and encourage members of new audiences to sign up in groups or pairs.**

The three participants who had never before heard of Glacial Park said the fact that someone they knew was also attending the event was a very compelling reason for signing up. Those who are new to Glacial Park may be more likely to attend events there as part of a group, rather than on their own, or to sign up if someone they know invites them. Providing an incentive to invite others, perhaps through a group discount or rebate, also could encourage this.

3.5.3 Event Promotion

When promoting the event, MCCD should **7) emphasize the content of the event and the opportunities it presents – such as learning from experts, participating in ecological restoration, working in a group setting, and the event’s location – and highlight these factors through photos and descriptions that tell the story of previous Weekend of Restoration events and their accomplishments.**

The least compelling factors that motivated participants to sign up for the Weekend of Restoration included the chance to get away for a weekend and the opportunity to vacation while contributing to a cause, despite branding the event as such. Instead, participants viewed the event as a way to learn from experts and work with a group to engage in ecological restoration field work. They also viewed the event’s location favorably. MCCD should highlight these aspects to encourage participants to register for future events.

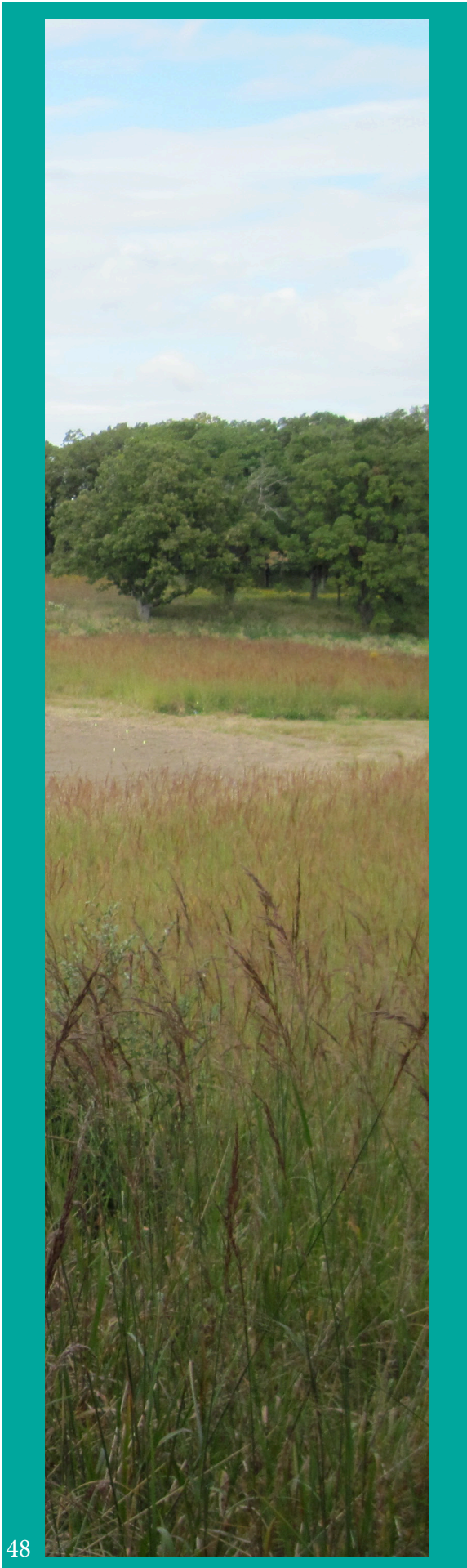
Research also supports this idea. Studies show that people often feel satisfaction from working together as a team to accomplish a common goal (Maller et al., 2005; Miles et al., 1998; O’Brien, 2010). This kind of social contact provides opportunities to network or to make friends (Schroeder, 2001; O’Brien, 2010). Additionally, research shows that humans naturally seek out opportunities for learning, so the chance to explore through new experiences, such as ecological restoration, may motivate people to participate (Measham & Barnett, 2007).

To effectively complement printed materials with electronic forms of marketing, MCCD should **8) regularly update its website and social media channels with information about the event, place repeated items in its monthly e-newsletter several months in advance, and enable online registration.**

The Internet plays a major role in raising awareness about this event. Five participants learned about the event through MCCD’s website, two saw the event advertised in an email, and one read a digital flier about the event. To capitalize on this trend, MCCD should increase the frequency of digital communications about the event and enable online registration to improve the convenience of registering for people who prefer to use the Internet as their main mode of communication.

Tailoring marketing efforts for specific groups of people also may increase participant registration. To help build the event’s base audience, MCCD should **9) highlight the outdoor components of the event and target people ages 51 to 60 who**





enjoy spending time outdoors. Almost half of the 2011 event's 17 participants fit this description, and many people indicated on their surveys that they wished the event had included more outdoor time.

MCCD also should **10) target young natural resources professionals and students looking to build professional skills and engage in career networking.** Almost one-fifth of the 2011 event's 17 participants were students ages 18 to 20, and research shows that in the United States, young adults volunteer for environmental organizations at almost twice the rate of the general population (McDougle et al., 2011). Promoting relevant aspects of the event, such as opportunities to network with environmental professionals and gain hands-on ecological restoration skills, could attract students and young professionals working in natural resources-related fields, expanding the event's audience.

It is unclear what role the event's price played in attracting people to the event, although 2011 participants did not describe the price as a compelling reason to attend and rated it relatively low in terms of event satisfaction. To better gauge the impact of price on the event's attractiveness and potentially increase participation, MCCD could **11) lower the cost of the event, improve or increase the benefits included in the price, or highlight what the cost includes, especially in terms of what will be accomplished ecologically through the event fees.**

3.5.4 Marketing Evaluation

MCCD should **12) administer marketing surveys when participants register for the event, either online or by mail.** This would enable MCCD to track marketing successes and ensure an effective marketing campaign.

After compiling survey responses, MCCD should **13) make improvements to the Weekend of Restoration marketing campaign based on results of current and past marketing surveys.** (See Appendix 15 for a marketing survey template.)



4. Implementation

4.1 Introduction

This chapter details the events and activities of the 2011 Weekend of Restoration as experienced by participants, and considers the educational and stewardship objectives of the weekend program. Based on survey findings, it outlines educational and environmentally responsible behavior change outcomes. These outcomes raised questions that guided research in pursuit of a set of recommendations relating to the implementation of future events. Thus, the 2011 Weekend of Restoration is described first. The chapter then splits into two threads, Education and Stewardship, each of which provides its own Outcomes and Survey Findings, Research, and Recommendations.

4.2 Methods

The Weekend of Restoration occurred September 23-25, 2011. Appendix 8 provides a complete itinerary for the weekend, which included a combination of informational lectures, philosophical discussions, and hands-on fieldwork. Participants began arriving around 7:00 p.m. Friday night at the Lost Valley Visitor Center in Glacial Park. An evening discussion began once all participants had arrived, checked in, and completed their baseline pre-event surveys. Participants introduced themselves and explained their backgrounds and interest in restoration, and commented on what combination of these factors led them to the Weekend of Restoration event. Moderated by Tom Simpson, a conversation ensued in which participants explored the definition, importance, and long-term validity of ecological restoration. The weekend's informal theme of "change" was introduced in the context of ecological restoration, and the ethical ambiguity surrounding the topic and related activities was described.

To begin the first full day of the Weekend of Restoration, Ed Collins, Natural Resource Manager for MCCD, led an op-



tional hike around Glacial Park at 7:00 a.m. Saturday. Breakfast followed, after which participants attended a lecture presented by Tom Simpson elaborating upon the history of the 0.63 acre wetland that would serve as the weekend's restoration site. Upon conclusion of the lecture, a time-lapse video taken during the summer that depicted the wetland's excavation was shown to provide perspective for participants about their role in the restoration process. After the lecture the participants went out to the wetland site to begin restoration. Ed Collins explained the process of spreading seeds in the wetland. Three separate, diverse seed mixes corresponded to different areas of the new wetland (sedge meadow, wet prairie, and mesic prairie) and were spread accordingly. The participants then spent the rest of the morning, an approximately two-hour work session, spreading seeds and then straw over the seeded areas to prevent erosion.

Participants returned to the LVVC for a lunch break, after which they were scheduled for an indoor presentation about wetland soils and hydrology, but departed abruptly for a field lecture on the topic instead. They travelled to various spots in the park and examined soil core samples, learning about linkages between soil formation and the history of the park. The field lecture concluded later than planned at the restoration site, where participants continued spreading seed and straw. During this work session, they also began planting what would ultimately amount to a total of 340 plugs and plant seedlings. A break with discussion was scheduled during this field session, but due to its late start and early end on account of inclement weather, the break was skipped. Participants returned to the LVVC when a storm moved in, and Tom Simpson returned to his presentation of wetland soils and ecology that had been scheduled for the early afternoon. Participants seized time for a restroom or snack break as needed at this transitional moment, but none was formally taken.

Participants went straight from this presentation to dinner, and straight from dinner to the evening's climate change panel, which began at 7:00 p.m. Panelists were Ed Collins of MCCD, Chris Mulvaney, Coordinator for Science and Natural Resources Management teams for Chicago Wilderness, and Steve Sullivan, the Curator of Urban Ecology for the Chicago Academy of Sciences and its Peggy Notebaert Nature Museum. Facilitation of the panel rotated among project team members, who asked questions that had previously been shared with the panelists about the ethical and philosophical issues posed by ecological restoration (as the participants themselves had been thinking about and discussing), and the unique challenges of ecological restoration under the threat of climate change. A few audience questions were accepted during this moderated period, and time was designated for additional audience questions during the second half of the

discussion, which concluded at 9:00 p.m. Though participant energy levels were noticeably waning prior to the panel discussion, the majority of the audience rallied and remained engaged throughout, posing insightful questions to the panelists that reflected their experiences during the Weekend of Restoration.

The final morning of the 2011 Weekend of Restoration kicked off with a second optional hike around Glacial Park, led by Ed Collins. All participants gathered for breakfast, and then attended a final presentation about how the last glaciation about 14,000 years ago affected the formation of the wetland restoration site and the effects of climate change on restoration.

The lecture was followed by a poetry reading and discussion. A packet of nature-themed readings from writers like Wendell Berry and John Muir had been included in the journal that participants received upon arrival. They gathered in a circle, alternated selecting and reading aloud from this packet, and discussed their political, intellectual, and emotional reactions to the ideas raised within it. Tom Simpson, as moderator of this discussion, made ties to other conversations throughout the weekend and related the discussion and many of the readings to the weekend's theme of "change" and to the Turtle Marsh restoration.

After the lecture and discussion, participants returned once more to the restoration site to finish planting, watering the plugs and seedlings, and spreading straw. In total, 30 pounds of seed were spread and 20 bales of straw were used to cover the site and protect the new seeds from erosion. Thirty pounds was a greater than average amount of seed for the site's area, but was used both to provide a better chance of success to the native species planted and to ensure there was enough work for all participants (T. Simpson, personal communication, October 13, 2011). Restoration work concluded at 11:00 a.m., and Ed Collins then led a graduation ceremony on a shaded hill overlooking the site. He led participants to reflect on the work they'd accomplished their connection to nature, which was strengthened as a result. He provided hand-made pendants to each participant as a reminder of their experience to carry with them, and offered each participant a blue bead to leave in the wetland as a symbol of the part of themselves they were leaving there. This gave the participants an opportunity to reflect on their experience with the site and restoration over the weekend.



4.3 Education: Outcomes and Survey Findings

4.3.1 Observed Outcomes

The 2011 Weekend of Restoration proved successful overall, and the team observed that participants reacted positively to presentations, discussions, and especially fieldwork. The lectures and discussions presented a mix of scientific information and challenging philosophical ideas that inspired the participants with diverse backgrounds and previous experiences to think critically about their restoration work. Rather than simply provide materials and directions for the restoration, the Weekend of Restoration provided an opportunity for participants to more deeply understand the act of restoration itself, and the reasons for performing it and its long-term value within the landscape. The length of time afforded by the weekend format for the event allowed for this kind of in-depth consideration of the work.

The Turtle Marsh restoration site was well suited for the depth of engagement with nature and the restoration project. Situated at the core of Glacial Park, it was accessible to participants only by foot and was completely surrounded by nature, without a telephone pole or building within view. Despite being a short walk from a parking lot and a quick drive to the LVVC, Turtle Marsh could easily be experienced as an escape. Similarly, despite the single interruption of fieldwork due to a passing storm, the weather was also ideal for the weekend. Indeed, the rain the site did receive on Saturday afternoon likely facilitated the arrival of a baby snapping turtle that was found in the center of the new wetland on Sunday morning, leading participants to dub the site “Turtle Marsh.” This unplanned opportunity to name the site surely contributed to the sense of ownership the participants felt for their work and the wetland. Additionally, the amount of work and the size of the restoration site worked well for the number of participants and the amount of time, and the nature of the work (planting) was positive. The time-lapse camera and reflection overlooking the site allowed participants to place their work into the temporal and spatial scale of the landscape, and to feel like they were part of a larger effort both in the restoration of Turtle Marsh and in ecological restoration as a whole. All of these factors combined to provide an experience that successfully blended education, engagement with nature, camaraderie with fellow restorers, and ceremonial reflection.



4.3.2 Event Satisfaction

After completion of the event, participants were asked to rate their satisfaction with several aspects of the event. For seven of these items (format/layout of event, sense of community/camaraderie, cost, knowledge acquired, staff's instruction for outdoor work, and skill level required for field work) the mean ratings were between 4.5 and 4.8 (where 5= "very satisfied"). These findings are consistent with observations during the weekend. The only item receiving a lower rating – mean of 4.0 – was "amount of time spent outdoors." Although this question did not ask participants to specify the reason for their rating, observations and participant comments reflected a desire to work outside for greater lengths of time.

The survey also included several open-ended questions. In answer to a question about their favorite part of the weekend, the two most frequent themes were the actual ecological restoration work, and the opportunity to work and build camaraderie with a group of other people. Participants' least favorite parts of the event were more varied. A few participants listed the lectures as their least favorite part of the weekend, and one stated that the lecture information was difficult to understand. Also, a few participants felt least satisfied with the climate change panel discussion, with one listing unfamiliarity with the panel format as a reason for his or her dissatisfaction, indicating some feelings of confusion with the activity's organization. Lastly, some participants felt dissatisfaction with the timing or frequency of breaks.

Again, these findings are consistent with observations that participants seemed most energized while working outside, and that while many were actively engaged in discussions or lectures, others seemed less interested. Some of the difficulty appreciating lectures and presentations may have been related to participants' tiredness. On both Saturday and Sunday, lectures were presented first thing in the morning immediately following breakfast, when participants may have still been tired. Other lectures and presentations followed long stretches without breaks, with a similar effect.

The survey also asked participants whether they would be interested in staying involved or learning about the future transformation of the wetland they restored as part of the event. They responded with a unanimous "yes." In fact, a few participants stated that they planned to return to the restoration site very soon, some with their children in tow. During the weeks after the event, project team members received emails from various participants describing their visits back to the wetland, their positive feelings and experiences, and photos.



4.3.3 Evaluation of Weekend Experience

Participants were asked to complete survey questions immediately before and after the weekend experience and then again toward the end of November. (Thirteen of the 17 participants provided responses to the final survey.) Questions regarding sense of familiarity and knowledge as well as attitudes regarding restoration activities were included in all three surveys.

4.3.3a Familiarity and Comfort Outcomes

Participants were asked to rate their comfort in a variety of nature settings including contexts with some similarity with the weekend's site. For the three that have most comparability to the restoration site, the results showed significant changes immediately after the event and one of them, "Nature preserve without trails," showed a lasting marginal gain based on the final survey responses (Table 4.1). This increase may have resulted from participants' immersion in nature during their fieldwork, and, in particular, a "trailblazing" approach to the wetland site before the first field session, during which Tom Simpson led participants through tall grasses and up over a hill above the site prior to beginning work.



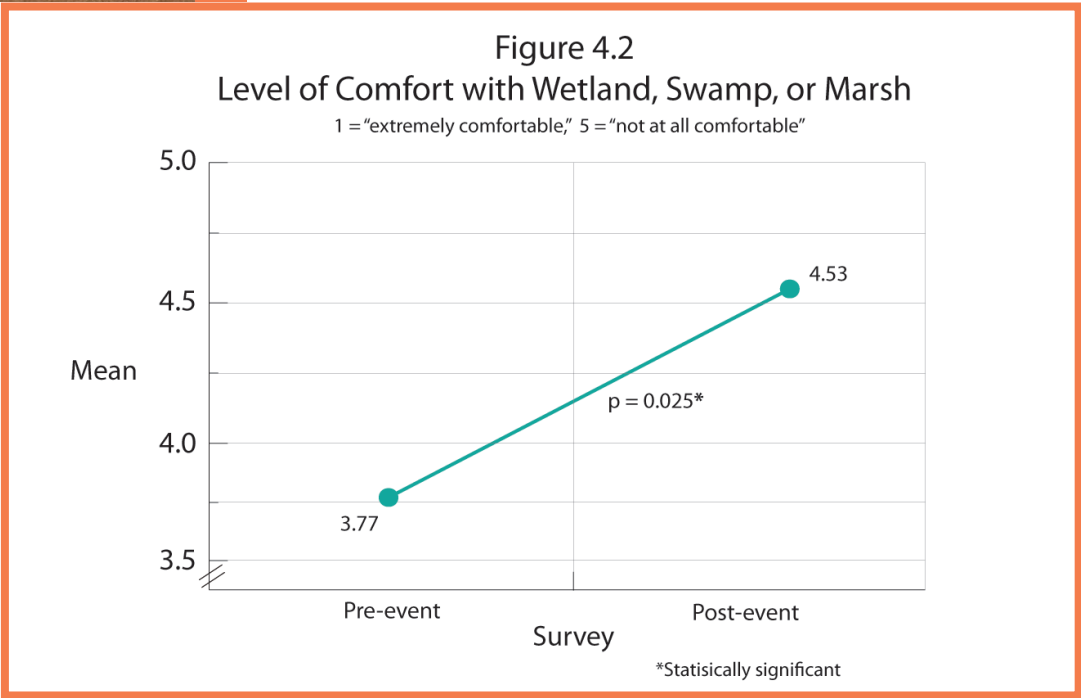
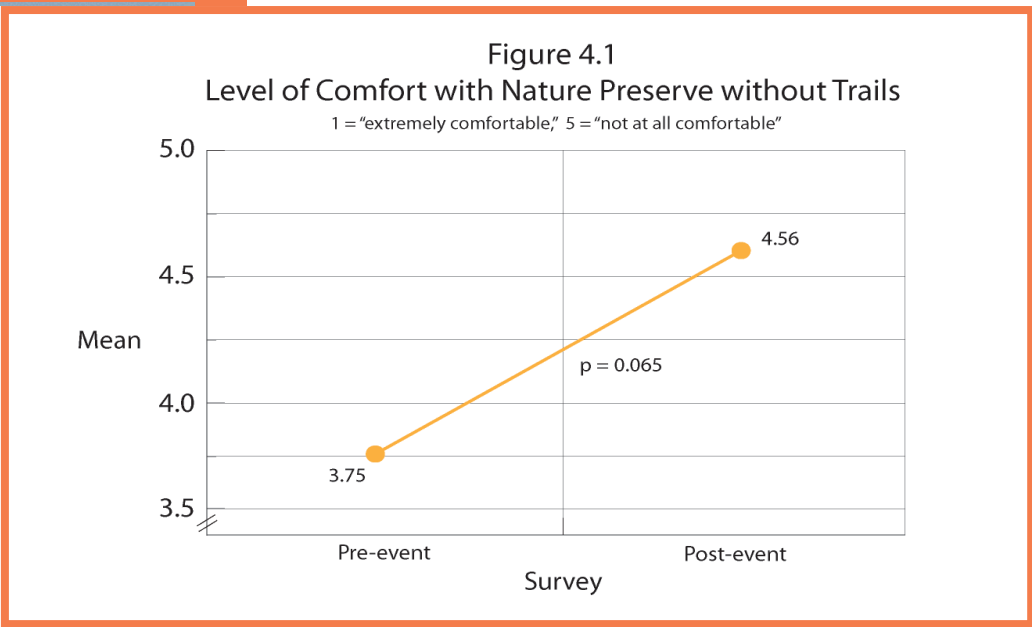
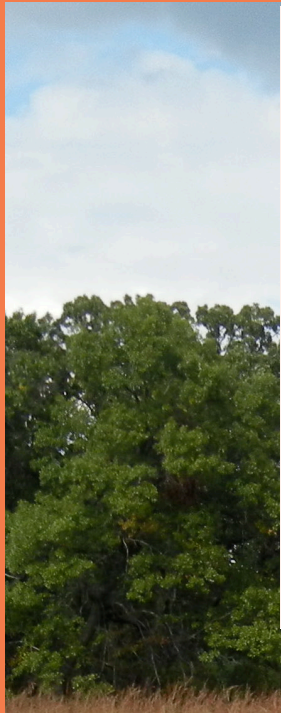
Table 4.1**Comfort in context of restoration event***

Survey item	Mean (s.d.)			Before - After		Before-Longit.	
	Before	After	Longitudinal	t (df)	p	t (df)	p
Nature preserve without trails	3.75 (1.18)	4.56 (.73)	4.15 (.80)	3.11 (15)	.007	2.01 (12)	.068
Wetland, swamp or marsh	3.76 (.97)	4.53 (.80)	4.33 (.65)	3.49 (16)	.003		n.s.
Rivers and streams	4.13 (.81)	4.50 (.63)	4.23 (.73)	2.09 (15)	.054		n.s.
Using restoration tools like loppers and shovels	4.56 (.81)	4.76 (.56)	4.85 (.38)		n.s.		n.s.
Spending time outdoors away from all roads, buildings & manmade structures	4.88 (.33)	4.94 (.24)	4.77 (.44)		n.s.		n.s.
Working with a team to accomplish ecological restoration goals	4.82 (.39)	5.00	4.92 (.28)		n.s.		n.s.
Feeling OVERWHELMED after spending time in nature	2.38 (1.36)	2.00 (1.46)	2.15 (1.34)		n.s.		n.s.

**All but last item are based on 1 = "very uncomfortable" to 5 = "very comfortable." Scale for final item ranged from 1 = "not at all" to 5 = "very much."*

Three items related to participants' comfort with activities closely tied to their weekend experience showed high degrees of comfort even before the event (see Table 4.1), leaving little room for substantial gain as a function of their participation. Figures 4.1 and 4.2 illustrate participants' experience and comfort with various natural settings.

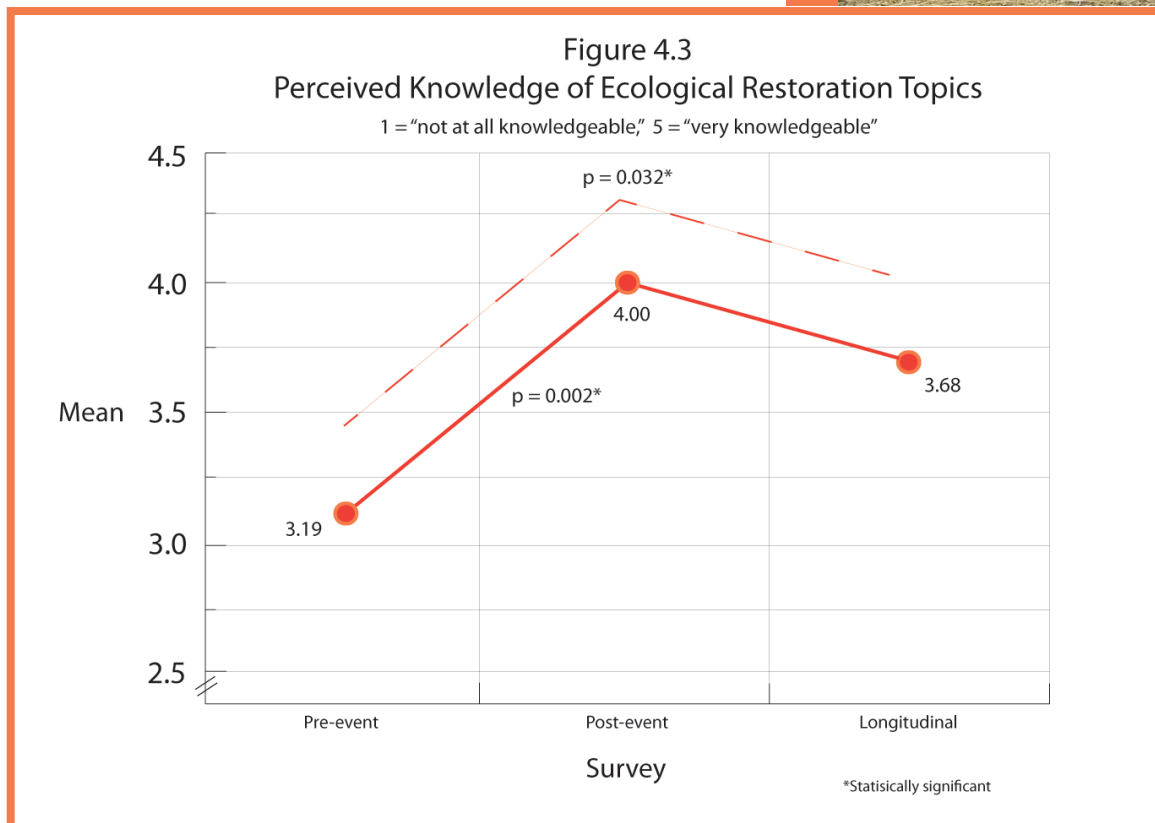
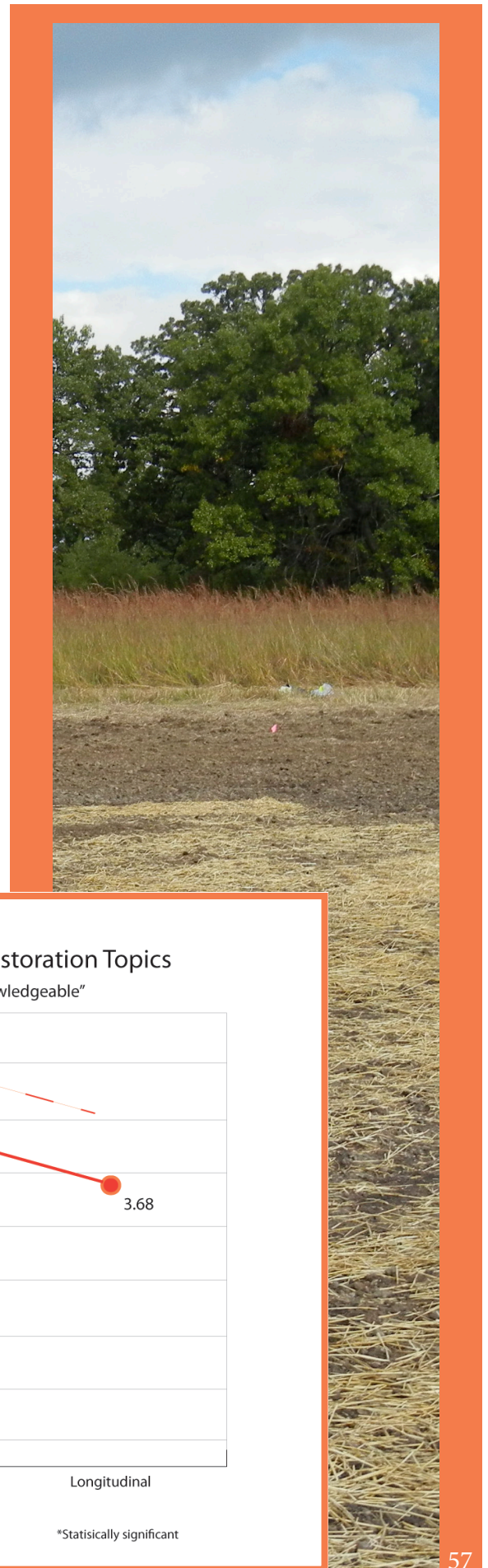




Another question asked participants to what degree certain adjectives described how they feel after spending time in nature. Table 4.1 includes the ratings for "overwhelmed," which showed some change from the initial rating to the second instance. However, with a small sample and large variability, the results are not significant. The three positive descriptors – "energized," "effective," and "relaxed" – had relatively high mean ratings before the start of the event (4.71, 3.94, and 4.76, respectively) and remained stable or increased slightly after the event.

4.3.3b Knowledge Outcomes

Participants were asked to rate their knowledge of a variety of ecological restoration themes and topics. As seven of these items were highly correlated, a summary knowledge index was created ($\alpha=.92$). The mean rating for the participants showed a substantial increase from before the event to immediately after (means 3.19 and 4.00, respectively, $t=3.73$, $df=16$, $p<.002$). While ratings of these knowledge items dropped (mean 3.68) by the end of November, the increase over the baseline level was still significant ($t=2.42$, $df=12$, $p<.032$). These findings demonstrate that participants felt noticeably more knowledgeable about issues such as “the impact of climate change on native Illinois landscapes,” “changes in historical planning as a result of climate change” “differing perspective on the role of restoration work,” and “methods and techniques of ecological restoration” as a result of the weekend’s experience. Complete results for all knowledge items are illustrated in Figure 4.3, in which the general trend of a marked increase from pre-event to post-event survey followed by a drop on the longitudinal survey is observable. The p-value next to the solid line indicates significance between pre- and post-event survey results. The dotted line and its p-value are associated with the significance of the results from pre-event to longitudinal. Although the decline in their perceived knowledge over time is hardly surprising, the fact that there was still a gain even two months later is particularly encouraging.



4.3.4 Research

Despite survey findings suggesting that participants did indeed feel more knowledgeable about ecological restoration after the Weekend of Restoration, they provided mixed reviews of the actual educational content and format. Therefore, it was determined that future Weekends of Restoration would benefit from an investigation into educational formats, including the use of ecological restoration as a teaching tool, and teaching styles. This research is presented in the following sections, and is used in conjunction with insights from the 2011 Weekend of Restoration to inform the recommendations that follow.

4.3.4a Structure of Traditional and Ecological Restoration Education

Using ecological restoration as a teaching tool differs substantially from traditional educational methods. The two educational structures are contrasted here to illustrate the approach recommended for future Weekend of Restoration events.

Traditional education is principally characterized by top-down organization, neglect for a sense of place, and an emphasis on accountability to curriculum standards. In traditional curriculum, a top-down organizational approach does not leave room for change or improvement in teaching methods. An “expert” teaches students, imparting knowledge to them. This linear information flow rarely recognizes sources of knowledge beyond the instructor, discouraging meaningful, outside-the-box thought or action.

A second characteristic of traditional curriculum is its disregard for a sense of place or awareness of one’s geographic or social context. Varying degrees of awareness define an individual’s relationship to a place. Gruenewald states, “Our ability to perceive places can be either thwarted or fostered by educational experience” (2003). In the traditional classroom, this ability is often thwarted when there is no, or very little, regard for the surrounding natural context.

A third characteristic of traditional education is a significant emphasis on accountability to national standards and testing. The No Child Left Behind Act of 2001 catalyzed a steadily increasing focus on accountability, leading toward national conformity through compliance with regulations. A sense of place and the study of local restoration projects that might accompany it are minimally pursued, if at all, and occur only through brief, disconnected field trips.



In contrast to traditional, formal education, non-formal education through guided ecological restoration impacts learners differently. Non-formal education is defined as education or an educational activity that does not fit into the “established formal system” of education. While not as easily recognizable as a way of learning, non-formal education is intended to teach, usually to a specific audience or for a specific learning objective (National Association for Interpretation). It is an important method of education to consider, especially with ecological restoration in mind. Non-formal education differs from traditional or formal education in various ways. Primarily, the participant and his or her desire for knowledge drive non-formal education. As a result, most non-formal education is voluntary (Heimlich, 1993). Unlike formal education, which strives to introduce new fields and completely new concepts to students, non-formal education aims to fill in gaps of knowledge on subjects that interest learners (Hassan, Osman, & Pudín, 2009). Non-formal learning, emphasizing learning through participation, complements how adults are assumed to learn (Mezirow, 1991).

The environmental education programs offered by MCCD, including the Weekend of Restoration, are by definition non-formal. Participants voluntarily attended the Weekend of Restoration, which did not adhere to any state or national learning standards. Within this non-formal context, however, many traditional forms of education were present. At appropriate times, the use of formal education format provided little opportunity for contributions from participants, who may have been able to share information themselves, especially considering the extent of knowledge that these participants possessed. Better and more consistent engagement of the participants may have led them to appreciate the educational content of the weekend without feeling as if it were, at times, over their heads.

Non-formal education works especially well for adults through a concept known as Transformative Learning (Mezirow, 1997). Adult education builds upon the capabilities of the participants to be self-reflective and to assess beliefs and judgments in an objective way (Mezirow, 2003). By using this type of non-formal education, educators work to change adults’ frame of reference to one that is more inclusive and less self-limiting. The Weekend of Restoration fit well within the Transformative Learning framework, as it allowed participants to introduce themselves and their existing paradigms before questioning and building upon these perspectives through the introduction of new points of view and critical thought.



In Transformative Learning, the idea of changing an adult's frame of reference replaces the traditional top-down approach of formal education. A frame of reference is "the structure of assumptions through which we understand our experiences." Frames of reference are largely formed by culture and its associated assumptions and paradigms. They are composed of two different layers: habits of mind and points of view. Habits of mind are broad ways of thinking that are set by assumptions that follow a "code" or set of rules. These rules can have influences that are cultural, socioeconomic, or educational, or influences that relate to personal life experiences. Habits of mind are harder to change than points of view, which result from habits of mind. Points of view are the specific thoughts and generalizations people make about a subject given their own assumptions about it. In order for learning to effect change in habits of mind, it must be communicative in nature. This usually implies two people engaging in dialogue of some sort with the goal of understanding one another. Communicative learning truly works when a consensus on what is being communicated is reached. However, that can be difficult if habits of mind are not acknowledged and taken into account. This is where Transformative Learning comes into play (Mezirow, 1997).

In order for Transformative Learning to be effective, the educator must make learners aware of their own points of view and habits of mind, as well as the underlying frames of reference. This involves redefining problems, such as the pros and cons of ecological restoration, and looking at them from a different perspective. Through non-formal education, learners work to transform their frames of reference, which may require help from an educator or through group problem solving. It is important to note that for adult learners, new information is just a part of the learning process. It must be set in a frame of reference and integrated into habits of mind in order to achieve successful learning (Mezirow, 1997). In this way, non-formal education provides an excellent vehicle for learning, compared to the information-centric methods of traditional education.

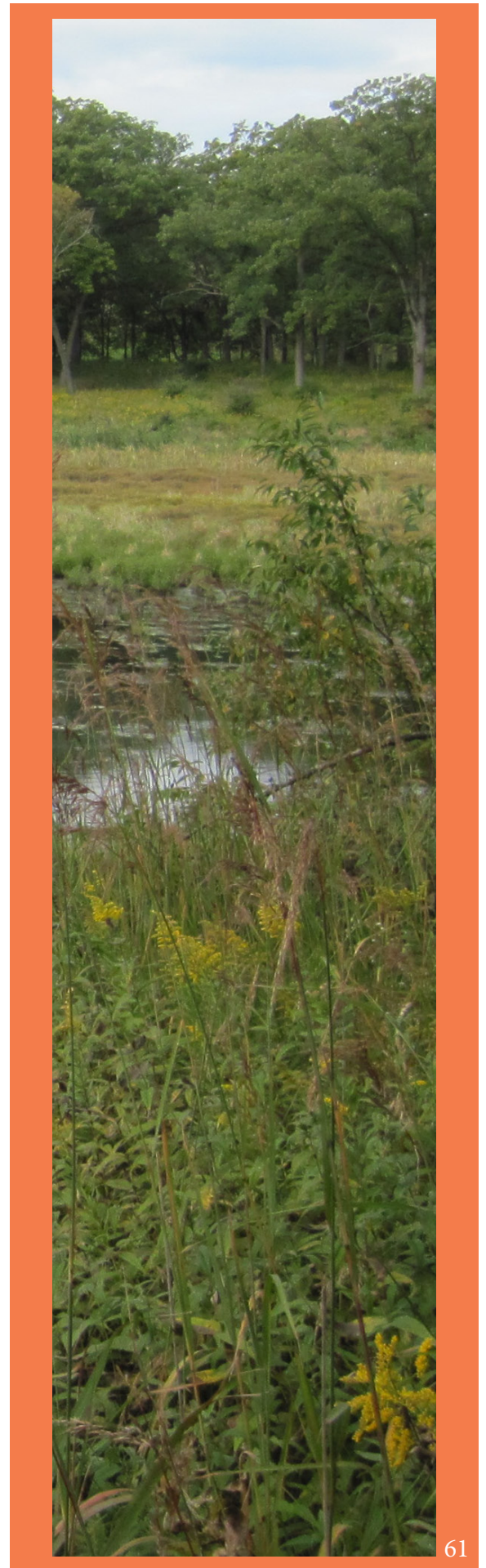
Learning through discovery is an example of how Transformative Learning can be successful. When educators integrate knowledge with an activity – for example, teaching the history and process of ecological restoration while having students engage in hands-on restoration – adults can better retain information, while challenging their habits of mind through the activity. Ecological restoration also provides an opportunity for educators to work as facilitators rather than assume authoritative positions, further encouraging learning through group problem solving (Mezirow, 1997).



Often there is no clear-cut solution to a restoration problem, so group work is essential for creating a solution. In order to effectively work as a group, communicative learning must take place, which can only be effectively achieved if habits of mind are in a state to be changed and evaluated. In this way, Transformative Learning can be a valuable tool for incorporating education into the group work that often comes with ecological restoration.

The setting of Glacial Park serves as an effective basis for non-formal education known as place-based education. This method of education combines many disciplines together to establish fundamental knowledge while instilling a sense of community and connectedness with the participants and their surrounding areas. An example of place-based education occurred at a middle school in Maine, where students created a garden and grew their own produce. This hands-on activity taught participants about the life cycle of plants, the food industry in their community, as well as other sciences such as soil ecology and hydrology (Winther, Sadler, & Saunders, 2010). Although this example is from a middle school, the idea could be applied to non-formal education in which adults are the main participants.

The idea of community was stressed at the Weekend of Restoration, with the backdrop of Glacial Park being an excellent setting for learning about ecological restoration while being engaged in it at the site. Because of the dynamic setting of the Weekend of Restoration, communicative learning was key, which was facilitated by group discussion and problem solving. These methods of learning, which complement a place-based education framework, are key ways to promote learning in adults. The sense of ownership participants felt at the end of the Weekend of Restoration may have been affected by the place-based nature of the project: participants learned about history, soils, hydrology, and ecological restoration itself all through the lens of one specific wetland, which they also engaged with during hands-on fieldwork. It is important to remember that even when participants are not engaged in a lecture or talk, they are still taking in lessons and absorbing information around them. Providing a place like Glacial Park for this and future Weekends of Restoration supports this non-traditional form of education.



While there are benefits to formal education (e.g. academic lectures and talks), non-formal education settings provide an ideal way of conveying ideas about the environment and environmental sciences. Non-formal education often involves opportunities for socializing that are not available in a formal education setting. There is evidence that this is often how ecologists communicate ideas and learn from one another. Emphasis on non-traditional forms of science education can help participants, particularly children, better grasp scientific concepts, especially complex subjects, such as ecology, that are not strictly laboratory based (Bowen et al., 2007). Many scientific concepts can be learned more effectively when an environmental component is included, such as having the students engage with their community and surrounding natural areas. This form of non-traditional education is often more effective than classroom teaching alone at instilling scientific concepts in students (Winther et al. 2010). In addition to an increase in understanding, non-formal education can merge disciplines with ease. Traditional environmental education tends to focus on the science of ecology and the environment, despite the fact that these are highly interdisciplinary fields (Palmer, 1998). Non-formal education is often better suited than traditional education to include other disciplines, such as history and local culture, which in turn enhances environmental understanding.

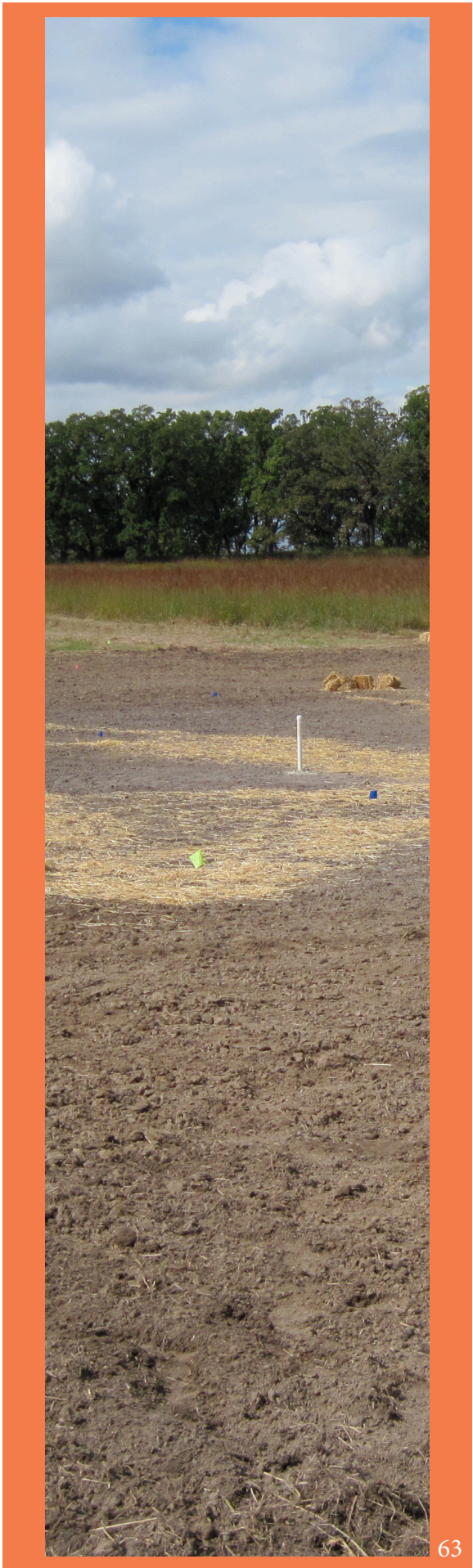
Lastly, aside from participant benefits, non-formal education benefits the environment. As the effectiveness of the environmental campaigns mentioned earlier demonstrate, implementing non-formal education increases awareness of environmental issues within adult populations (Hassan et al., 2009). Through workshops and talks that participants choose to attend, environmental issues can be addressed and better understood. As adults participate in non-formal education, especially in group problem-solving scenarios, they increase their communicative learning abilities, effectively learning more. For ecological restoration and the Weekend of Restoration at MCCD, this format is a natural fit.



Non-formal education through engagement in ecological restoration has generated innovative ways of confronting the issues present in formal education, such as top-down methods, no emphasis on sense of place, and a focus on accountability. Ecological restoration education, which often occurs in non-formal settings as it does at MCCD, is not confined to the top-down conveyance of information central to traditional education approaches. Information may flow from the expert to the learners (top-down), from the learners to the expert (bottom-up), or may be shared directly among learners. This acceptance of information from all parties allows for greater accessibility of and capacity for knowledge sharing. Participants in ecological restoration learn through a variety of experiences, engaging in active, rather than passive, learning. As David Orr states, “Ecology, like most learning worthy of the effort, is an applied subject” (1992). In contrast to the neglect of a sense of place in traditional education, an awareness of and respect for place are vital to an ecologically sound treatment of the natural world. A multitude of environmental organizations offer numerous “in the field” daylong sessions or trainings coupled with restoration work. In addition, learning can occur at other less restoration-focused events such as festivals or potlucks. For example, the Nature Conservancy’s 1995 Prairie Festival and Illinois Chapter Benefit, which celebrated native prairies, provided informative displays, nature-related books, hands-on projects, and educational walks led by scientific experts (North Branch Prairie Project, 1995).

Learning does occur in classroom settings, but effective environmental education often includes a field application component. For example, Chicago’s Morton Arboretum hosts horticulture classes consisting of lectures and Ecological Restoration Education at MCCD.

As illustrated, there are many models that MCCD can draw on as it continues to develop and improve upon its Weekend of Restoration. Embracing the non-formal nature of such an event may allow for ever-greater engagement of participants with the material learned and with the restoration project itself. This type of engagement will be essential to provoking the kind of critical, philosophical thinking about ecological restoration that the Weekend of Restoration is intended to inspire.





4.3.5 Effective Environmental Education Event Planning

While acknowledging that the Weekend of Restoration constitutes a non-formal learning opportunity for participants, and is thus freed from adherence to traditional teaching methods, it is nonetheless important to consider what teaching methods might be most effective and whether or how to incorporate variety. Non-formal education can still involve lectures and discussions as the Weekend of Restoration did, and participants may voluntarily attend these sessions. Still, survey results indicated that participants had mixed feelings about the presentations and discussions. Therefore, an investigation of learning styles and how best to accommodate them was conducted, the findings of which follow.

4.3.6 Content and Materials for Effective Teaching

4.3.6a Variation in Learning Styles and Differentiated Instruction

At one time or another, we have all been in a situation in which an educator presents information in a way that does not align well with our previous knowledge of the topic or preferred method of learning. Ironically, despite most people having a vague appreciation of this phenomenon, educators still largely neglect the issue. This incongruity results from lack of understanding about different learning styles – various ways in which people optimally process information (Felder & Spurlin, 2005). If a program director aims to create a program in which a diverse audience can easily access and digest the information, he or she must try to embrace the various kinds of learning styles and incorporate a variety of them into the program.

Felder and Silverman created a model of learning styles to better comprehend the needs of students in an educational setting (1988). They classified students along four bipolar dimensions: sensing or intuitive, visual or verbal, active or reflective, and sequential or global.

The first dimension, sensing-intuitive, determines whether students are concrete or abstract thinkers. Some students may prefer a fact-based lecture, such as those often found in biology classes, while others may prefer a more abstract format, such as those in theoretical mathematics courses. The second dimension, visual-verbal, determines whether a student prefers visual representations of the proposed material or written and spoken

explanations. Some students may grasp information better from a colorful PowerPoint presentation, poster, or tangible hand-held model, while others do better when presented with written handouts of definitions and stories. The third dimension, active-reflective, looks at whether a student best learns through active participation with or reflection on the topic. Some may prefer jumping in right away to learn by doing, while others may feel more comfortable analyzing the situation conceptually before partaking in any hands-on activity. Lastly, the fourth dimension, sequential-global, decides whether a student prefers learning in a step-by-step sequential manner or through a holistic, “big-picture” style of thinking. Some students may need detailed instructions leading them from one step to another, while others may want an explanation of the purpose of a task before hearing the details of its execution. By better understanding the different kinds of learning styles, a program director can better determine the methods to use when teaching the environmental curriculum of the new program. The non-formal format of and the Glacial Park setting for the Weekend of Restoration present ample opportunity to be flexible to varying learning styles. Written information can be provided, as well as highlighted visually by referring to the landscape. Similarly, fact-based lectures about wetlands and their history can be provided alongside a more abstract discussion of the value of restoration.

Differentiated instruction, a teaching theory, can help a program director tailor an educational program for a diverse group of students (Hall, Strangman, & Meyer, 2003). It gives guidance on how to adapt one’s environmental instruction to best suit students with varying learning styles and levels of base knowledge and outdoor experience. A program director or educator should first evaluate the audience by inquiring about past experiences and surveying participant knowledge, as occurred during the 2011 Weekend of Restoration, and then adjusting the program’s content and materials accordingly. This responsiveness to student differences will result in improved understanding of the information as well as a more enjoyable environment in which to learn. The Weekend of Restoration event was successful in the first of these steps, in that the Friday evening discussion allowed participants to share their previous experience, but none of the educational content was adapted in response to pre-existing participant knowledge.



4.3.6b Choosing Appropriate Materials

Selecting appropriate materials with which to teach is essential for reaching the educational objectives of an environmental education program. A manual that the Peace Corps created about adapting educational materials for students provides recommendations on how best to select appropriate materials for an environmental education program (Peace Corps, 1999). To begin, a program director should recruit members of the cross-functional team (CFT; see Chapter 2: Planning for a description of the formation and role of a CFT) to brainstorm a list of potential educational materials. With their breadth of experience and knowledge, as well as the use of local, regional, and national sources, CFT members can derive a suitable list of potential materials. The North American Association for Environmental Education, the U.S. Environmental Protection Agency, and the World Wildlife Fund also offer guidelines for selecting high quality materials (NAAEE, 2004). After drafting a list, CFT members can sort and evaluate each of the materials to determine the value it could bring to the program. Each member of the CFT can review and rate the materials independently, and then the larger team can discuss and vote on the finalists. During the review process, CFT members should consider certain discerning questions: 1) Do the materials address priority environmental issues or can they be adapted to address them? 2) Are the materials appropriate for the audience that is the target of the educational strategy? Can they be adapted to be appropriate? 3) Are the materials appropriate for the learning setting (e.g. classroom, outdoor center, informal gathering)? Can they be adapted to be appropriate? and 4) Do the materials provide sufficient instructor information so that they are understandable and easy to follow (Hall, Strangman, & Meyer, 2003)? These questions should guide the CFT in making decisions about the appropriateness of educational materials.



4.3.7 Education Recommendations

In order to appeal to more of the participants' preferred learning styles in conveying useful information about Glacial Park, ecological restoration in general, and the particular ecosystems of relevance to the Weekend's restoration project, the following recommendations were developed.

To accommodate more participants, MCCD should **1) incorporate variety into lectures and discussions, in terms of the format, content, and context.**

As the team's research indicated, people learn in a variety of ways, and varying teaching styles is the most effective way to accommodate the greatest number. Participants themselves confirmed this, expressing a wide range of opinions about the lectures and discussions on the post-event survey. Incorporating greater variety into lectures and discussions, including perhaps alternating or rotating instructors, is likely to appeal to more of the audience.

To take advantage of the plentiful aesthetic resources of the site, MCCD should **2) use Glacial Park's landscape as an effective outdoor classroom (in part by having guided hikes during the day that tie in to the weekend's theme).**

Glacial Park's landscape is an invaluable resource that can be more effectively used to illustrate many of the points that would otherwise be explained conventionally through the use of PowerPoint presentations. Transplanting a lesson on soils or wetlands outdoors will make it seem more engaging and exciting. Outdoor education presents unique opportunities for learning by engaging more of the senses. Introducing the purpose of a traveling lecture, tying it to the weekend's themes and project, and traveling together to each site will further enhance the learning potential and effectiveness of Glacial Park as an outdoor classroom. Additionally lectures about soils or ecosystems could be incorporated into a midday hike that serves as a break from the restoration work sessions. (At least one participant specifically suggested just such a hike during the day.)

When inclement weather forces participants to return indoors, as occurred during the 2011 Weekend of Restoration, the choice of indoor setting might still allow participants to feel engaged with their surroundings despite being sheltered from them. For example, the LVVC cafeteria could be utilized in these instances for its expansive panorama of the Park. This could be especially powerful in a dynamic explanation of watersheds and wetlands during a rainstorm.



Finally, to build on the participant engagement initiated during the Friday evening discussion, MCCD should **3) engage and continually re-engage participants through the use of questions.**

Throughout all sessions, posing questions to participants can help to ensure that they remain engaged. The Friday evening discussion was particularly effective at prompting participants to share what had brought them to the Weekend of Restoration, allowing them to reveal a little of themselves and their backgrounds and become engaged with both the rest of the group and the work ahead. While some participants are naturally inclined to join in discussions or ask questions during a lecture, others need more encouragement. Making an active effort to engage those participants who tend toward being passive observers will help to maintain their interest. It may also present the opportunity to correct misconceptions that might not be apparent before imparting information. For example, during a soils lecture, parts of a soil core can be passed around and participants can be asked to describe the texture and color and to speculate on the reasons for it. Some participants may be able to answer correctly, reaffirming their self-efficacy and creating an atmosphere in which they can learn from one another as well as the instructor, and the instructor can fill in any gaps or correct any inaccuracies.

The quality of the educational content available from MCCD, and the expertise of Tom Simpson and other staff, is unquestionable, but it is important to take care to ensure that it can be effectively communicated to participants. The recommendations outlined here, as informed by participant experiences during the 2011 Weekend of Restoration together with the research questions it raised, provide a basis for maximizing participant learning outcomes at future Weekends of Restoration.

4.4 Stewardship

Although the event's major goals included teaching participants about the value and uses of ecological restoration and engaging them in restoration field work, MCCD also hoped to instill attitudes of environmental stewardship and foster stewardship behaviors. To accomplish this, MCCD engaged participants in discussions about humans' historical and current roles in altering the landscape and involved participants in a behavior change intervention aiming to encourage environmentally responsible behaviors (ERBs). Through the intervention, participants selected ERBs in which they were not already engaged and signed commitment forms pledging to try these new behaviors at home.

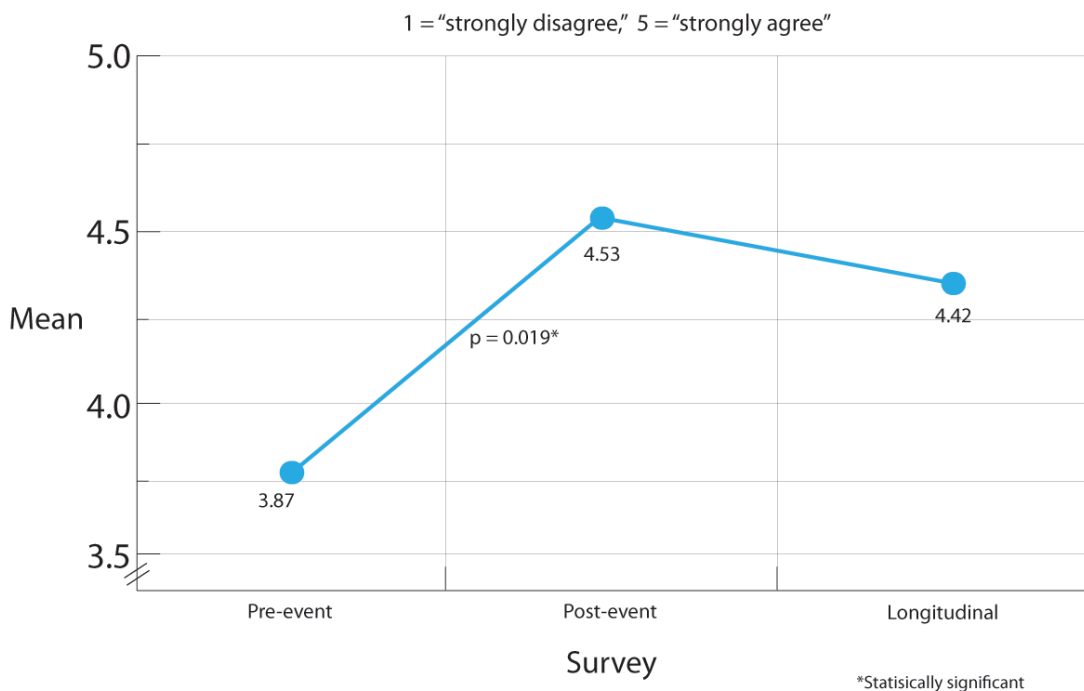


4.4.1 Attitudes

Each of the three surveys participants completed included several questions related to their attitudes toward the environment, including how they valued nature and restoration and the degree of responsibility for degrading or improving the environment that they felt. Questions measured attitude variables on a Likert scale, on which participants rated their agreement with statements such as “I find working outdoors satisfying” and “People affect the environment both beneficially and detrimentally.” Across the 31 items comprising these questions, participants provided information about their sense of responsibility for the environment’s degradation and improvement, sense of empowerment to improve nature, valuation of nature in monetary and aesthetic (inherent) terms, and willingness to trade off one element of a landscape in favor of another in the name of restoration, among others (see Figure 4.4).



Figure 4.4
Participant Response: “I Possess the Skills and Knowledge Necessary to Engage in Ecological Restoration”



For many of these items, ratings were above 4.0 (on the 5-point scale) initially and remained high on the subsequent surveys as well. Nonetheless, as shown in Table 4.2, several of these showed significant change.



Table 4.2**Attitude Items showing significant change**

	Mean (s.d.)			Before - After		Before-Longit.	
	Before	After	Longit.	t (df)	p	t (df)	p
I feel I am able to make a difference to improve natural areas	4.53 (.52)	4.80 (.41)	4.60 (.70)	2.26 (14)	.04		
I possess the skills and knowledge necessary to engage in ecological restoration	3.87 (1.06)	4.53 (.52)	4.40 (.52)	2.65 (14)	.019	2.09 (9)	.066
People affect the environment both beneficially and detrimentally	4.37 (.72)	4.93 (.26)	4.27 (1.01)	3.01 (14)	.009		

In particular, it is notable that participants felt significantly more capable of improving natural areas immediately after the event. The site for the weekend's effort was a relatively manageable size, enabling participants to make a difference as well as to learn of other opportunities to get involved with similar projects through organizations such as MCCD. It is not surprising, however, that their assessment would decline over time having been removed from a compatible setting and from access to the necessary tools and expertise that were available during the event. Related, participants more strongly agreed that they possessed the skills and knowledge necessary to engage in ecological restoration immediately upon completion of the event than at the beginning. In this case, however, the rating at the end of two months was almost as high as it had been at the end of the weekend.

This result reflects one of the event's desired outcomes: that participants would better understand ecological restoration and why it is performed. As part of the weekend's activities, participants learned about the history of the restoration site and the human alteration that led to its degraded state, as well as the improvements expected at that site as result of their restoration work. Thus, they could see concretely the ways that humans can alter the environment both negatively and positively. The significant increase in their agreement with the item about positive and negative human impacts reflects this emphasis. It is perhaps more surprising that the ratings on this item declined to slightly below the baseline level.



Similarly, participants who did not have much previous experience with ecological restoration increased significantly in their agreement with this idea, while those with a lot of previous experience did not increase significantly. It is possible that those with little previous experience were less familiar with the ways in which restoration and other proactive behaviors could positively impact the environment or that they were less familiar with the hidden degradation within seemingly natural landscapes. More research and perhaps future program design could potentially shed more light on this finding. Neither of these results was maintained in the longitudinal survey.

The survey included a series of visual images to assess changes in participants' preferences for restored or natural landscapes compared with landscapes altered to suit human needs. A pair of images, for example, portrayed a channelized, or straightened, stream, and a restored, re-meandered stream (the site of a previous Weekend of Restoration event at Glacial Park). There was no change in the preference ratings between the initial time and the end of the weekend.

While the ratings did not change significantly over time, the differences in the appeal of the two images were substantial already in the initial survey. The means for the straightened stream (2.18) and the re-meandered stream (4.73) are at almost at opposite extremes of the scale. From this, it is clear that participants already strongly preferred the re-meandered, restored landscape at the beginning of the event, leaving little room to increase on this measure and creating a ceiling effect. Similarly, they already rated the appeal of the channelized stream so low that it, too, was unlikely to change significantly, leading to a floor effect. This reflects that participants already held strong preferences for restored landscapes compared with those artificially altered for human use.

Further indication of this preference, even before their restoration effort, is evident in the participants' strong agreement that "a meandering stream is ecologically more sound as a water body and habitat" (mean 4.93) and disagreement that "straightened streams manage water more efficiently (mean 2.29). They were less clear about whether "A meandering stream reduces the amount of available land for productive uses" with an initial mean at mid-scale and slightly less agreement after the event (means 3.13 and 2.56, respectively). Though not a strong finding ($p=.083$), it suggests that participants may have reconsidered their understanding of what constitutes a "productive use" of land. In terms of ecosystem services, which participants learned about throughout the weekend in the context of those a wetland provides, a restored landscape is in fact more





productive than one altered to suit the needs of agriculture or other human development. Learning about ecosystem services as a productive use of land during the event may have affected participants' responses to this item on the post-event survey.

Participants' agreement with the statement that restoration projects are multigenerational, already quite strong initially, increased significantly after the event (means 4.00 and 4.36, $t=2.69$, $df=13$, $p=0.019$). This reflects an increased understanding of the timescale on which ecological restoration occurs, reflecting the discussions during the weekend. Another survey question described a fictional scenario in which the restoration of a sedge meadow would displace a small population of sand hill cranes and asked participants to rate the appeal of both the sedge meadow and the sand hill cranes. Because the question did not ask participants to rate these relative to each other they could – and did – find each component attractive (means 4.29 and 4.53, respectively). By the end of the weekend, however, only the appeal of the sedge meadow increased significantly (mean 4.82, $t=2.50$, $df=16$, $p=0.024$), while the appeal of the sand hill cranes did not change. While this result was not maintained longitudinally, it suggests that the event had some effect in shaping participants' understanding of the tradeoffs involved in restoration work. They may have been more willing to sacrifice the habitat of the cranes, which could potentially relocate, in favor of the greater benefits that would result from a restored ecosystem. Thus, they were more drawn to the restored sedge meadow than to the sand hill cranes after completion of the event.

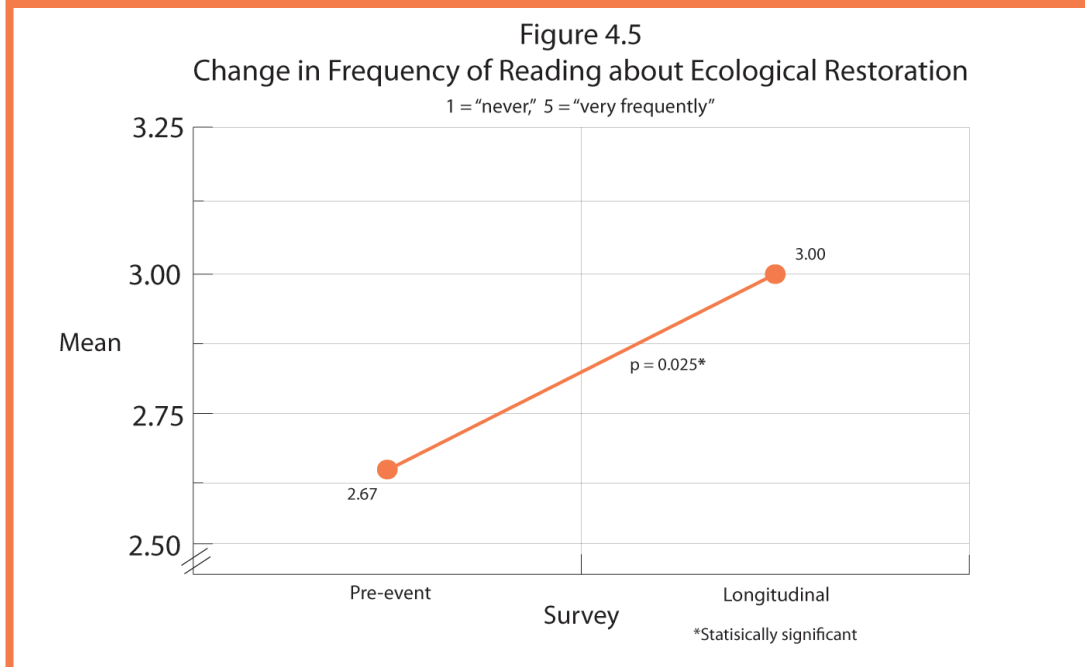
It is important to remember that individuals drawn to the restoration weekend event are likely to have positive attitudes about the value of nature and restored landscapes as well as their ability to have a positive impact on the environment. It is thus not surprising that their responses to the survey items reflected strong endorsement already at the beginning of the event. Nonetheless the changes observed between the pre- and post-event surveys suggest that the weekend made a difference in their sense of empowerment and an increase in favorable views toward restoration. Though not measured explicitly, participants may have felt better about their role in restoration after weekend because of their experiences working and bonding with the other participants. It is not surprising that these changes were not sustained over time. However, in many instances the ratings two months later were somewhat higher than at baseline.

4.4.2 Behavior Change

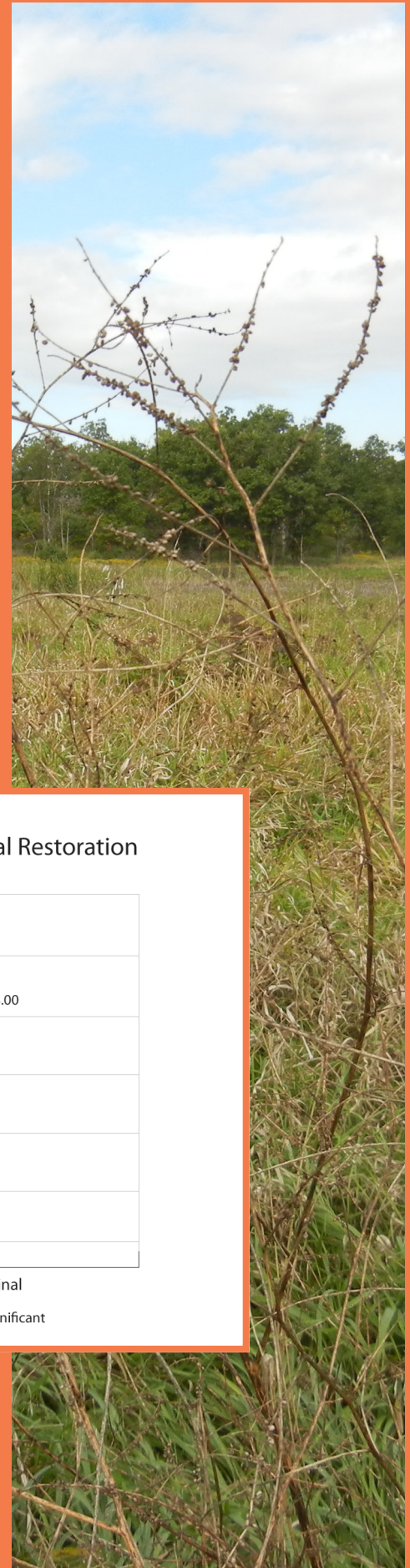
Besides measuring attitude change, the surveys also evaluated the effectiveness of the event's goal of encouraging participants to practice environmental stewardship in their everyday lives. To assess environmental stewardship, the baseline pre-event survey and follow-up longitudinal survey asked participants to rate, using a Likert scale ranging from 1 ("never") to 5 ("very frequently"), the frequency of their involvement in various activities related to ecological restoration tasks and ERBs, such as recycling and energy conservation.

4.4.2a Ecological Restoration

In general, when combining all the ecological restoration behaviors listed on the surveys into one collective measure, participants seemed to engage in ecological restoration activities a little more frequently two months after the event than before the event, although this change was not significant. There also was no significant change between the pre-event and longitudinal surveys when analyzing frequency of ERBs collectively or measuring how often participants encouraged others to engage in ERBs or ecological restoration behaviors (see Table 4.3).



Four of the six ecological restoration-related behaviors listed on the survey involved outdoor activities that depended on weather or available opportunities to participate in restoration activities. It is not surprising, then, that the frequency of participants' engagement in most of these restoration tasks did not change significantly from before the event to two months after



the event. The other two listed activities, however, did not rely on weather or opportunity. One of these, which asked how often participants discussed the benefits of restoration with friends and family, had a mid-range mean (3.17) both before the event and later. The remaining item, however, indicated that the Weekend of Restoration event piqued participants' interest in ecological restoration. Participants reported that they read books, articles, and other materials about ecological restoration significantly more frequently two months after the event than before the event (means 3.92 and 3.25, respectively; $t=2.60$, $df=11$, $p=0.025$).

Table 4.3

Frequency of Engagement in Various Ecological Restoration Activities

Behavior	Mean (standard deviation)*†	
	Pre-event survey	Longitudinal survey
Reading books, articles, or newsletters about restoration**	3.25 (1.29)	3.92 (0.90)
Invasive species removal	3.25 (1.60)	3.33 (1.37)
Discussion of the benefits of restoration with friends and family	3.17 (1.53)	3.17 (1.27)
Seeding or planting native plant species	2.67 (1.30)	3.00 (1.21)
Prescribed burns	2.42 (1.38)	2.50 (1.17)
Erosion control	1.83 (0.72)	2.08 (0.67)

*1="never" ... 5="very frequently"

**statistically significant at $p \leq 0.05$

†The means shown in Table 4.3 are based on the 12 individuals who completed these survey items both on the pre-event and longitudinal surveys.

As previously discussed, the lack of significant change in the frequency of participants' engagement in most ecological restoration tasks may be explained by a variety of factors, including weather and opportunity. When participants filled out the longitudinal surveys in November – typically a cold month in the Midwest – they may not have had a chance to engage in ecological restoration yet and may have postponed their ecological restoration plans until the following spring or summer. Some participants may not have had an opportunity to engage in ecological restoration, especially those who did not own their own land or did not have frequent access to organized ecological restoration work days.

Some participants reported engaging in erosion control activities and planting native plants more frequently two months after the event than before, although this result was not significant. The program – which specifically taught skills in native planting and erosion control – may have equipped some participants to try these particular types of restoration or increased their confidence, potentially leading them to complete these restoration tasks more often. The Weekend of Restoration event only taught participants how to perform these two types of ecological restoration, so it is not surprising that some participants may have engaged in these tasks more frequently after the event.

4.4.2b Environmentally Responsible Behaviors

Survey results indicated substantial variation in the frequency of engagement in the ERBs listed on the survey (see Table 4.4). While a few of the means declined over time, most showed minimal increases, and none of the differences between the pre-event and longitudinal ratings was significant.

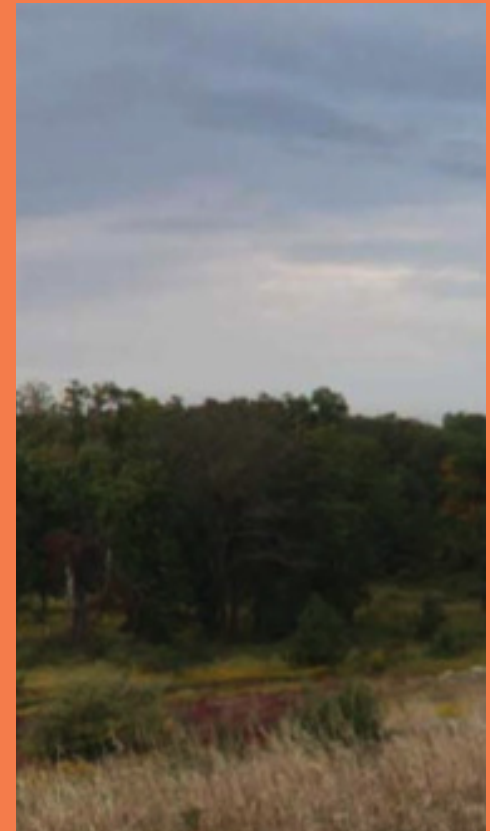


Table 4.4

Frequency of Engagement in Various Environmentally Responsible Behaviors

Behavior	Mean (standard deviation)*†	
	Pre-event survey	Longitudinal survey
Recycling	4.75 (0.62)	4.92 (0.29)
Using natural light whenever possible	4.45 (0.93)	4.27 (0.79)
Turning off the lights when leaving the room	4.27 (0.90)	4.45 (0.69)
Reusing old clothes or materials instead of buying new ones	3.92 (0.90)	4.17 (0.83)
Using local, seasonal, or organic food	3.45 (0.93)	3.36 (0.67)
Taking short showers	3.27 (1.01)	3.36 (1.12)
Buying biodegradable detergent	3.00 (1.33)	3.00 (1.70)
Biking/walking/carpooling to work	2.55 (1.57)	2.00 (1.26)

*1 = "never" ... 5 = "very frequently"

†The means shown in Table 4.4 are based on the 10-12 individuals who completed these survey items both on the pre-event and longitudinal surveys.



As Table 4.4 shows, the pre-event means for individual ERBs reached as high as 4.75 (for recycling), indicating that before the event, participants already engaged in ERBs fairly frequently and so did not have much room to increase the frequency of those behaviors. The high pre-event means likely created a ceiling effect, making it difficult for them to increase significantly after the event because they were already so high.

A small sample size may have also contributed to the lack of significant changes in ERBs. Because participants responded to the longitudinal survey by mail, not in person, some participants did not send back responses. These missing responses made an already small sample size of 17 people even smaller, with some questions only receiving 10 responses. This small sample size made statistically significant findings difficult to obtain, since one person can make a large impact on the size of a change.

The Weekend of Restoration event did not target ERBs to the extent that it targeted ecological restoration behaviors. Event staff taught participants skills for engaging in several types of ecological restoration activities but did not actively teach skills relevant to ERBs. Staff and participants also spent several days focusing on the theory and ethics behind ecological restoration but only spent a few minutes discussing ERBs. Additionally, attendees participated in only one behavior change intervention (a commitment form) focused on ERBs. The lack of significant behavior change may indicate that the event was not focused on ERBs and behavior change techniques targeting ERBs.

Survey results indicated substantial variation in the degree to which participants acted as change agents by encouraging others to engage in ecological restoration or ERBs, and none of the differences between the pre-event and longitudinal ratings was significant. At the event, staff members did not explicitly urge participants to encourage others to engage in ecological restoration activities or ERBs, so it is not surprising that they did not encourage others more frequently after the event.

4.4.2c Commitment

During the Weekend of Restoration, participants each signed a commitment form, pledging to engage in at least one ERB during the three months after the event (See Appendix 9). Two months after the event, participants reported that they still engaged in a total of 24 behaviors they had committed to and had failed to engage in 33 behaviors they had committed to, yielding a 42.1% success rate (n=11).

The design of this particular behavior change intervention may have contributed to the low success rate. During the commitment process, the team asked participants to select new ERBs; the form did not ask them to list behaviors in which they already engaged. When filling out the commitment forms, several participants expressed both verbally and in writing that they already did many of the behaviors listed. Some people incorrectly filled out the form, selecting both new and current behaviors. Providing an outlet for participants to highlight the ERBs they already engaged in may have prevented some of these errors and feelings of discontent.

Attendees also may have committed to behaviors on which they could not follow through in two months. For example, one participant committed to purchasing energy-efficient appliances; however, on the follow-up survey, that participant stated he or she had not yet had an opportunity to do so because no appliances required replacement yet. On the other hand, some attendees did honor commitments involving some of the more substantial behaviors. For instance, one participant committed to and followed through with winterizing his or her home windows. Other potential barriers may have prevented attendees from upholding their commitments, as well. One participant reported living in a condominium and therefore could not engage in behaviors such as growing an edible garden or replacing a gas-powered mower with a push mower.

Attendees reported engaging in a total of 31 new behaviors to which they had not committed. This potentially indicates a degree of generality, or a spillover effect, to ERBs not targeted in people's individual commitments. It also may have resulted from this particular group's willingness and enthusiasm to try new ERBs, demonstrated through their high baseline results. When asked to rate their level of commitment to new ERBs in the two months following the event using a scale of 1 to 5, with 1 being "not at all" and 5 being "very much," attendees rated themselves at an average of 4.18. This indicates that participants believed their commitment to new ERBs to be much higher than their actual self-reported level of commitment,





which showed they still engaged in only 42.1% of commitment behaviors two months after the event. This inflated perception could have resulted from the fact that many participants regularly engaged in numerous ERBs before the Weekend of Restoration, so they likely already viewed themselves as very committed to ERBs. The misperception also may have occurred if respondents misinterpreted the wording of the survey question – they may have responded as if rating their commitment to all new behaviors they listed, regardless of whether they committed to them during the event.

4.4.3 Opportunities for Behavior Change

4.4.3a Behavior Change

When environmental agencies organize volunteer-based projects, they, like MCCD, are sometimes interested in instilling or supporting stewardship beyond the restoration work itself. Often, organizations seek to change behavior, benefiting the environment through increased environmentally responsible actions. Although attempts to change behavior often take the form of education, behavior change is a more complicated pursuit and may entail any number of approaches.

While conservation practitioners often assume they need to use a strong, compelling technique to motivate behavior change, they in fact can more effectively change people's behavior through moderate external techniques, rather than very powerful ones, in a phenomenon known as the minimal justification principle. When using moderate or weak interventions, people often attribute the cause of their behavior to their own intrinsic motivations, their own attitudes, and their own personal beliefs. On the other hand, when using powerful external interventions, people often attribute their behaviors to the intervention itself (Katzev, 1996). Because of this, strong external interventions will not result in enduring behavior changes because they do not allow people to develop permanent attitudes of valuing conservation, which, if developed, would lead to durable conservation behaviors following the removal of the interventions (Lepper, 1981).

In general, an effective behavior change intervention needs to provide rationale for and precise information about the target behavior, demonstrate that the behavior can lead to benefits, and make available training and methods for maintaining the behavior long term (Ester & Winett, 1981-82). The research presented here illustrates the types of interventions available to MCCD and how they can be best utilized. Realistically, it is unlikely that a single intervention over a very short period will

durably change behavior. Care should be taken, therefore, in selecting an intervention appropriate to the scale of the desired activity and relevant to the context in which it is presented, and setting realistic expectations for the degree of change. The expected impact may be less for participants who are one-time attendees of the Weekend of Restoration, but many of those involved in the 2011 program were frequently engaged in restoration through MCCD, and a longer-term intervention may be more effective with these individuals.

4.4.3b *Commitment*

Commitment as a behavior change intervention has proven successful and adheres to the minimum justification principle. Researchers have found that asking people to make a commitment to engage in an environmentally responsible behavior (ERB) can increase the likelihood of the behavior and can encourage continuation of the behavior even after the intervention ends (Katzev, 1996). For example, in one study, after signing commitments pledging to ride the bus twice per week for four weeks, one-third of participants continued riding the bus even during the three-week follow-up period after the intervention ended, demonstrating the durability and longevity of commitment as a behavior change intervention. In contrast, only slightly more than 1% of the control group – who received information about the bus but no request – rode the bus at all during the study (Katzev & Bachman, 1982).

The most effective commitments are written and publicly shared. Additionally, incorporating other strategies – such as performance feedback, free tools to make the behavior easier, or multiple requests that increase in difficulty – can further enhance a commitment’s effectiveness (Katzev, 1996). In the same study discussed above, besides making a commitment, some participants also received free bus tickets. More than half of this group continued riding the bus during the follow-up period, demonstrating that the addition of complementary strategies, such as free tools, can increase the impact of commitment (Katzev & Bachman, 1982). Research also indicates that signing a written document enhances the effectiveness of commitment (Katzev, 1996). In one study, people who signed written commitments to recycle newspapers for two weeks recycled more often and recycled larger amounts than a group that made a verbal commitment. The written commitment group also continued to recycle beyond the commitment period, whereas the verbal commitment group did not continue recycling (Pardini & Katzev, 1983-84).





Researchers have found the effectiveness of a commitment varies depending on whether a person made it publicly or privately. Making public commitments – including publicly taking a stand or expecting that one’s position on an issue would become public knowledge – led participants to decrease their electricity and natural gas use in several studies. Making such a commitment also can lead to future behaviors aligned with the attitude reflected in the commitment. In one study, people who allowed their names to be listed in publicity materials related to their commitments used less energy than people who made private commitments. Additionally, people who made public commitments continued to save energy during the next year, even though they were no longer publicly recognized (Pallak, Cook, & Sullivan, 1980).

Using a foot-in-the-door technique, in which people receive small, initial requests before a large, target behavior change request, can also make interventions more effective (Katzew, 1996). In one study, researchers asked people to complete a short questionnaire about energy conservation and sign an acknowledgement form indicating they understood that signing the upcoming target request would entail a real commitment. This foot-in-the-door treatment produced more individuals who reduced their electricity consumption than administering only the target request or only the questionnaire (Katzew & Johnson 1983). In another study, a group given a foot-in-the-door questionnaire along with a later commitment, as well as a group given a cash rebate together with a questionnaire and commitment, both conserved more electricity than groups given each treatment singly (questionnaire only, commitment only, and incentive only). This illustrates the potential benefit of combining behavior change strategies into a multifaceted approach (Katzew & Johnson, 1984).

4.4.3c Feedback

Providing feedback about a person’s performance can increase the effectiveness of commitment and other behavior change interventions (Katzew, 1996). When people receive performance-related feedback, they feel motivated to act and improve their performance. Researchers describe feedback as an easy, cost-effective intervention that conservation professionals can readily incorporate into various programs (Katzew & Mishima, 1992).

Research also indicates that information alone is ineffective at boosting widespread participation in ERBs, such as recycling because it typically does not go far enough in explaining the consequences of engaging in these behaviors.

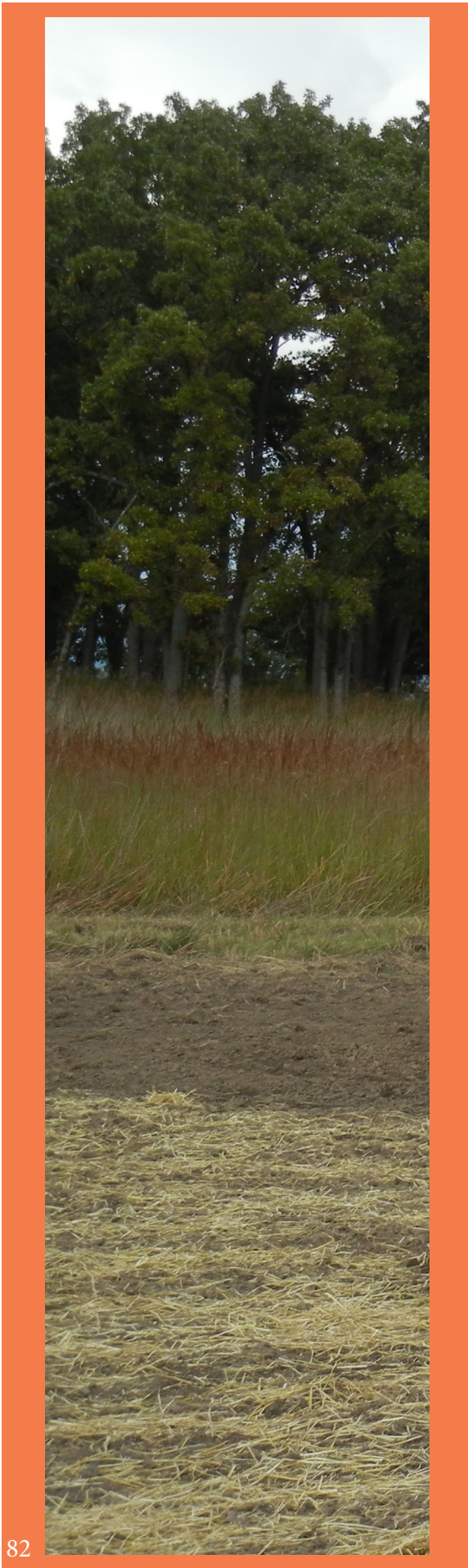
Feedback can illuminate participants' progress and the instantaneous or cumulative impact of their efforts. It also can include the overall level of participation in their communities, the environmental benefits of their activities (such as the amount and type of waste diverted from a landfill), and how their current activities compare with previous periods. Receiving this kind of information can increase people's motivations to take part in ERBs, possibly inspiring them to engage in friendly competition with their neighbors or with their own earlier performance. For example, during one study in which people saw posted feedback about their efforts in public areas, the amount of paper recycling increased substantially and immediately. Conservation professionals can post feedback in places such as multifamily residential locations, office and business settings, or community centers, among other places. They can also mail feedback to individuals or provide it through newspaper announcements or televised public service announcements (Katzev & Mishima, 1992). The internet and social media also may provide a means to convey feedback.

Feedback that allows participants to compare their own results with those of their colleagues or neighbors may be especially effective. In one study in which participants signed private commitments, some kept energy logs of appliance use and utility meter readings. That group used less energy during a year-long period than a group that did not record their usage. This self-monitoring, a form of feedback, increased adherence to their commitments, thus increasing the target ERBs. In the same study, members of another group received bi-weekly feedback on their actual electricity use, while a third group received this feedback along with additional information about how their usage compared with that of other homeowners. Participants receiving comparative feedback reduced their electricity use more than participants receiving just individual feedback. Additionally, the energy reduction was durable and persisted at least six weeks after the feedback ended (Pallak et al., 1980). Effective feedback should also include two-way communication so participants can respond to the feedback or ask for more information (Ester & Winett, 1981-82). The internet and social media make two-way communication highly feasible for many types of programs.

4.4.3d Prompts

While commitment and feedback strategies can be relatively easy and effective ways to motivate behavior change in a known group of individuals, prompts are less individualized and can be appropriate for reaching a diverse and unknown audience. In general, an antecedent behavior change strategy,





such as a prompt, occurs before the target behavior and intends to increase or decrease the probability of that behavior occurring (Ester & Winett, 1981-82). On the other hand, a consequence strategy, such as feedback, occurs after the target behavior. When trying to encourage ERBs, antecedent strategies tend to be less effective than consequence strategies. However, certain design techniques can increase their effectiveness, and pairing the two types of strategies can yield a high success rate if an effective antecedent intervention increases the effectiveness of a complementary consequence intervention.

Because they typically cost less to implement than consequence strategies, government agencies usually prefer antecedent interventions, often distributing informational materials about conservation and ERBs, even though research has shown solely information-based antecedent interventions produce almost no change in behavior. Therefore, governmental agencies should improve the quality of their antecedent strategies. Conservation professionals can create effective prompts by paying attention to factors such as specificity, proximity, convenience, and salience. Prompts work best when they are specific about the desired behavior (e.g. “turn of the lights,” rather than “conserve energy,” which is vague). They should be displayed or provided in close proximity to the location of the behavior (e.g. decals on light switch covers). Prompts work best for convenient behaviors and should be salient, clear, and direct (e.g. “a clean environment means no littering”). Prompts should also be repeated and intrusive, such as positioned at the time and site of purchase. Keeping in mind the variety of ways people learn, incorporating written and visual messages into prompts also enhances their effectiveness (Ester & Winett, 1981-82).

Conservation professionals can use consumer feedback to evaluate the effectiveness of their prompts and other antecedent strategies. For instance, they could find out whether people threw the materials away, glanced at them but did not like the format, did not understand the content, or understood the content but wanted more advice. Practitioners should incorporate this feedback into future designs to increase the strategies’ effectiveness (Ester & Winett, 1981-82).

4.4.3e Modeling

Early adopters of ERBs often serve as behavioral models who encourage others to also adopt those behaviors. For example, personal contact from a neighborhood leader who retrofitted his home may play a role in another homeowner's decision to retrofit. Participant modeling, the most effective form, involves a person physically demonstrating an action. For example, in one case study of effective participant modeling, a home energy auditor provided homeowners with step-by-step demonstrations of energy reduction behaviors and retrofitting strategies. Symbolic modeling is less personal. In one example, a persuasive video demonstrating practical energy conservation methods proved effective (Ester & Winett, 1981-82).

4.4.3f Social Networks

Tapping existing local social networks can effectively promote behavior change. For example, in various studies, researchers have found that encouragement from influential others – such as friends, family, or other significant members of one's social circle – increased adoption of energy-conserving behaviors. Neighbors can also exert this influence, as illustrated in case studies of neighborhoods with strong, cohesive social networks conserving more energy than those with weak social networks. This impact occurred, in part, because these strong neighborhood social networks created a sense of community norms related to conservation. To develop successful social networks, some environmental organizations have recruited





neighborhood leaders or respected individuals to change their behaviors and then serve as formal or informal instructors and models for others. This can lead to a snowball effect, producing widespread behavior change (Ester & Winett, 1981-82).

4.4.3g Behavior Change Metrics

The effectiveness of a behavior change intervention involves multiple dimensions (De Young, 1993). Five evaluation metrics can help determine the overall, multifaceted effectiveness of an intervention:

- Reliability:** The reliability of an intervention is two-fold. It is determined by its ability to change behavior after initial implementation and also after subsequent implementations, assessing whether the effect wears off with repeated exposure.
- Speed of change:** The speed with which an intervention effects behavior change can be measured as how fast someone adopts a new behavior or improves performance of an existing behavior.
- Particularism:** Particularism is a measure of the intervention's universality. Programs with high particularism are designed specifically for certain subgroups, individuals, sites, or situations and cannot be applied universally.
- Generality:** The spill-over effect, or generality, of an intervention refers to the degree to which the program leads a person to adopt non-target conservation behaviors or encourage others to adopt the target behavior.
- Durability:** The sustainability, or durability, of an intervention is its ability to create behavior change that is maintained over long periods of time without repeated interventions.

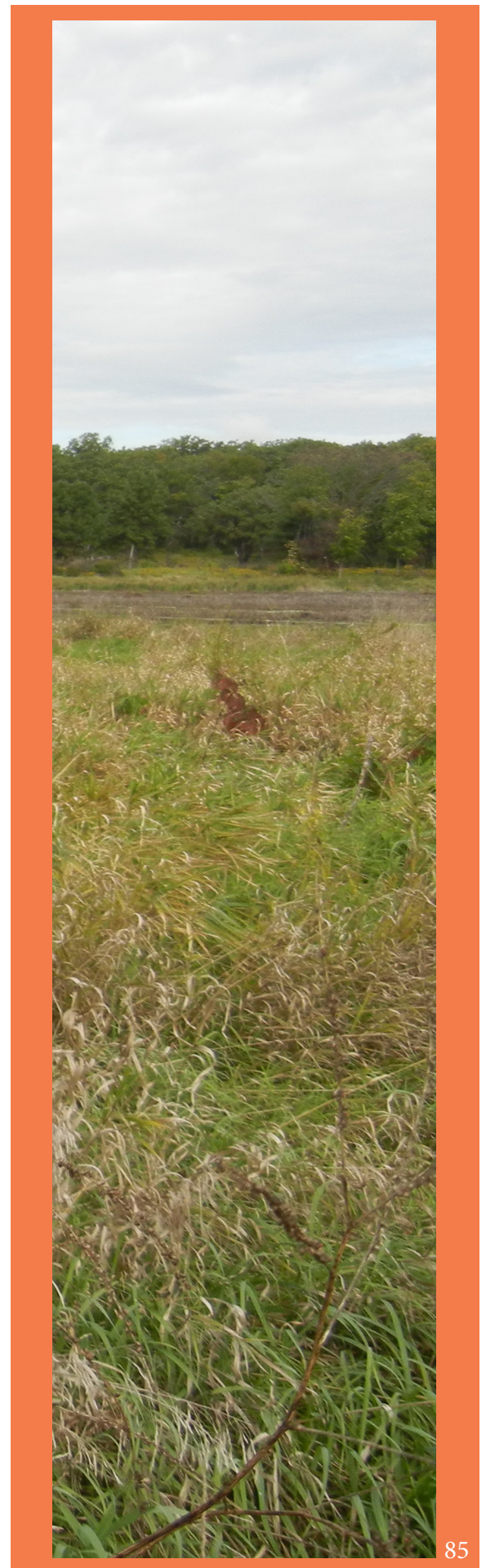
To illustrate, it may be useful to consider some of the strategies described above in light of these metrics. For example, prompts, such as signs near light switches reminding people to turn off the lights, typically have high speed of change and low particularism, since they can apply universally to entire populations. Prompts perform poorly, however, on both generality, since they do not lead to non-target behaviors, and durability, because behaviors return to baseline after the prompts' removal. Reliability also decreases as time goes on because prompts lose their novelty and ability to catch

attention (De Young, 1993).

Coercive tactics, including social pressure and material disincentives such as penalties, work quickly and reliably. Social pressure is more particularistic than material disincentives, since it usually caters to a specific group. Although they can change behavior, coercive interventions typically elicit negative reactions, such as psychological reactance, which can make an individual feel more inclined to do the forbidden action or experience a decreased desire for the action he or she is forced to do. Thus, while coercion may produce limited effectiveness, it often leads to counterproductive results, especially in the long term. Material incentives also have rapid speed of change, change behavior reliably, and can apply universally. However, these types of interventions are durable only as long as the material incentives remain in place. When the incentives end, so do the behaviors (De Young, 1993).

Commitment has a high speed of change and can be just as reliable as material incentives. One study even found that commitment led to a higher percentage of participants changing their behavior than did material incentives. Commitment also displays high durability, often motivating people to maintain target behaviors long after commitment periods end. The minimal justification principle explains this durability because moderate tactics, such as commitment, prove more effective than unnecessarily strong external interventions. In the case of commitment, participants may find their own reasons for engaging in the target behaviors and may begin to enjoy participating in those behaviors, leading them to continue the behaviors on their own after the commitment periods end. This shift – from attributing a behavior to a weak external intervention, such as a commitment, to attributing it to an internal motive – suggests that interventions involving commitment also have some potential for generality to non-target behaviors. As for the particularism measure, however, commitments perform relatively poorly because individual, rather than group, commitments are most effective, requiring at least some particularism (De Young 1993).

Because of the sheer number of behaviors that humans must change to create sustainable societies, seeking interventions with high levels of generality and durability seems most prudent. Interventions that rate highly in these categories can help practitioners get the most out of their resources. A strategy high in generality allows practitioners to direct environmental program funds toward the broadest suite of ERBs and the widest possible audience, since the strategy's influence may generalize to reach both non-target behaviors and unintended





audiences. Meanwhile, a tactic high in durability lifts the burden of having to continually intervene to maintain a behavior change (De Young, 1993). Conservation professionals should determine the importance of the other evaluation metrics based on the goals of each individual intervention and organization.

4.4.4 Recommendations

Fostering attitudes of environmental stewardship and encouraging conservation behaviors – including ecological restoration activities and environmentally responsible daily behaviors – are goals of many environmental education programs, including the Weekend of Restoration. Because the 2011 participants already possessed a fair amount of pro-environmental attitudes before the event, if MCCD wishes to increase environmental stewardship, it could focus on effecting behavior change. Using survey results, observations, and research, the team developed the following recommendations regarding various options for strengthening the event’s behavior change efforts, if MCCD chooses to focus on that aspect of the event.

4.4.4a Commitment

MCCD should **1) ask each participant to sign a written commitment form pledging to engage in at least one new ERB or ecological restoration activity during a specified time period.** For example, the 2011 Weekend of Restoration commitment forms focused on a time period of three months following the event.

As previously described, research shows that commitment to a particular behavior can effectively motivate people to engage in that behavior and continue the behavior even after the commitment period ends (Katzev, 1996). Written commitments tend to yield better results than verbal commitments (Pardini & Katzev, 1983-1984). After signing commitment forms during the 2011 Weekend of Restoration, participants still engaged in 42.1% of the behaviors they had committed to on the forms when surveyed two months later. Therefore, asking participants to sign written commitment forms pledging to undertake new ERBs or ecological restoration activities may change their behaviors, subsequently increasing the number of pro-environmental activities occurring in the local community. Research also shows that people who are publicly associated with their commitments tend to honor their pledges better than those who commit privately (Pallak et al., 1980). Encouraging participants to share their commitments publicly may motivate them to uphold their commitments and even potentially try similar ERBs in the future.

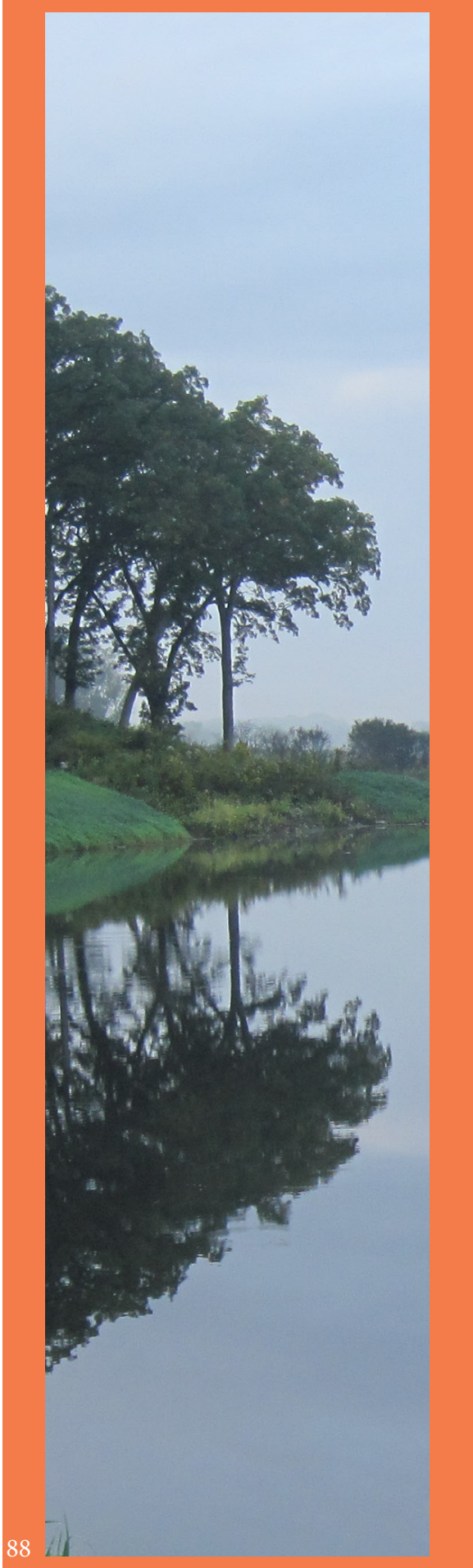
MCCD should 2) **suggest that participants set realistic goals and select behaviors they are capable of completing within the specified time frame. After each participant has made a commitment, MCCD should ask those who are comfortable doing so to share their commitments publicly.**

Attainability is a key factor in the success of a commitment. Several attendees committed to long-term behaviors, such as winterizing a home or purchasing energy-efficient appliances, and indicated on their surveys that they had not yet had an opportunity to accomplish the behavior. Recommending that participants select only goals achievable in the specified time frame will lead to a higher success rate, and suggesting behaviors that participants can start doing right away – rather than waiting until a particular season – will actively engage them in the behavior change initiative. Some participants selected multiple behaviors and subsequently did not uphold their commitments to all of them, while others selected behaviors that were not possible because of individual barriers. Therefore, emphasizing that participants should select a realistic number of behaviors and select behaviors compatible with their living situations will increase success. Encouraging ecological restoration behaviors that participants can perform on an individual basis may prove especially effective, since they will have learned about ecological restoration during the weekend and may not have attempted small-scale projects in their own yards previously.

To strengthen the commitment intervention, MCCD should 3) **offer resources that eliminate barriers, provide instructional information or teach participants the skills necessary to engage in the proposed behaviors, and explain the ways in which those behaviors will positively impact the environment.**

Along with tools, certain types of knowledge also promote the success of behavior change initiatives. Studies also show that people who possess more knowledge about environmental issues, more procedural knowledge about how to take action on environmental issues, or understanding of the benefits of ERBs, more often engage in ERBs than those with less knowledge (Hines, Hungerford, & Tomera, 1987; Ester & Winett, 1981-82). Some 2011 Weekend of Restoration participants reported engaging in erosion control activities and planting native plants more frequently two months after the event than before they attended the event. The program – which taught skills in native planting and erosion control – may have equipped participants to try these particular types of restoration





activities for the first time on their own. For others, it may have increased their confidence, leading them to complete these restoration tasks more often. Therefore, teaching skills or providing instructions for a wider variety of ecological restoration activities may lead people to do those activities at home. Research also shows that providing free tools can increase compliance with commitments (Katzev & Bachman, 1982). Giving participants free resources that could eliminate barriers and aid them in their behavior change endeavors may lead to a higher commitment success rate.

MCCD should also **4) provide a way for participants to highlight the ERBs and ecological restoration activities in which they already engage.**

When filling out commitment forms at the 2011 Weekend of Restoration, several participants expressed both verbally and in writing that they already did many of the behaviors listed, indicating discontent with the fact that the forms only asked them to select new ERBs and did not ask them to list behaviors in which they already engaged. Some people incorrectly filled out the forms, selecting both new and current behaviors. Giving participants an outlet to express which ERBs they already engage in may prevent errors in the commitment process and avoid feelings of discontent.

To reduce possible reactance to the commitment intervention, and to better its chance of success, MCCD should **5) give participants a smaller behavior change request a day or two before administering the commitment.**

Giving people a small, initial request before a large behavior change request – called a “foot-in-the-door” technique – can make commitments more effective (Katzev & Johnson, 1983). Priming participants for the commitment using this technique, by describing the coming commitment early in the weekend, could increase compliance with commitments.

4.4.4b Prompts

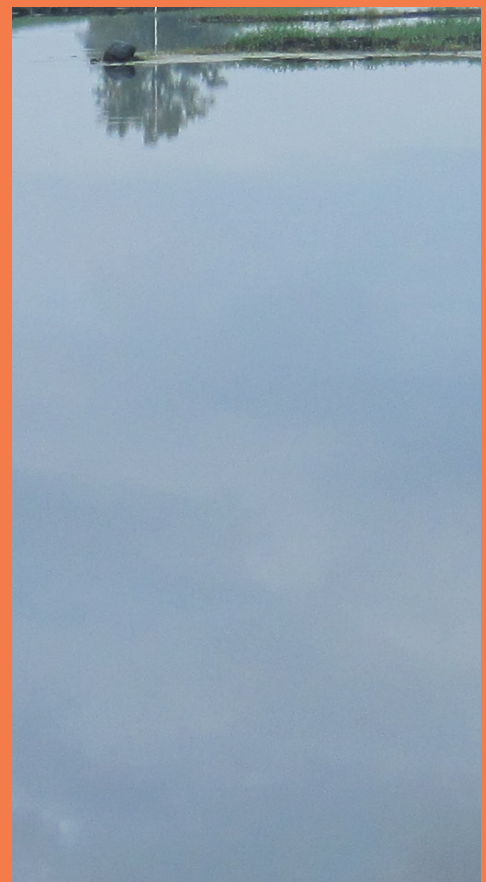
MCCD should **6) employ prompts to encourage participants to uphold their commitments**. After participants sign their commitment forms, MCCD should make photocopies of the forms, give participants the originals, and ask them to display them prominently at home. Several days after the event, MCCD should then send participants the photocopies of their individual commitment forms. A few weeks later, it should mail them small, individualized reminder prompts, such as personalized index cards specifying the behaviors to which they committed, and request that participants hang the prompts near the location of the behavior.

Research shows that prompts most effectively encourage behavior change when they are specific about the desired behavior, located in close proximity to the behavior, convenient, salient and direct, repeated, and intrusive (Ester & Winnett 1981-82). For example, an effective prompt may include mailing a participant a reminder that he or she committed to using natural light and requesting that the person hang the prompt near a light switch. Providing repeated prompts – the original commitment form, the photocopy, and the reminder card – and asking participants to display these prompts near the behavior location may increase the success rate of the commitment.

4.4.4c Modeling and Social Networks

MCCD should **7) incorporate modeling opportunities throughout the three-day event to encourage behavior change, both in terms of ERBs and ecological restoration activities**. MCCD can provide demonstrations and training related to the behavior changes participants committed to (or will commit to) and suggest ways that participants can maintain the behaviors long term. To take advantage of the behavior change power of the social network each Weekend of Restoration group forms, MCCD should **8) ask a participant group leader or previous Weekend of Restoration participant to tell the group about his or her new behaviors – including ERBs committed to during the previous year’s event – and encourage other participants to follow suit and change their behaviors**.

Leading by example is an effective way of encouraging others to adopt ERBs. Research shows that early adopters of environmentally friendly behaviors often serve as behavioral models for others. When a model – usually someone of high local status – performs a target behavior, it often prompts others





to follow suit. Using MCCD staff members or past participants as models could inspire current participants to also try new ERBs. Studies also show that in-person demonstrations, also called participant modeling, can effectively equip people to perform a new behavior and can increase the likelihood of behavior change (Ester & Winett 1981-82). Demonstrating ERBs or ecological restoration activities may help equip participants with the procedural knowledge they need to try new behaviors at home. Approaching the Weekend of Restoration group as a social network and relying on group leaders may encourage participants to change their behaviors, perhaps creating future leaders through a snowball effect.

Encouraging people to adopt new ERBs may require more than just one behavior change method. The 2011 Weekend of Restoration event did not target ERBs to the extent that it targeted ecological restoration behaviors. Participants discussed and learned skills for engaging in ecological restoration but did not discuss or learn skills relevant to ERBs. They also engaged in only one behavior change technique (commitment) focused on ERBs. After the event, Weekend of Restoration participants did not collectively engage in ERBs significantly more frequently than they did before the event. Therefore, if MCCD staff members discuss and model ERBs more frequently throughout the weekend, as well as implement multiple behavior change techniques targeting ERBs, participants may successfully adopt ERBs after the event. (As stated previously, it is important to have realistic expectations when encouraging or supporting behavior change during a brief intervention. Greatest success will come from those behaviors that are relevant to the Weekend's activities, which may be primarily ecological restoration behaviors more so than other ERBs.)

4.4.4d Feedback

MCCD should **9) give participants individual feedback about their performance in the event’s ecological restoration task, as well as comparative feedback posted in a common area that allows participants to see how their individual performance compares to others’ performance.** MCCD also should **10) use a website or social media to provide participants with feedback about the progress of the restoration site and provide a space where they can post information about their own ecological restoration or ERB accomplishments; share information, articles, or upcoming events with each other; and ask questions.**

Research shows that providing performance-related feedback motivates people to act and improves performance (Katzev & Mishima 1992). Feedback is even more effective at increasing desired behaviors when participants can compare their own results with those of their colleagues (Pallak et al., 1980). Allowing participants to see how their performance compares with their peers’ may enhance the positive effects of the individual feedback described above. Studies also show that feedback should involve two-way communications to further promote the desired behaviors (Ester & Winett, 1981-82). In the months after the event, Weekend of Restoration participants displayed a desire to remain connected to one another and to the site. Several participants shared emails updating the others about the progress they observed at the restoration site, and several participants have joined a Facebook page dedicated to the event. Allowing participants to receive feedback about the project and communicate with each other through a website or social media will help them feel ownership of the restoration site and may encourage them to continue engaging in restoration activities.





5. Evaluation

5.1 Benefits of Evaluation

Evaluation can allow a program director to gain a better grasp of the appropriate audience for a program as well as how effectively the program achieves established objectives. Evaluation goes beyond collecting mass quantities of data from participants' satisfaction ratings or answers to comprehension questions about particular topics. Rather, it uses systematically collected information from every stage in the planning, marketing, and implementation process to inform recommendations for the future of a program. The results of this evaluation can help improve the direction of the program in regard to its objectives, planning, implementation, and the evaluation process and medium itself (Patton, 1987). This evaluative process allows an environmental education planning team, such as a cross-functional team, to assess the program objectively, without prejudice from personal investment in the program or other subjective biases, which can often color a program's evaluation. With concrete evidence of the program's success, a team can develop an effective and sustainable program that is attractive to funders (NOAA, 2004).

Evaluation provides numerous benefits. At its core, evaluation allows one to understand what is and is not working in a program. However, a well-structured and carefully planned evaluation can lead to multiple positive outcomes beyond that. First and foremost, a properly constructed evaluation can help determine the short- and long-term benefits for participants. An evaluation may assess their overall satisfaction with the program, as well as their development in terms of behavior, attitudes, and knowledge. In so doing, an evaluation can help determine how, if at all, the program benefits participants and the organization itself. Secondly, through evaluation – which may include participant feedback – a program planning team can identify the strongest and weakest components of the program and, more

importantly, understand how these parts interact. The planning team must evaluate each part of the program separately to determine the value of its contribution to the whole and subsequently discuss the role of any component deemed ineffective (NOAA, 2004). Another benefit of evaluation involves securing funding. With pertinent data in hand, program leaders can better promote the program within and outside of their own agency. Evidence that the program is effective in meeting its stated objectives will confirm the value of the program to those planning it and can then help them promote the program externally. Similarly, external funders will be more likely to continue their support if the program provides tangible and verified benefits (NOAA, 2004).

Since an evaluation can inform the environmental education planning team of what the event is accomplishing as well as missing, evaluation and event development need to be addressed simultaneously. Knowing that the event's goals and objectives will be evaluated will help keep them at the forefront of event planning and implementation. Baseline measurements can prove invaluable for informing future modifications of the event. An advantage of conducting an evaluation before an event begins is that the planning team can compare assessments of participants' prior knowledge, attitudes, behavior, experiences, and opinions with similar assessments after the event. For example, a general survey asking participants how knowledgeable they feel about a certain ecological restoration technique can then be compared to a survey conducted at the end of the event that asks participants whether they now feel more knowledgeable about the technique after engaging in it during the event.

The effectiveness of an event's marketing strategies, particularly when recruiting specific audiences, also is important to evaluate. Whether the goal of the event is to expand its reach to a more youth-oriented population or recruit former participants to return, a marketing survey conducted during registration or prior to the event can serve as a useful tool. In addition, a marketing survey can help determine how effective specific marketing materials were in attracting participants to the event.

5.2 Methods

5.2.1 Survey Design and Administration

5.2.1a- Marketing Survey (see Chapter 3, Appendices 11-14)

To prepare for the 2011 Weekend of Restoration, the master's project team designed a marketing survey to evaluate how effective each type of marketing material was in attract-





ing participants, what they found attractive about the event, and how familiar they were with Glacial Park. (See Appendix 12 for copy of marketing survey.) This survey included open-ended questions about what kinds of marketing materials the participants were exposed to and where they came across them as well as a rating question asking what most compelled them to register for the event (e.g. cost, location, opportunity to work with experts in the field). The program director gathered this information as participants registered, administering the survey as early as possible to avoid weakening of memory.

5.2.1b- Event Satisfaction Survey (see Appendix 14)

The team created an event satisfaction survey to evaluate participants' experiences during the Weekend of Restoration. (See Appendix 12 for copy of event satisfaction survey.) This survey, administered at the very end of the event, included both open-ended and rating questions. It allowed participants the opportunity to voice comments, concerns, recommendations, and gratitude regarding the event. The team collected the results from this survey to inform recommendations for future Weekend of Restoration events.

5.2.1c General Survey (see Appendix 13)

One of the master's project's goals was to evaluate the potential of a three-day ecological restoration event having durable effects on participants' knowledge, attitude, comfort, and behavior. Several months before the event, the team gathered questions regarding these topics to measure any potential changes resulting from attending the event. It constructed a three-part general survey consisting of a pre-event survey administered at the beginning of the event before any activities or lectures, a post-event survey administered along with the event satisfaction survey immediately following the event, and a longitudinal survey, mailed to participants approximately six weeks after the event. (See Appendix 13 for copy of general survey.)

All 17 participants completed the marketing survey at registration and the event satisfaction and pre- and post-event surveys since the team administered them at the Weekend of Restoration. However, only 13 of the 17 completed the longitudinal survey, so the strength of analyses of these particular findings was naturally weaker. Nonetheless, the team analyzed the data using IBM SPSS Statistics 19, performing paired-samples t-tests for each question related to knowledge, attitudes, behavior, and familiarity, which included comfort and experience.

5.3 Research: Evaluation

5.3.1 Evaluations Best Suited for Environmental Education

Evaluations for environmental educational programming generally come in two forms. Proactive, or formative evaluations, are integrated from the beginning of a program's development and provide insight into how best to improve the program and achieve goals. Retroactive, or summative evaluations, are conducted once a program has already been completed and show the planning team which, if any, of their objectives were met. Based on the kind of information a program director wants and where in the process he is, he may choose one type of evaluation over the other (Duvall, Higgs, and Wolske, 2007). However, in many situations a formative evaluation is best because it can be adapted while the program is still running to adjust for new information and insight acquired during program implementation.

Formative evaluations provide two types of tools: needs assessment and process of implementation evaluation. Needs assessments are particularly useful when seeking to develop relevant and effective educational materials for specific audiences, such as underrepresented populations. By knowing the informational gaps and best ways to inform the intended audience of the program, program planners can tailor advertisements more effectively, as well as request funding from appropriate sources in a more targeted fashion. The needs assessment also allows planners to develop the program's objectives with the target audience's pre-existing knowledge in mind. Process of implementation evaluation, generally used during program execution, can show an evaluator whether the program is on track to meet its objectives. This kind of evaluation also can provide feedback on participant engagement and measure satisfaction ("Needs Assessment Training Module," n.d.).

Summative evaluations also include two tools: outcome evaluation and impact evaluation. Summative evaluations, conducted post-program, can evaluate a program's success in achieving its outcomes. Outcome evaluation assesses the direct and short-term benefits or changes resulting from the program, while impact evaluation gauges broad and long-term achievements ("Needs Assessment Training Module," n.d.). These summative evaluations are most often used in the absence of other preemptive evaluations. An evaluation's results are more likely to be useful if the evaluation is created and used alongside the development of a new program rather than after the program is already in place.





5.3.2 Benefits of Using a Survey for Evaluation

Among the many techniques available for evaluating a program, surveys are commonly used for environmental educational programming since they offer three main benefits over other means of evaluation: versatility, efficiency, and generalizability. First, especially in the case of social science research, such as education and behavior change, surveys frequently enhance understanding of a variety of social issues. From evaluating a program's effectiveness to assessing participants' attitudinal changes, surveys can investigate numerous variables and topics of interest to program directors using a single tool (Schutt, 2001).

Additionally, surveys can quickly and cost-effectively collect large amounts of data. Surveys, administered through phone interviews, in-person meetings, or written questionnaires, provide evaluators opportunities to ask a great variety of questions at a relatively low monetary cost without fatiguing participants. Granted, a significant amount of time and effort should go into drafting, editing, and pre-testing an effective survey, but the result is a highly replicable and easily administered evaluation tool. Surveys often collect data in a format easily transposed into statistical software. Since surveys may unintentionally force participants into answering questions based on a set scale or range, including open-ended questions may help shed light on quantitative findings.

Lastly, surveys are beneficial for evaluating environmental education programs because they can consolidate results from participants of a particular program and then generalize these findings to a larger audience. In other words, to better comprehend the value systems, attitudes, or knowledge base of a larger population, a survey can effectively project the responses of the sample onto the larger population. Since no single program or team of educators can evaluate each and every member of an intended audience, a survey can provide insight into the population using fewer participants and minimal effort (Schutt, 2001). However, the smaller the sample size, the less light the findings can shed on the population as a whole.

5.3.3 How to Evaluate the Weekend of Restoration

A lot of thought and preparation must go into any program evaluation. Many program directors make the mistake of jumping into an evaluation design that seems to fit a program, when in actuality a closer look at the organization's needs and objectives often illuminates a different and more appropriate method of evaluation ("MEERA – My Environmental Educa-

tion Evaluation Resource Assistant,” n.d.). The following steps detail how to successfully conduct an evaluation of an environmental education program and increase the effectiveness of the evaluation’s outcomes.

Step 1: Before starting the evaluation

- Determine what types of resources the organization has available for conducting a proper evaluation – such as the ability to hire an external evaluator – and how an evaluation can involve program managers and other staff members.

Step 2: Clarify the program’s logic

- Create a diagram, such as a flow chart, that highlights what objectives the program aims to accomplish and how it will achieve them. Identify short- and long-term outcomes in the model.

Step 3: Set goals and indicators

- Establish the goals of the evaluation and how it should benefit the program. This will shed light on which methods – such as survey or experimental design – will most effectively evaluate the program.

Step 4: Choose design and tools

- Determine the types of data needed and identify the tools necessary for collecting those data.

Step 5: Collect data

- Discuss what population to evaluate and how big of a sample to use. Plan how to manage and analyze the data collected.

Step 6: Analyze data

- Determine how to analyze both quantitative and qualitative data.

Step 7: Report results

- Discuss how to develop conclusions and recommendations based on the evaluation’s results and how to best illustrate these findings to the appropriate members of the organization.

Step 8: Improve program

- Consider how to use the evaluation results to benefit the program and how to ensure that program leaders use the evaluation to improve the program.



5.4 Recommendations

5.4.1 Marketing Survey

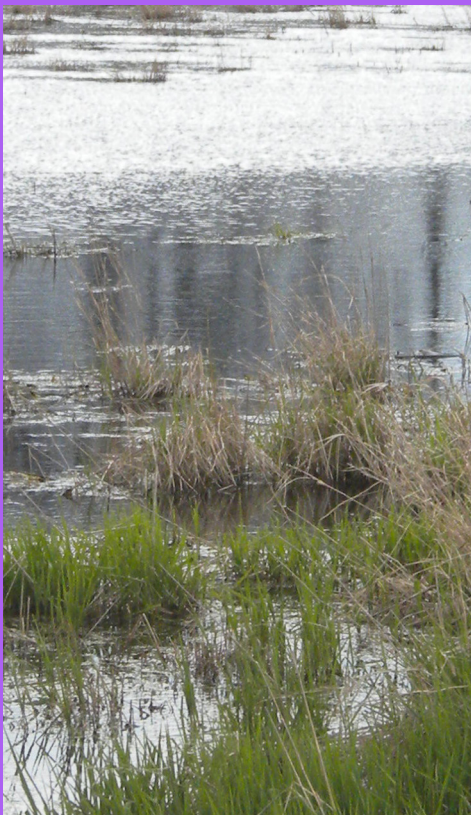
To know how well MCCD is reaching its intended audience, MCCD should **1) administer a marketing survey during Weekend of Restoration registration to analyze how participants heard about the event.**

If MCCD's goals include specifically expanding the event's audience geographically, demographically, or otherwise, a simple marketing survey can help determine what kind of participants attend the event and allow for adjustments in marketing strategy. To ensure the most efficient marketing campaign, in regards to both money and time, MCCD should refer to the marketing survey to determine what types of marketing materials – for example, printed products such as brochures and postcards, social media such as Facebook, or the MCCD website – participants experienced the most. The survey can also ask which marketing material in particular convinced participants to attend the event. The marketing survey needs to be made available to all participants, whether they register over the phone, online, or by mail. Online surveys are recommended so there are no errors from an MCCD staff members filling in the information on behalf of a participant registering over the phone. Additionally, data from online surveys can be easier to organize and save.

5.4.2 Event Satisfaction Survey

At the end of the Weekend of Restoration and prior to participants leaving Glacial Park, **2) MCCD should ask all participants to complete an event satisfaction survey.**

This survey will allow MCCD to determine whether the event's objectives were met in terms of providing an enjoyable and educational experience for participants as they gained ecological restoration skills and knowledge. This platform can allow participants the opportunity to voice comments, concerns, recommendations, and gratitude regarding the event. The results of this survey are very important to keep in mind for future development of Weekend of Restoration events. Also, MCCD should use a combination of open-ended questions (e.g. "What features of the event did you most enjoy?" and "What changes do you recommend?") and structured rating questions about specific components about the event (e.g. "Please rate from 1 to 5 how satisfied you were with the lectures."). Lastly, MCCD should use this survey as an opportunity to ask participants whether they would like to be contacted with updates about the



site they helped restore. This could also serve as an opportunity to advertise future Weekend of Restoration events.

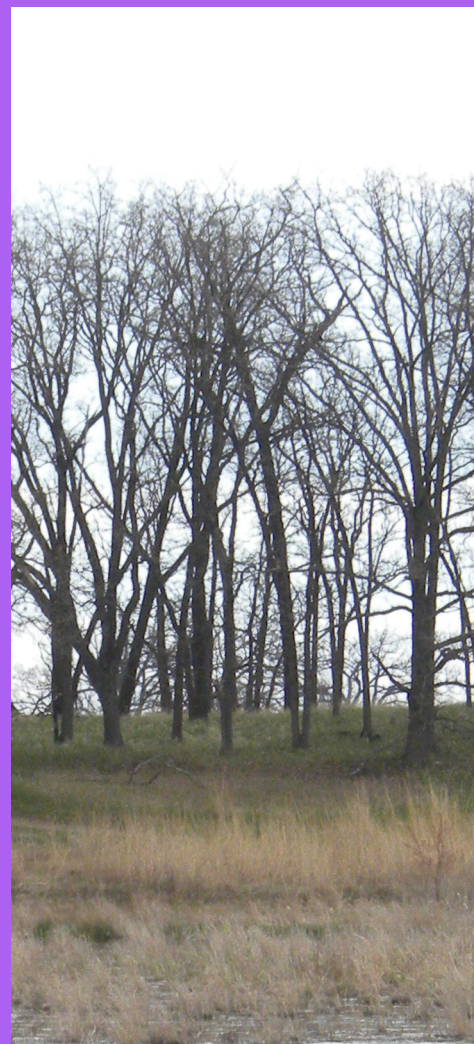
5.4.3 General Evaluation

Over the lifetime of the Weekend of Restoration program, **3) MCCD should conduct an evaluation of each annual event.**

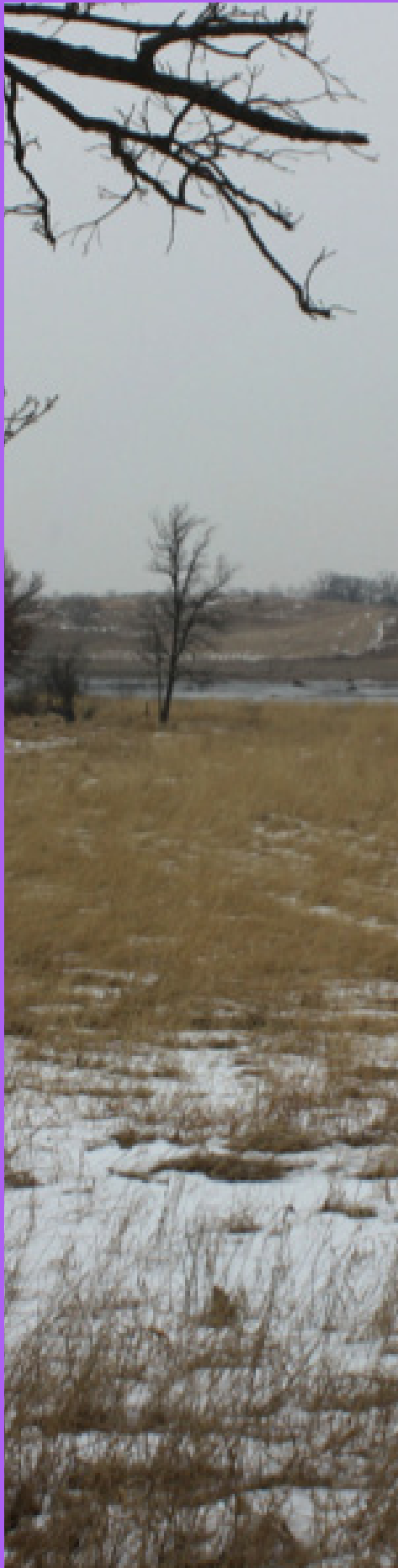
By conducting an evaluation of each Weekend of Restoration, MCCD can identify specific strengths and weakness of the event. It can then use this information to rework certain components to best suit the different audiences that participate in the event. The information generated by a well-written evaluation can lead to administrative support and funding for future events. In addition, this recognition of the event can encourage other staff members to help organize and provide resources for the event. When creating an evaluation, MCCD should carefully consider what baseline information it needs and what dimensions of the program to evaluate. To conduct an appropriate and thorough evaluation, MCCD should use the step-by-step instructions provided by My Environmental Education Evaluation Resource Assistant (MEERA) – a website devoted to educating program directors and evaluators about how to assess a program or event.

Designing an event simultaneously with a formative evaluation will help program developers keep objectives in mind. This also would give MCCD a chance to measure certain variables before participants are exposed to the event’s educational components. Additionally, if MCCD decides to conduct an evaluation of the event’s impacts – such change in knowledge, attitudes, or behavior – it should incorporate the evaluation early in the development of the event.

In regard to evaluation methods, **4) MCCD should use a survey to quickly and cost-effectively evaluate whether the Weekend of Restoration changed participants’ level of knowledge, skills, or attitudes.** The survey should be updated before every Weekend of Restoration so it evaluates each event-specific aspect appropriately. MCCD should consider this a form of adaptive evaluation – one that changes over the years to assess each event’s new goals and objectives. In some cases, MCCD can use a longitudinal survey to test whether the changes participants experienced because of the event were durable. This, however, may not be needed if the event’s goals do not include changing long-term variables.



Additionally, **5) MCCD staff members should interact with the participants during the event and ask questions to gauge how the participants are feeling about the event as it is occurring.** If staff members see tired and sluggish behavior, they should replace the present activity with a backup one. If participants seem especially engaged in a certain aspect of the event, staff should extend the times for that activity during the current and future events. Staff observations and interviews with participants also can act as valuable evaluation tools. With permission, staff members should write down specific quotes to evaluate later and to use for future marketing. In terms of staff evaluations, the cross-functional team should meet with employees who staffed the event to discuss what they felt were strengths and weaknesses of the event.





6. Next Steps

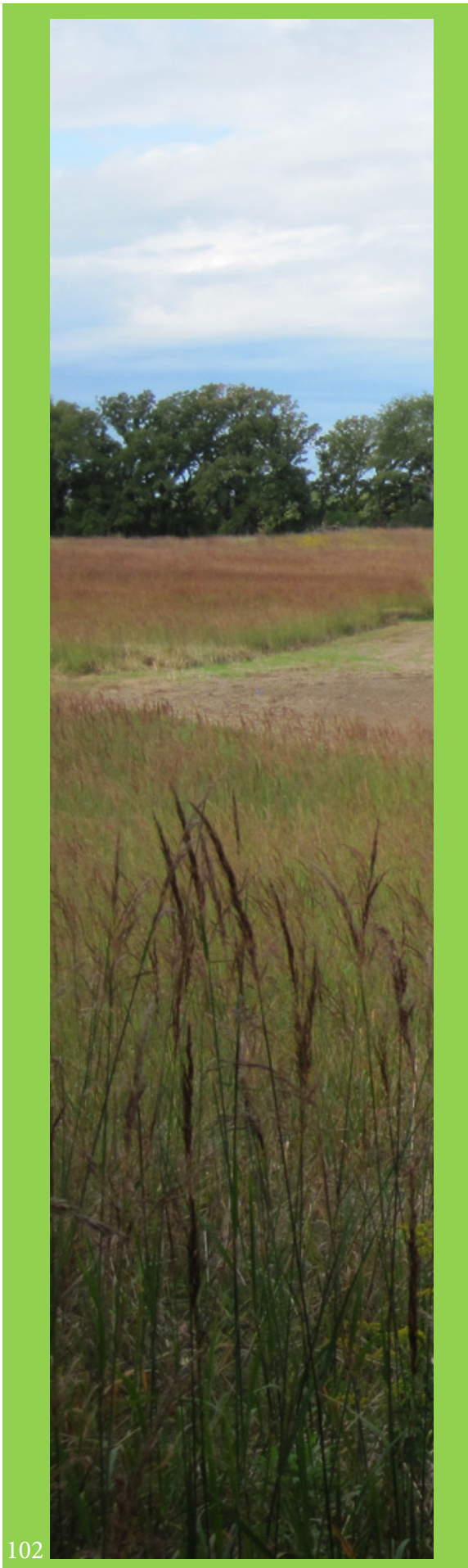
6.1 Handbook: Recommendations and Site Analysis

The recommendations presented in this report – related to the planning, marketing, implementation, and evaluation of the Weekend of Restoration program – will be more practical and accessible if available in a succinct, user-friendly fashion. To that end, the team created a handbook detailing recommendations for these components, as well as other aspects of the program, including event agendas, educational approaches, transportation, food, organizational strategy, and behavior change efforts, among others.

Furthermore, the handbook contains analyses of three potential restoration sites for future events. When designing and organizing future Weekend of Restoration events, MCCD can use this series of graphic site-specific analyses in combination with the general recommendations provided in the rest of the handbook. The site analyses include maps and teaching opportunities appropriate for the following sites at Glacial Park: a mesic woodland surrounding Turtle Marsh, a prairie and oak savannah near the historic Powers-Walker House, and a wetland near Wiedrich Woods.

6.1.1 Site Analyses

The site analysis for each of the possible future restoration areas includes a map and legend marking significant logistical features and places that provide teaching opportunities. An accompanying page details the reasoning behind each of these teaching points and provides activity suggestions. The content of each analysis differs according to the location and type of restoration project. However, the map and written component of each analysis contain similar items:



- **Trails:** This section offers detailed paths on which participants could travel to the restoration sites, specifies which trails ATVs and vans could access when transporting supplies or participants, and includes notes regarding when and why to use certain trails.
- **Logistics:** This section describes and illustrates the locations of features such as nearby bathrooms, recommended areas for breaks and snacks, expected lodging facilities, the closest shelters in case of inclement weather, and how supplies could be transported and stored at the site.
- **Teaching Points:** This section suggests areas within Glacial Park that could serve as teaching opportunities or illustrative examples of restoration or other nature topics related to each particular Weekend of Restoration. It also provides examples of potential lesson topics and activities, as well as logistical information about how to best travel to these locations.

6.1.1a Turtle Marsh

The Turtle Marsh restoration site has the advantage of familiarity for MCCD staff members since it was the focus of the 2011 Weekend of Restoration. As a result, many of the logistics for the area have already been figured out. Therefore, the site analysis for Turtle Marsh aimed to improve certain aspects of the 2011 event, such as transportation to the site and locations for breaks and snacks. Because inclement weather was a concern in 2011, this site analysis places emphasis on describing nearby shelters and ways to efficiently transport participants to these shelters.

The success of the 2011 Weekend of Restoration in part resulted from the effectiveness of the educational material and the natural beauty of Glacial Park. The site analyses for future events look to marry these two features by emphasizing field spots with educational value and aesthetic appeal. Because Turtle Marsh is a wetland with a history tied to human involvement, the suggested teaching points revolve around wetland ecology – including hydrology, vegetation, and soil ecology – and the glacial and human history of the restoration site and surrounding natural areas.

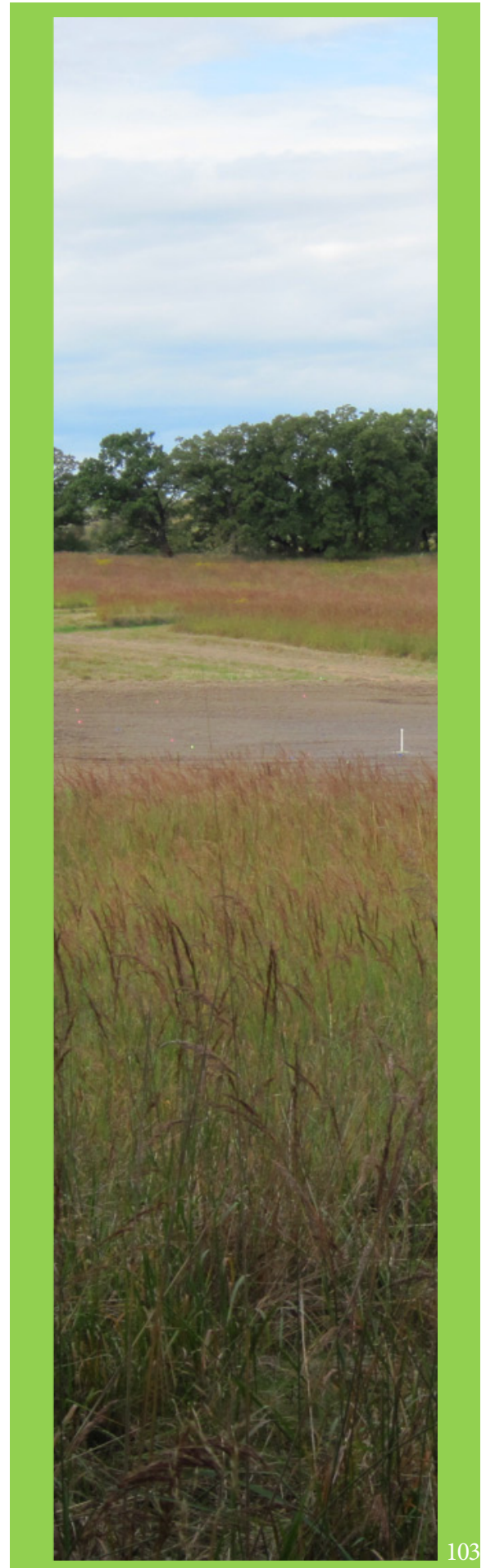
6.1.1b- Powers-Walker Prairie

A prairie next to the historic Powers-Walker House could serve as a future Weekend of Restoration site. The house was built in the 1850s and restored by Glacial Park volunteers in 1998. Using the house's history as a starting point, this Weekend of Restoration could focus on how humans have used and changed Glacial Park throughout its history from farmland in the 1800s to the park that it is today. Many logistical considerations are simple for this site because the surrounding area has a portable bathroom, shelter from adverse weather, and secluded areas for snacks and breaks. The restoration site's proximity to the Lost Valley Visitor Center also reduces travel time to the site, allotting more time to restoration work or traveling to other teaching points that are farther away.

6.1.1c- Wiedrich Woods

Similar to the Powers-Walker project, a major benefit of the Wiedrich Woods restoration site is its close proximity to the visitor center – bathrooms, shelter from inclement weather, and lunch facilities are all located within one minute's walk. However, this site presents a unique challenge: safety. Unlike the Powers-Walker or Turtle Marsh restoration sites, which are both relatively flat, Wiedrich Woods includes a steep hill. Additionally, the restoration work done on this hill would require sharp hand tools and possibly chainsaws, so quick access to the visitor center's first aid supplies is critical, and it is important to have a plan in case a participant slips, especially if a sharp hand tool is involved.

This site provides opportunity for two types of restoration themes: wetlands and invasive species. For an event that focuses on wetland restoration at the base of Wiedrich Woods near the visitor center, the site analysis recommends teaching points related to hydrology and the park's water features. In contrast, it suggests oak savannah teaching points for an event that focuses on removing invasive species and seeding native plants in the oak savannah on the Wiedrich Woods slope.



6.1.2 Future Weekend of Restoration Themes

Many of the participants who attended the 2011 Weekend of Restoration had previously participated in MCCD's Ecological Restoration Certificate Program. As a result, many of them were familiar and comfortable with the process of ecological restoration and were eager to experience a new restoration site. However, one of the goals of the Weekend of Restoration program is to encourage different demographic groups to attend and learn about ecological restoration, exposing new audiences to this aspect of conservation. To help MCCD meet this goal, the handbook includes a list of possible themes and target audiences, as well as suggestions for modifying the event agenda to match particular needs or interests. These audiences include college students, scouting groups, Master Gardeners, and landowners, to name a few.

6.2 Weekend of Restoration 2012

The next Weekend of Restoration is slated to occur in September 2012. In part because of the success of the pilot event in 2011, MCCD received a grant to fund the 2012 Weekend of Restoration. In addition to securing funding to offset the cost of the event, MCCD also has set in motion a plan to allow participants to camp at the park for the weekend, which could help address some of the challenges 2011 participants faced. With a successful pilot event completed and these promising changes on the horizon, as well as the recommendations and site analyses available in the handbook, MCCD seems well on its way to creating a bright future for the Weekend of Restoration program at Glacial Park.





Conclusion

The master's project team successfully helped plan, market, implement, and evaluate the 2011 Weekend of Restoration and, through this process, accomplished many of the objectives and goals established when MCCD first approached the team about the master's project. The team helped transform the Weekend of Restoration into an opportunity ripe with potential to become a long-lasting, recurring program at MCCD. The handbook the team created will provide the Weekend of Restoration program director and other staff members a set of tools that can help ensure the event remains part of MCCD's educational framework for many years to come. The team also developed marketing materials that promoted the Weekend of Restoration and, by extension, raised awareness about Glacial Park and other MCCD programs. Lastly, the master's project team created a portfolio of surveys that MCCD can adapt and use to evaluate the success of future Weekend of Restoration events and determine whether the program increases knowledge, builds skills, and fosters environmental stewardship and connectedness with nature.

Though the project team tailored its recommendations for MCCD and the Weekend of Restoration in particular, these recommendations could inform development or improvement of other environmental education programs that consist of multi-day ecological restoration activities, particularly in the Midwest. The team hopes that this unique opportunity to combine restoration work with environmental stewardship and camaraderie will serve as an example for others and result in the recognition of ecological restoration as an effective educational tool. The team encourages MCCD to evaluate Weekend of Restoration events so the program can continue to improve, reaching larger and more diverse audiences eager to gain new ecological restoration skills and knowledge while simultaneously restoring local environments.



The recommendations the team compiled – based on evaluation survey results, research in relevant fields, and personal observations of the pilot event – could help support and solidify the Weekend of Restoration as a staple of MCCD’s educational programming, as well as help secure future funding for many years of successful ecological restoration, community building, and participant satisfaction. The team hopes its findings and recommendations regarding planning, marketing, implementation, and evaluation will help MCCD create a successful and sustainable Weekend of Restoration program.

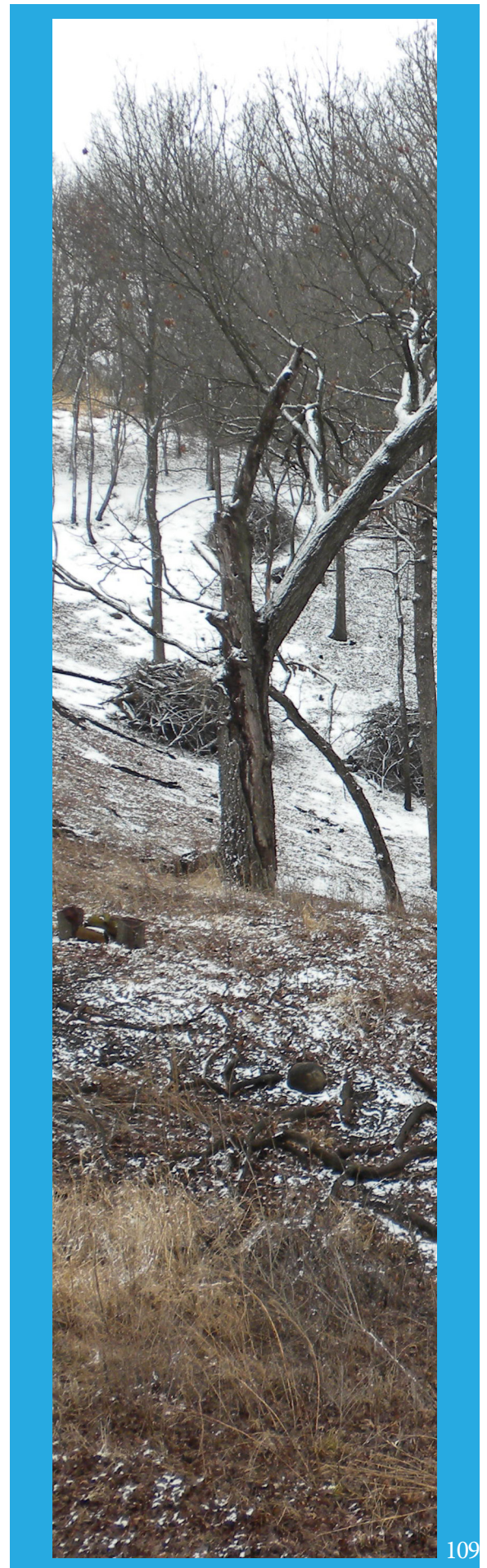


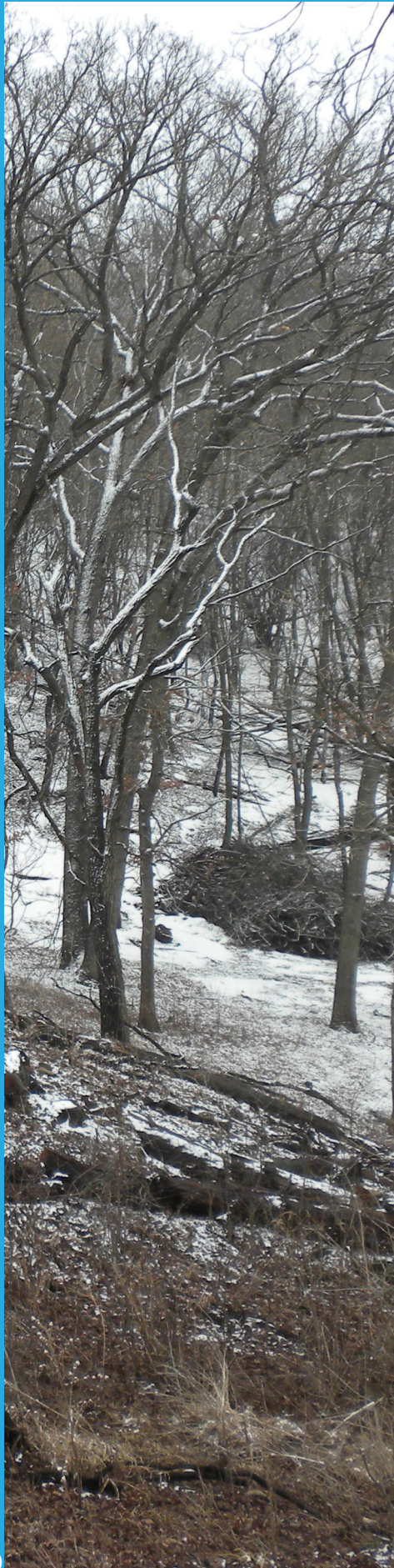


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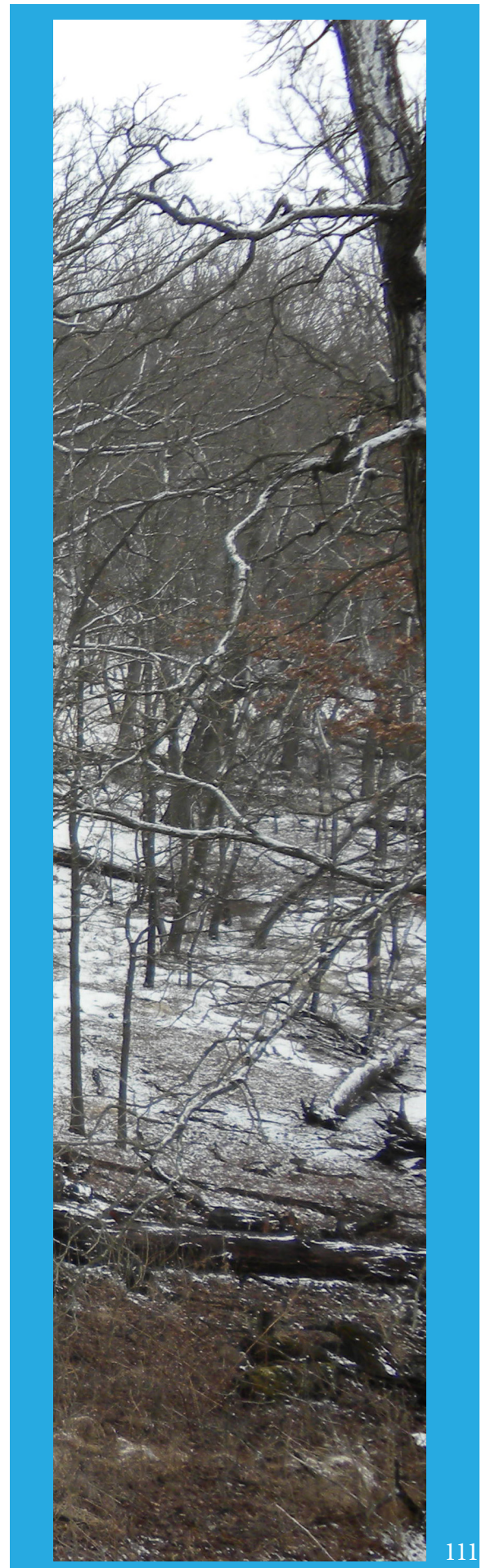
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Appendices



Appendix I: Master's Project Timeline

Timeline

2011

January	February	March	April	May	June	July	August	September
<p>Communication with MCCD client representative, Tom Simpson, to solidify interest in project and clarify broad goals</p> <p>Team members finalized</p> <p>Project proposal and budget developed</p>	<p>Project advisors chosen</p> <p>Applied for SNRE master's project funding</p> <p>Applied for SNRE climate change funding</p> <p>Set up meetings with Chicago conservation professionals to get marketing advice</p>	<p>Met with Chicago conservation professionals</p> <p>Potential marketing distribution partners identified</p> <p>Marketing partners contacted</p> <p>Marketing materials developed</p> <p>Site visit, met client, WOR* itinerary established</p> <p>Evaluation survey method development</p> <p>Weekly update conference calls between team members</p> <p>Monthly update conference calls between team members and client</p> <p>Conducted research to inform project recommendations and improve WOR</p>	<p>Climate change panelists contacted and confirmed</p> <p>Marketing materials distributed throughout Chicagoland and Wisconsin via marketing partners</p> <p>Marketing survey distributed to registered participants</p> <p>Applied for IRB approval</p> <p>Granted IRB exemption</p> <p>Site visit, WOR occurred</p> <p>Pre- and post-event survey administered to participants at event</p>	<p>Master's Project Planning Class</p>				

Key

-  Project Design
-  Project Planning
-  Marketing
-  Survey
-  Research
-  Final Products
-  *Weekend of Restoration

2012

October	November	December	January	February	March	April
<p>Preliminary statistical analysis conducted on responses to first two surveys</p> <p>Longitudinal surveys mailed to participants, email reminders sent</p>	<p>Data from all surveys compiled and analyzed using SPSS</p> <p>Received longitudinal survey responses</p> <p>Preliminary site analysis</p>	<p>Preliminary event recommendations and observations compiled</p>	<p>Poster created for Stewardship Network conference</p> <p>Attended Stewardship Network conference (two members)</p>	<p>Preliminary data analysis</p> <p>Wrote and revised handbook</p>	<p>Site visit, further site analysis (two members)</p> <p>Wrote and revised handbook</p>	<p>SNRE Master's Project Symposium presentation</p> <p>Completed handbook given to client</p> <p>Final report submitted to SNRE</p>

Appendix 2: Marketing Posters

Weekend of Restoration at Glacial Park ...



... a getaway that makes a difference!



September 23-25 | Friday evening - Sunday noon

Learn about the history and ecology of Midwestern wetlands, take part in an ongoing restoration effort, and feel yourself restored in the process!



Cost: \$60 covers both your registration fee and meals, including a snack Friday evening, continental breakfast Saturday and Sunday morning, and lunch and dinner on Saturday.

Several economical motel options are located within 15 minutes of the park (information provided upon registration).



For more information: Go to www.mccdistrct.org and click on "Programs & Events," or contact Tom Simpson at tsimpson@mccdistrct.org or (815) 678-4532 Ext. 8218.

NATURAL RESOURCES
AND ENVIRONMENT
UNIVERSITY OF MICHIGAN



A Getaway that Makes a Difference

Get away from the hustle and bustle of daily life and spend a weekend at Glacial Park, one of the premier natural areas of the Chicago region.

Unlike most vacations, this *Weekend of Restoration* gives participants a chance to actually make the world a better place. At this *Weekend of Restoration* you will learn about the plants and animals that inhabit Illinois wetlands, wetland ecology and hydrology, and how natural areas managers are trying to save and restore our wetland heritage. But you won't stop with just learning!

You will actually become part of the restoration effort, protecting the site from erosion, and planting and seeding native wetland plants. Come be part of a unique and exciting experience of both learning and *doing* – a vacation that makes a difference!



When: September 23 - 25

Friday evening - Sunday noon

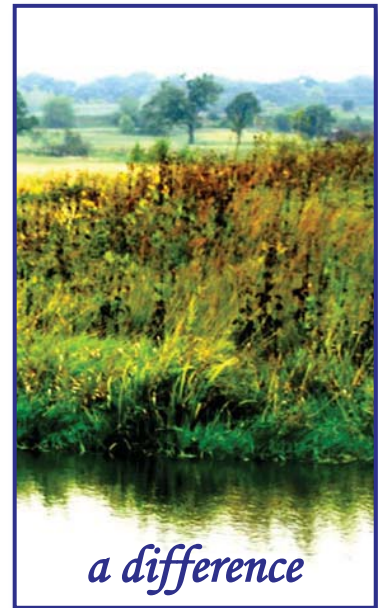
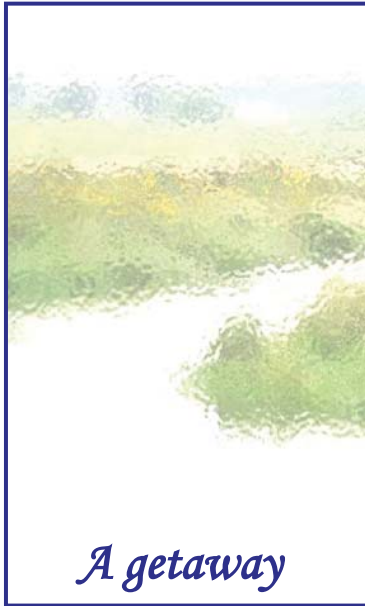
Where: Glacial Park in Richmond, Illinois
(northwest of Chicago)

Cost: \$60. Includes a snack Friday evening, continental breakfast Saturday and Sunday morning, and lunch and dinner on Saturday. There are several economical motel options within 15 minutes of the park for those who need accommodations (information provided upon registration).

For more information: www.mccdistrict.org or contact Tom Simpson at tsimpson@mccdistrict.org or (815) 678-4532 Ext. 8218.



Participate in a Weekend of Restoration



Get away from the hustle and bustle of daily life and spend a weekend at Glacial Park, one of the premier natural areas of the Chicago region. Unlike most vacations, this *Weekend of Restoration* gives participants a chance to actually make the world a better place.

At this *Weekend of Restoration* you will learn about the plants and animals that inhabit Illinois wetlands, wetland ecology and hydrology, and how natural areas managers are trying to save and restore our wetland heritage. But you won't stop with just learning!

You will actually become part of the restoration effort, protecting the site from erosion, and planting and seeding wetland plants. Come be part of a unique and exciting experience of both learning and *doing* – a vacation that makes a difference!

When: September 23 - 25

Friday evening - Sunday noon

Where: Glacial Park in Richmond, Illinois (northwest of Chicago)

Cost: \$60. Includes a snack Friday evening, continental breakfast Saturday and Sunday morning, and lunch and dinner on Saturday. There are several economical motel options within 15 minutes of the park for those who need accommodations (information provided upon registration).



McHenry County

Appendix 3: Marketing Postcard

Weekend of Restoration at Glacial Park



McHenry County
CONSERVATION DISTRICT

A Getaway that Makes a Difference

Get away from the hustle and bustle of daily life and spend a weekend at Glacial Park, one of the premier natural areas of the Chicago region.

Unlike most vacations, this Weekend of Restoration gives participants a chance to actually make the world a better place. Here you will learn about the plants and animals that inhabit Illinois wetlands, wetland ecology and hydrology, and how natural areas managers are trying to save and restore our wetland heritage, but you won't stop with just learning!

You will actually become part of the restoration effort, protecting the site from erosion, planting and seeding wetland plants. Come be part of a unique and exciting experience of both learning and *doing* - a vacation that makes a difference!

Cost: \$60 includes a snack Friday evening, continental breakfast Saturday and Sunday morning, and lunch and dinner on Saturday. There are several economical motel options within 15 minutes of the park for those who need accommodations (information provided upon registration).

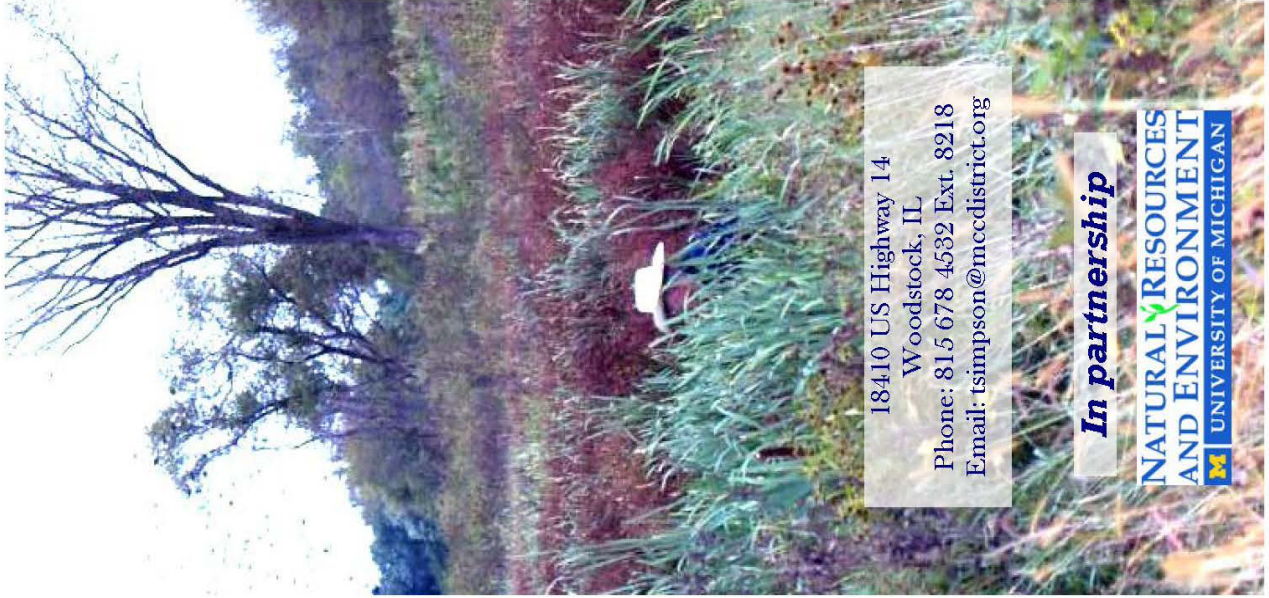
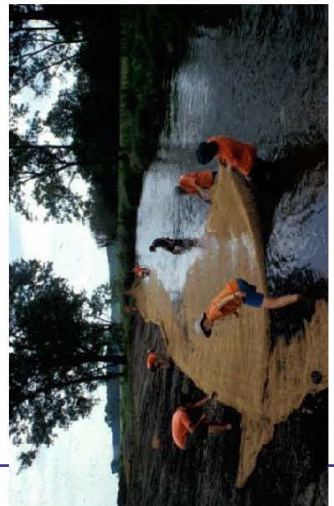
For more information: www.mccdistrct.org or contact Tom Simpson at tsimpson@mccdistrct.org or (815) 678-4532 Ext. 8218.



Appendix 4: Marketing Brochure

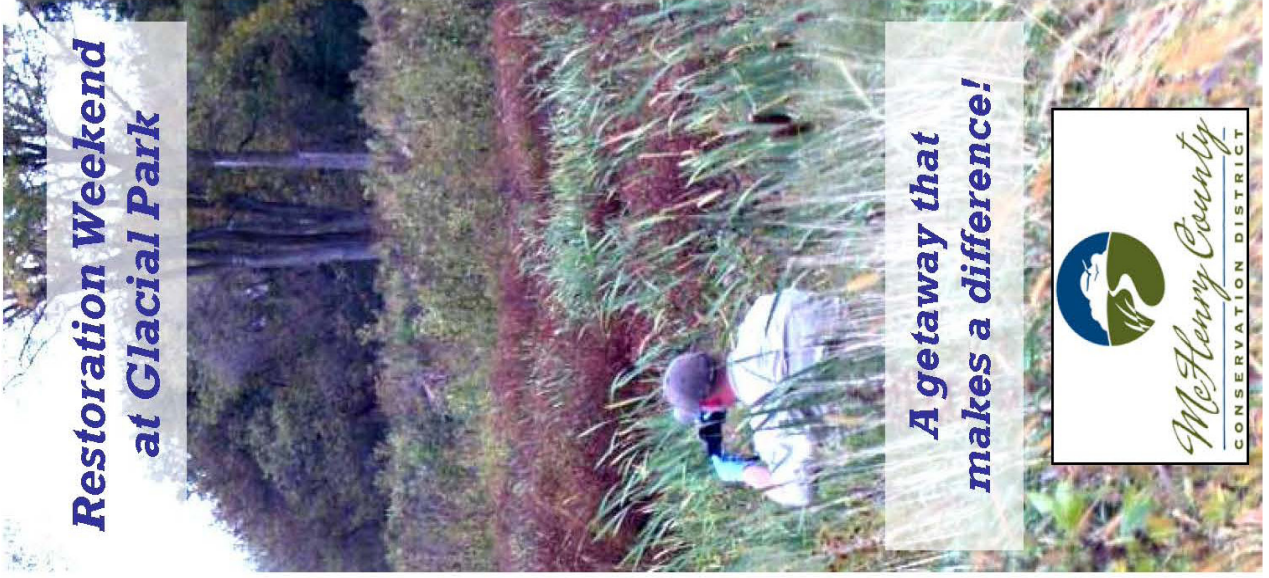


Get away from the hustle and bustle of daily life and spend a weekend at Glacial Park, one of the Chicago region's premier natural areas, with 3,500 acres of oak savannas, prairies, wetlands, and streams. And unlike most vacations, this *Weekend of Restoration* gives participants a chance to actually make the world a better place.



18410 US Highway 14
Woodstock, IL
Phone: 815 678 4532 Ext. 8218
Email: tsimpson@mccdistrict.org

In partnership
**NATURAL RESOURCES
AND ENVIRONMENT**
UNIVERSITY OF MICHIGAN



**Restoration Weekend
at Glacial Park**

**A getaway that
makes a difference!**



Two hundred years ago, a small, shallow wetland pool sat in the center of what is now Glacial Park. Green frogs, herons, and other wildlife regularly visited the wetland, and wildflowers and oak trees surrounded it.



Eventually, farmers transformed the wildflowers and trees into a cornfield, and runoff from the cornfield slowly entombed the wetland under layers of sediment.



At this *Weekend of Restoration* you will learn about the plants and animals that inhabit Illinois wetlands, wetland ecology and hydrology, and how natural areas managers are trying to save and restore our wetland heritage, but you won't stop with just learning!

You will actually become part of the restoration effort, protecting the site from erosion, planting wetland plants, and scattering seed of wetland plants. Come be part of a unique and exciting experience of both learning and *doing* – a vacation that makes a difference!



When: September 23 – 25
Friday evening – Sunday noon

Where: Glacial Park in
Richmond, Illinois (northwest
of Chicago)



Cost: \$60. Includes a snack Friday evening, continental breakfast Saturday and Sunday morning, and lunch and dinner on Saturday. There are several economical motel options within 15 minutes of the park for those who need accommodations (information provided upon registration).

For more information: Go to www.mccdistrict.org and click on “Programs & Events,” or contact Tom Simpson at tsimpson@mccdistrict.org or (815) 678-4532 Ext. 8218.

Appendix 5: Marketing Letter and Social Media

Newsletter

Weekend of Restoration

Get away from the hustle and bustle of daily life and spend a weekend at Glacial Park, one of the premier natural areas of the Chicago region. Unlike most vacations, Weekend of Restoration gives participants a chance to actually make the world a better place. Participants will perform outdoor activities to restore a historic wetland buried centuries ago by agricultural sediment. They will also learn about the ecology and history of prairie wetlands, the way farmers transformed the Midwestern landscape, and how today's natural areas managers are restoring lost wetlands. Come be part of something unique and exciting – a vacation that makes a difference!

When: Evening of Friday, September 23, 2011, through Sunday, September 25, 2011

Where: Glacial Park in Richmond, Illinois (northwest of Chicago)

Cost: \$60, which includes a snack Friday, three meals Saturday, and a continental breakfast Sunday. There are several economical motel options within 15 minutes of the park for those who need accommodations (information provided upon registration).

For more information: Go to www.mccdistrct.org and look under “Programs & Events,” or contact Tom Simpson at tsimpson@mccdistrct.org or (815) 678-4532 Ext. 8218.

Social Media

FACEBOOK:

Get away from life's hustle and bustle and spend a weekend at Glacial Park, where you'll learn about ecological restoration and help restore a historic wetland buried centuries ago by agricultural sediment. Come be part of something unique and exciting – a vacation that makes a difference!

What: Weekend of Restoration

When: Sept. 23-25, 2011

Where: Glacial Park, Richmond, IL (NW of Chicago)

Cost: \$60

More info: www.mccdistrct.org, or contact Tom Simpson at tsimpson@mccdistrct.org or 815-678-4532 x8218.

TWITTER:

Restore a wetland at Weekend of Restoration, Glacial Park, Richmond, IL, Sept. 23-25, \$60, info: tsimpson@mccdistrct.org/815-678-4532 x8218

Appendix 6: Climate Change Adaptation Panel Marketing Flier

McHenry County Conservation District presents



THE FUTURE MEETS THE PAST:

A Panel Discussion About Climate Change & Ecological Restoration

THE DISCUSSION:

The city of Chicago is preparing for a future in which the climate of this region will be dramatically different. Meanwhile, ecological restoration uses a historical model of ecosystems to guide their management.

What is the value of restoration in the face of climate change?

Join us and find out!

7:00-9:00 PM

SATURDAY, SEPTEMBER 24, 2011

**LOST VALLEY VISITOR CENTER
GLACIAL PARK, RINGWOOD, IL**

MEET THE PANELISTS:



Ed Collins - *Natural Resource Manager, McHenry County Conservation District*

Chris Mulvaney - *Coordinator for Science and Natural Resources Management, Chicago Wilderness*

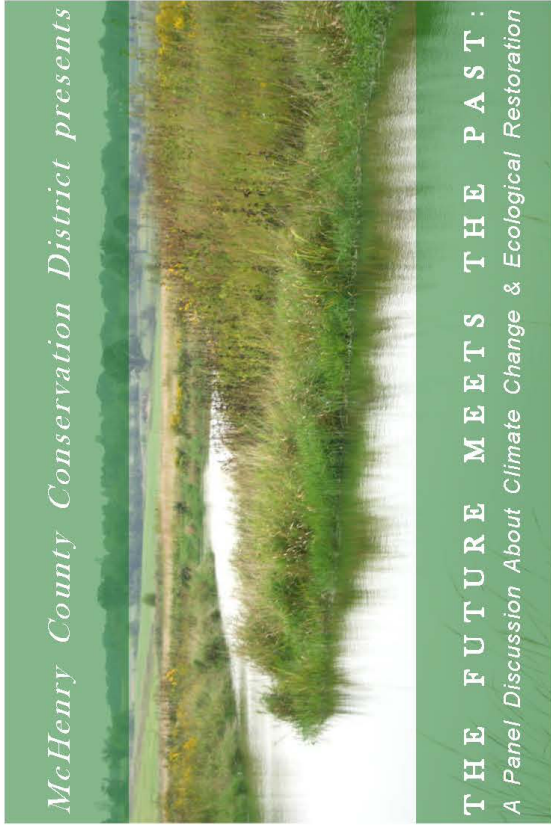
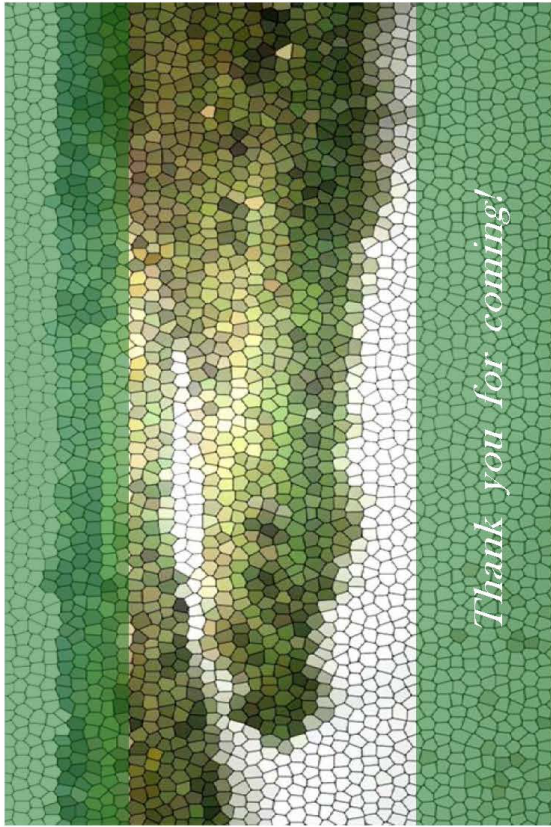


Steve Sullivan - *Curator of Urban Ecology, Peggy Notebaert Nature Museum*



For more information: Go to www.mccdistrict.org and click on "Programs & Events," or contact Tom Simpson at tsimpson@mccdistrict.org or (815) 678-4532 Ext.

Appendix 7: Climate Change Adaptation Panel Program



AGENDA:

7:00 p.m. Welcome!

7:05 p.m. Introduction of panelists & moderators

7:20 p.m. Moderated panel discussion

There will be a limited time for audience questions during this segment and a dedicated time for questions later.

8:00 p.m. Break for refreshments

8:15 p.m. Audience Q&A

9:00 p.m. End

M E E T T H E



Ed Collins is the Natural Resource Manager at the McHenry County Conservation District. He is head of the Natural Resources Department, which includes 17 full-time biologists and other staff. MCCD manages more than 25,000 acres of natural areas northwest of Chicago, including 32 sites that are open to the public. In his role, Ed oversees budget and grant activity, manages biological inventories and research priorities for restoration sites, and is involved in public outreach. Ed has worked at MCCD for 25 years and holds a master's degree in geography and environmental studies from Northeastern Illinois University in Chicago.



Chris Mulvaney is a coordinator for the Chicago Wilderness alliance's Science, Natural Resources Management, and Sustainability teams. Composed of staff and volunteers from Chicago Wilderness member organizations, these three teams are responsible for the alliance's "Restoring the Health of Local Nature" and "Green Infrastructure Vision: Bringing Nature to People" initiatives. In his role, Chris works to support these activities and to ensure the ongoing maintenance and development of the teams.

Working closely with the team co-chairs, Chris promotes the exchange of information between organizations, forges relationships among team members, and helps implement project ideas. He holds a master's degree in biology from Illinois State University and a bachelor's degree in biology from Millikin University.

P A N E L I S T S :



Steve Sullivan is the Curator of Urban Ecology for the Chicago Academy of Sciences and its Peggy Notebaert Nature Museum. Steve studies how human impacts, from municipal tree planting programs to habitat restoration, affect species' perceptions of local environments. His current work focuses on squirrels, sparrows, and humans. You can work with him as a citizen scientist by submitting data to ProjectSquirrel.org. In the past, Steve has worked for the U.S. Fish and Wildlife Service, restoring desert marshlands, controlling invasive plants and animals, and studying the distribution of wading birds in managed habitats.

When he's not in the field, Steve can be found doing taxidermy for the museum's 150-year-old scientific collections. He also works closely with the Chicago Herpetological Society and the Boy Scouts of America. Steve received his bachelor's degree in zoology, conservation, and wildlife biology from Brigham Young University and is currently a Ph.D. candidate in ecology and evolution at the University of Illinois at Chicago.

M O D E R A T O R S :

Tom Simpson - Field Station Ecologist, MCCD

Kathryn Bounsey, Erin Dreps, Lindsay Hanna, Nayiri Havarounian, Tiviny Pearce - Master's Degree Students, University of Michigan School of Natural Resources & Environment

Appendix 8: 2011 Weekend of Restoration Itinerary

FRIDAY

- 7:00 Greeting and mixer
- 7:30 Introductions
- 7:40 Presentation: Opening remarks on time and change
- 8:40 Conclusions and prep for Saturday

SATURDAY

- 7:00 Morning hike
- 8:00 Breakfast
- 8:30 Wetland ecology: origin and demise of the kettle wetland
- 10:00 Seeding and straw
- Noon Lunch
- 1:00 Presentation: field investigation—wetland soils and hydrology
- 2:30 Planting 1
- 3:40 Afternoon break and discussion
- 4:00 Planting 2
- 5:30 Break for dinner
- 6:00 Dinner
- 7:00 Panel discussion (prepared questions)
- 8:00 Break and refreshments
- 8:15 Panel discussion (audience questions)
- 9:00 Conclusion

SUNDAY

- 7:00 Morning hike
- 8:00 Breakfast
- 9:00 Presentation: Wetland Types and Wetland Plants
- 10:00 Planting, watering, and final straw application
- 11:30 Synthesis and graduation (on hill above wetland)

Appendix 9: Commitment Form

Do Your Part to Protect the Planet Make a Commitment!

I, _____, agree to partake in the following selected activities for at least the three months following the McHenry County Conservation District's Weekend of Restoration. I commit to engaging in these environmentally conscientious behaviors because I know that my personal choices make a difference. I also commit to sharing my knowledge about these activities with my friends and family.

Step 1

- Use natural light whenever possible
- Buy biodegradable detergent and eco-friendly household products
- Put a displacement object in your toilet tank to save water
- Unplug electronics chargers (e.g. cell phone) and appliances (e.g. toaster) when not in use
- Bring a reusable water bottle/coffee mug when patronizing cafes & other food service locations
- Print double-sided pages and use printers sparingly
- Use reusable grocery bags
- Other: _____

Step 2

- Run your dishwasher only when full
- Winterize your home windows
- Replace your gas-powered mower with a push mower
- Buy/eat local, seasonal or organic food
- Consider ways to repurpose items before throwing them away
- Take shorter and cooler showers
- Ask your energy company to pursue renewable energy options
- Other: _____

Step 3

- Bike/walk/carpool to work
- Make your own cleaning products
- Replace your lawn with native, low-maintenance ground cover
- Compost your food and yard waste
- Grow an edible garden
- Buy energy-efficient appliances
- Incorporate vegetarian and vegan meals into your diet
- Purchase/install a rain barrel
- Participate in Community Supported Agriculture (CSA) with your neighbors
- Other: _____

Signature:

Date:

A journey of a thousand miles begins with a single step.

Appendix 10: Commitment Reminder

Friday, September 30, 2011

Dear _____,

Thank you for participating in McHenry County Conservation District's Weekend of Restoration. It was a fun and productive event, and we're so glad you were a part of it!

We'd also like to tell you how much we appreciate your cooperation in our master's project surveys. You've already filled out two surveys for us, both of which have been extremely helpful, and we'll mail a third survey to you in a few weeks. Your answers will be very useful as we work with the District to improve the Weekend of Restoration event and design a recurring program.

Enclosed with this letter is a copy of the pledge you signed to make a commitment to try out one or more new conservation behavior for the next three months. We encourage you to hang this copy of your pledge in a visible location, such as on a refrigerator or bulletin board, where it can remind you of your commitment daily and help you successfully honor your pledge.

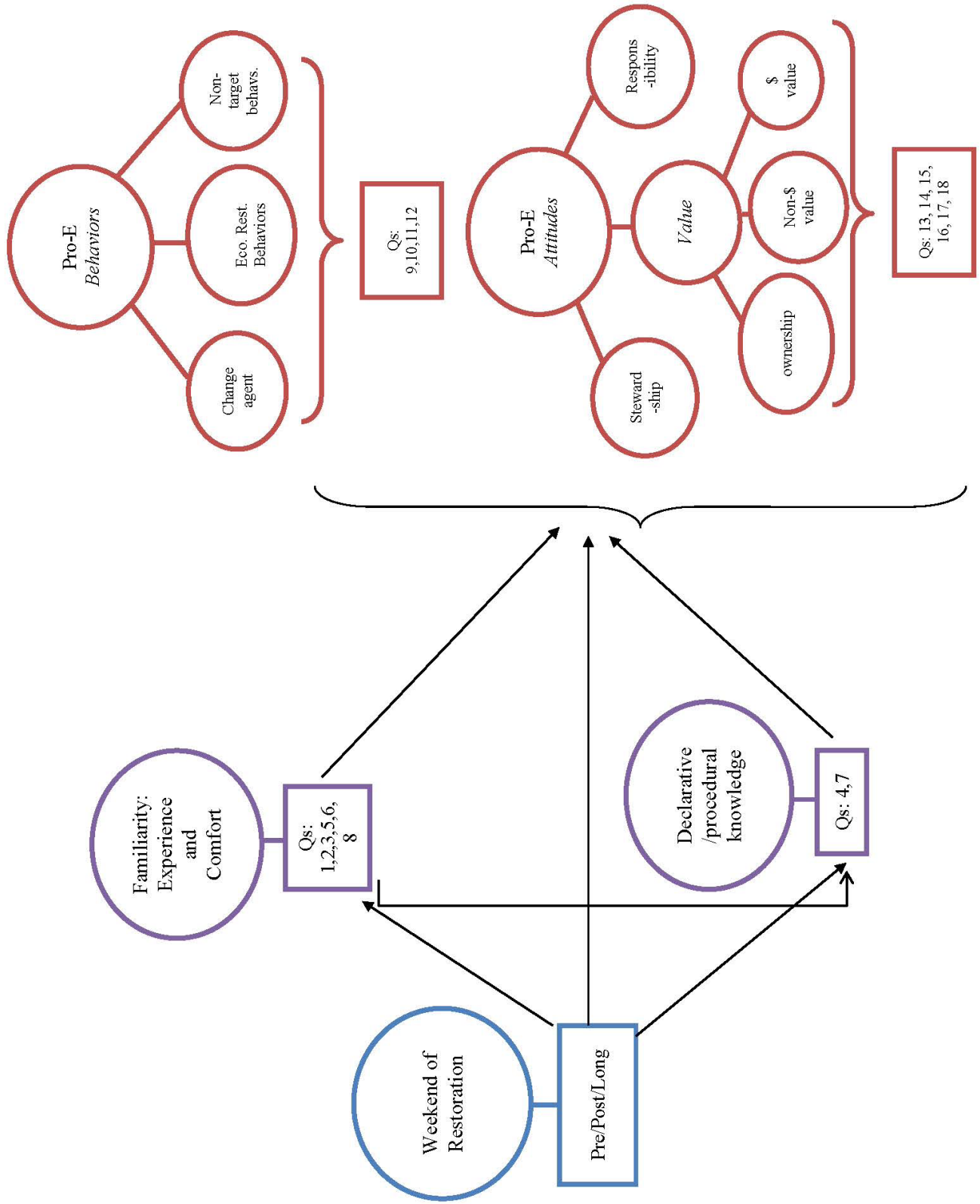
We applaud your dedication to the environment and wish you the best of luck!

Sincerely,

Kathryn Bomey
Erin Dreps
Lindsay Hanna
Nayiri Haroutunian
Trinity Pierce

University of Michigan
School of Natural Resources and Environment

Appendix II: Survey Diagram



Appendix I2: Marketing Survey

1. Where were you (Glacial Park, Chicago Botanic Garden, Forest Preserve, etc.) when you heard about this event, and what marketing materials first caught your attention?
2. Indicate all the marketing materials that you encountered about this event:
 - a. Poster
 - b. MCCD website
 - c. Digital flier
 - d. Brochure
 - e. Postcard
 - f. MCCD "Landscapes"
 - g. E-mail
 - h. Word of mouth
 - i. Other:
3. How much did each of these compel you to register for the event? (1 = not at all compelling, 5 = very compelling)
 - i. Location
 - ii. Price
 - iii. Chance to participate in restoration
 - iv. Chance to learn from experts in field
 - v. Chance to work within a group setting
 - vi. Opportunity to vacation while contributing to a cause
 - vii. Opportunity to get away for a weekend
 - viii. Someone I know was also going
 - ix. Other:
4. Had you ever heard of Glacial Park before learning about this event? Y/N
5. Have you ever been to Glacial Park before? Y/N If so, for what type of event?

Appendix 13: General Survey

Pre-event Survey- (filled out prior to Saturday morning)

1. On average, how many hours a week do you spend outdoors recreationally during the autumn months? _____
2. On average, how many hours a week do you spend outdoors for work-related or other non-recreational activities (e.g. your job, yard work, walking the dog, volunteering for an environmental organization) during the autumn months? _____

3. How much experience have you had with each of these activities:

(1= none ... 5= a significant amount)

- | | | | | | |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | Hiking |
| 1 | 2 | 3 | 4 | 5 | Backpacking |
| 1 | 2 | 3 | 4 | 5 | Camping |
| 1 | 2 | 3 | 4 | 5 | Outdoor sports (e.g. kayaking, rock climbing) |
| 1 | 2 | 3 | 4 | 5 | Hunting or fishing |
| 1 | 2 | 3 | 4 | 5 | Gardening |
| 1 | 2 | 3 | 4 | 5 | Nature photography |

4. How knowledgeable do you feel about each of the following:

(1= not at all knowledgeable ... 5= very knowledgeable)

- | | | | | | |
|---|---|---|---|---|--|
| 1 | 2 | 3 | 4 | 5 | The history of Glacial Park |
| 1 | 2 | 3 | 4 | 5 | The history of ecological restoration |
| 1 | 2 | 3 | 4 | 5 | The impact of climate change on native Illinois landscapes
(woodland, wetland and prairies) |
| 1 | 2 | 3 | 4 | 5 | The differing perspectives on the role of restoration work |
| 1 | 2 | 3 | 4 | 5 | The methods and techniques of ecological restoration |
| 1 | 2 | 3 | 4 | 5 | The impact of human beings on our landscape |
| 1 | 2 | 3 | 4 | 5 | Psychologically restorative benefits of natural environments |
| 1 | 2 | 3 | 4 | 5 | Changes in historical restoration planning as a result of climate change |

1. How comfortable are you in each of these contexts?

(1= not at all comfortable ... 5= extremely comfortable; X= do not know)

- 1 2 3 4 5 X Botanical garden
1 2 3 4 5 X Nature preserve with marked trails
1 2 3 4 5 X Nature preserve without trails
1 2 3 4 5 X Wild tall-grass prairie
1 2 3 4 5 X Wetland, swamp or marsh
1 2 3 4 5 X Large national or state park
1 2 3 4 5 X Rivers and Streams
1 2 3 4 5 X Lakes and lakeshores

2. How comfortable are you with doing the following kinds of activities?

(1= very uncomfortable ... 5= very comfortable; X= do not know)

- 1 2 3 4 5 X Using restoration tools like loppers and shovels
1 2 3 4 5 X Spending time outdoors away from all roads, buildings and other manmade structures
1 2 3 4 5 X Working with a team to accomplish ecological restoration goals

3. Please rate each statement on the following :

(1= strongly disagree ... 3 = neither agree nor disagree ... 5= strongly agree)

- 1 2 3 4 5 Ecological restoration improves the resilience of ecosystems
1 2 3 4 5 Reference points for ecological restoration are largely arbitrary
1 2 3 4 5 The challenges that climate change brings make restoring the environment too uncertain

4. To what degree do these words describe how you feel after spending time in nature?

(1= not at all ... 5= very much)

- 1 2 3 4 5 Energized
1 2 3 4 5 Overwhelmed
1 2 3 4 5 Effective
1 2 3 4 5 Relaxed

5. How often do you engage in the following activities?

(1= never ... 5= very frequently)

- 1 2 3 4 5 Recycling
- 1 2 3 4 5 Reusing old clothes or materials instead of buying new ones
- 1 2 3 4 5 Using local, seasonal or organic food
- 1 2 3 4 5 Taking short showers
- 1 2 3 4 5 Turning off the lights when you leave the room
- 1 2 3 4 5 Using natural light whenever possible
- 1 2 3 4 5 Biking/walking/carpooling to work
- 1 2 3 4 5 Buying biodegradable detergent

6. How often do you encourage others to engage in the following activities?

(1= never ... 5= always)

- 1 2 3 4 5 Recycling
- 1 2 3 4 5 Reusing old clothes or materials instead of buying new ones
- 1 2 3 4 5 Using local, seasonal or organic food
- 1 2 3 4 5 Taking short showers
- 1 2 3 4 5 Turning off the lights when you leave the room
- 1 2 3 4 5 Using natural light whenever possible
- 1 2 3 4 5 Biking/walking/carpooling to work
- 1 2 3 4 5 Buying biodegradable detergent

7. How often do you engage in the following restoration activities?

(1= never ... 5= very frequently)

- 1 2 3 4 5 Invasive species removal
- 1 2 3 4 5 Seeding or planting of native plant species
- 1 2 3 4 5 Prescribed burns
- 1 2 3 4 5 Erosion control
- 1 2 3 4 5 Discussion of the benefits of restoration with friends and family
- 1 2 3 4 5 Reading books, articles, newsletters etc on restoration

1. How often do you encourage others to engage in the following restoration activities?

(1= never ... 5= very frequently)

- | | | | | | |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | Invasive species removal |
| 1 | 2 | 3 | 4 | 5 | Seeding or planting of native plant species |
| 1 | 2 | 3 | 4 | 5 | Prescribed burns |
| 1 | 2 | 3 | 4 | 5 | Discussion of the benefits of restoration with friends and family |
| 1 | 2 | 3 | 4 | 5 | Reading books, articles, newsletters etc on restoration |
| 1 | 2 | 3 | 4 | 5 | Erosion control |

2. To what extent do you agree with the following?

(1= strongly disagree ... 3= neither agree nor disagree ... 5= strongly agree; X= don't know)

- | | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | X | I find working outdoors satisfying |
| 1 | 2 | 3 | 4 | 5 | X | I find working outdoors valuable |
| 1 | 2 | 3 | 4 | 5 | X | I feel I am able to make a difference to improve natural areas |
| 1 | 2 | 3 | 4 | 5 | X | Nature has value apart from human utility |
| 1 | 2 | 3 | 4 | 5 | X | It is important to undo the damage humans have inflicted on the environment |
| 1 | 2 | 3 | 4 | 5 | X | I feel connected to the land on which I live |
| 1 | 2 | 3 | 4 | 5 | X | I think that nature has great monetary value |
| 1 | 2 | 3 | 4 | 5 | X | I think that nature has great aesthetic value |
| 1 | 2 | 3 | 4 | 5 | X | Humans have always shaped nature for their use and survival |
| 1 | 2 | 3 | 4 | 5 | X | Restored ecosystems require active management |
| 1 | 2 | 3 | 4 | 5 | X | Many large-scale environmental changes are outside human control |
| 1 | 2 | 3 | 4 | 5 | X | People affect the environment both beneficially and detrimentally |
| 1 | 2 | 3 | 4 | 5 | X | I possess the skills and knowledge necessary to engage in ecological restoration |
| 1 | 2 | 3 | 4 | 5 | X | I possess the skills and knowledge necessary to engage in other conservation behaviors, such as recycling, composting, carpooling ... |



A. Straightened stream

This stream has been straightened and deepened to get water off property faster.

B. Stream restoration

This stream had also been straightened. However, it is now in the midst of a long-term restoration process and has been re-meandered.

3. How much does each of these views of streams appeal to you?

(1 = not at all ... 5 = very much)

1 2 3 4 5 Straightened stream (A)

1 2 3 4 5 Stream Restoration (B)

4. How much do you agree with each of these statements?

(1= strongly disagree ... 3= neither agree nor disagree ... 5= strongly agree; X= don't know)

1 2 3 4 5 X Straightened streams manage water more efficiently

1 2 3 4 5 X A meandering stream reduces the amount of available land for productive uses

1 2 3 4 5 X Restoration of a stream is a multi-generational project

1 2 3 4 5 X A meandering stream is ecologically more sound as a water body and habitat

Sedge Meadow Restoration

Some time ago this area was converted from a sedge meadow to farmland using drainage tiles to drain the area. The drainage tiles have since been plugged, allowing the water to remain on site, a key characteristic of sedge meadows. Another key characteristic is burnings to rejuvenate the sedge grass.

A flock of sand hill cranes has taken up residence in the sedge meadow. They would disappear if the meadow were burned.



1. How much does each of these components of the landscape appeal to you?

(1 = not at all ... 5 = very much)

1 2 3 4 5 Sedge meadow

1 2 3 4 5 Sand hill crane

2. How much do you agree / disagree with each of these statements?

(1= strongly disagree ... 3= neither agree nor disagree ... 5= strongly agree; X= don't know)

1 2 3 4 5 X The plugging of the drainage tiles is a large step towards restoring the sedge meadow

1 2 3 4 5 X The difference between the current sedge meadow and the restored ideal
is not enough to warrant the loss of the sand hill cranes and the additional work

1 2 3 4 5 X The sand hill cranes will be able to find a new home if the burnings begin

This photograph shows the site for the current restoration project. Once a thriving wetland, agricultural runoff from surrounding fields filled the wetland basin. We will work to restore this wetland over the weekend of the workshop by planting and seeding native plants. We will also remove the reed canary grass, seen in the picture, which is an invasive species in this area.



Please answer the following questions while keeping this in mind.

3. How much do you agree with the following statements?

(1= strongly disagree ... 3= neither agree nor disagree ... 5= strongly agree)

1 2 3 4 5 I believe it is unjust that humans have disturbed the natural balance of this land

1 2 3 4 5 I believe that it is our responsibility as human beings to restore this land

1 2 3 4 5 I believe humans have the ability and know how to restore
this habitat back to its pre--settlement state

1 2 3 4 5 I am intimidated by the amount of reed canary grass that needs to be removed in order to
restore this habitat

1 2 3 4 5 I question whether it is worth devoting a great deal of human effort to restore this land

1 2 3 4 5 I think that human disturbance, even in the name of restoration, will continue
to damage land. It should be left in the state that it currently is in

4. Please provide the following background information:

Age: <20__ 21-30__ 31-40__ 41-50__ 51-60__ 61-70__ 70+__

Gender: Female____ Male ____ N/A____

Occupation:_____

Current zip code:_____ How long you have lived in your current zip code?_____

Is there any specific land that you would like to conduct ecological restoration on
after attending this event? _____

Post-Event Survey (Immediately after weekend)

1. How knowledgeable do you feel about each of the following *now that you have attended the restoration weekend?*

(1= not at all knowledgeable ... 5= very knowledgeable)

- 1 2 3 4 5 The history of Glacial Park
- 1 2 3 4 5 The history of ecological restoration
- 1 2 3 4 5 The impact of climate change on native Illinois landscapes
(woodland, wetland and prairies)
- 1 2 3 4 5 The differing perspectives on the role of restoration work
- 1 2 3 4 5 The methods and techniques of ecological restoration
- 1 2 3 4 5 The impact of human beings on our landscape
- 1 2 3 4 5 Psychologically restorative benefits of natural environments
- 1 2 3 4 5 Changes in historical restoration planning as a result of climate change

2. Please rate each statement on the following *now that you have attended the restoration weekend*

(1= strongly disagree ... 3 = neither agree nor disagree ... 5= strongly agree)

- 1 2 3 4 5 Ecological restoration improves the resilience of ecosystems
- 1 2 3 4 5 Reference points for ecological restoration are largely arbitrary
- 1 2 3 4 5 The challenges that climate change brings make restoring the environment too uncertain

3. How comfortable are you in each of these contexts?

(1= not at all comfortable ... 5= extremely comfortable; X= do not know)

- 1 2 3 4 5 X Botanical garden
- 1 2 3 4 5 X Nature preserve with marked trails
- 1 2 3 4 5 X Nature preserve without trails
- 1 2 3 4 5 X Wild tall-grass prairie
- 1 2 3 4 5 X Wetland, swamp or marsh
- 1 2 3 4 5 X Large national or state park
- 1 2 3 4 5 X Rivers and Streams
- 1 2 3 4 5 X Lakes and lakeshores

4. How comfortable are you with doing the following kinds of activities?

(1= very uncomfortable ... 5= very comfortable; X= do not know)

- 1 2 3 4 5 X Using restoration tools like loppers and shovels
1 2 3 4 5 X Spending time outdoors away from all roads, buildings and other manmade structures
1 2 3 4 5 X Working with a team to accomplish ecological restoration goals

5. To what degree do these words describe how you feel after spending time in nature?

(1= not at all ... 5= very much)

- 1 2 3 4 5 Energized
1 2 3 4 5 Overwhelmed
1 2 3 4 5 Effective
1 2 3 4 5 Relaxed

6. To what extent do you agree with the following?

(1= strongly disagree ... 3= neither agree nor disagree ... 5= strongly agree; X= don't know)

- 1 2 3 4 5 X I find working outdoors satisfying
1 2 3 4 5 X I find working outdoors valuable
1 2 3 4 5 X I feel I am able to make a difference to improve natural areas
1 2 3 4 5 X Nature has value apart from human utility
1 2 3 4 5 X It is important to undo the damage humans have inflicted on the environment
1 2 3 4 5 X I feel connected to the land on which I live
1 2 3 4 5 X I think that nature has great monetary value
1 2 3 4 5 X I think that nature has great aesthetic value
1 2 3 4 5 X Humans have always shaped nature for their use and survival
1 2 3 4 5 X Restored ecosystems require active management
1 2 3 4 5 X Many large-scale environmental changes are outside human control
1 2 3 4 5 X People affect the environment both beneficially and detrimentally
1 2 3 4 5 X I possess the skills and knowledge necessary to engage in ecological restoration
1 2 3 4 5 X I possess the skills and knowledge necessary to engage in other conservation behaviors, such as recycling, composting, carpooling



A. Straightened stream

This stream has been straightened and deepened to get water off property faster.



B. Stream restoration

This stream had also been straightened. However, it is now in the midst of a long-term restoration process and has been re-meandered.

1. How much does each of these views of streams appeal to you?

(1 = not at all ... 5 = very much)

1 2 3 4 5 Straightened stream (A)

1 2 3 4 5 Stream Restoration (B)

2. How much do you agree with each of these statements?

(1= strongly disagree ... 3= neither agree nor disagree ... 5= strongly agree; X= don't know)

1 2 3 4 5 X Straightened streams manage water more efficiently

1 2 3 4 5 X A meandering stream reduces the amount of available land for productive uses

1 2 3 4 5 X Restoration of a stream is a multi- generational project

1 2 3 4 5 X A meandering stream is ecologically more sound as a water body and habitat

Sedge Meadow Restoration

Some time ago this area was converted from a sedge meadow to farmland using drainage tiles to drain the area. The drainage tiles have since been plugged, allowing the water to remain on site, a key characteristic of sedge meadows. Another key characteristic is burnings to rejuvenate the sedge grass.

A flock of sand hill cranes has taken up residence in the sedge meadow. They would disappear if the meadow were burned.



3. How much does each of these components of the landscape appeal to you?

(1 = not at all ... 5 = very much)

1 2 3 4 5 Sedge meadow

1 2 3 4 5 Sand hill crane

4. How much do you agree / disagree with each of these statements?

(1= strongly disagree ... 3= neither agree nor disagree ... 5= strongly agree; X= don't know)

1 2 3 4 5 X The plugging of the drainage tiles is a large step towards restoring the sedge meadow

1 2 3 4 5 X The difference between the current sedge meadow and the restored ideal

is not enough to warrant the loss of the sand hill cranes and the additional work

1 2 3 4 5 X The sand hill cranes will be able to find a new home if the burnings begin

This photograph shows the site for the current restoration project. Once a thriving wetland, agricultural runoff from surrounding fields filled the wetland basin. We will work to restore this wetland over the weekend of the workshop by planting and seeding native plants. We will also remove the reed canary grass, seen in the picture, which is an invasive species in this area.



5. In light of this description, how much do you agree with the following statements?

(1= strongly disagree ... 3= neither agree nor disagree ... 5= strongly agree)

1 2 3 4 5 I believe it is unjust that humans have disturbed the natural balance of this land

1 2 3 4 5 I believe that it is our responsibility as human beings to restore this land

1 2 3 4 5 I believe humans have the ability and know how to restore this habitat back to its pre-settlement state

1 2 3 4 5 I am intimidated by the amount of reed canary grass that needs to be removed in order to restore this habitat

1 2 3 4 5 I question whether it is worth devoting a great deal of human effort to restore this land

1 2 3 4 5 I think that human disturbance, even in the name of restoration, will continue

to damage land. It should be left in the state that it currently is in

Longitudinal Survey

1. How knowledgeable do you feel about each of the following:

(1= not at all knowledgeable ... 5= very knowledgeable)

- | | | | | | |
|---|---|---|---|---|--|
| 1 | 2 | 3 | 4 | 5 | The history of Glacial Park |
| 1 | 2 | 3 | 4 | 5 | The history of ecological restoration |
| 1 | 2 | 3 | 4 | 5 | The impact of climate change on native Illinois landscapes
(woodland, wetland and prairies) |
| 1 | 2 | 3 | 4 | 5 | The differing perspectives on the role of restoration work |
| 1 | 2 | 3 | 4 | 5 | The methods and techniques of ecological restoration |
| 1 | 2 | 3 | 4 | 5 | The impact of human beings on our landscape |
| 1 | 2 | 3 | 4 | 5 | Psychologically restorative benefits of natural environments |
| 1 | 2 | 3 | 4 | 5 | Changes in historical restoration planning as a result of climate change |

2. Please rate each statement on the following :

(1= strongly disagree ... 3 = neither agree nor disagree ... 5= strongly agree)

- | | | | | | |
|---|---|---|---|---|--|
| 1 | 2 | 3 | 4 | 5 | Ecological restoration improves the resilience of ecosystems |
| 1 | 2 | 3 | 4 | 5 | Reference points for ecological restoration are largely arbitrary |
| 1 | 2 | 3 | 4 | 5 | The challenges that climate change brings make restoring the environment too uncertain |

3. How comfortable are you in each of these contexts?

(1= not at all comfortable ... 5= extremely comfortable; X= do not know)

- | | | | | | | |
|---|---|---|---|---|---|------------------------------------|
| 1 | 2 | 3 | 4 | 5 | X | Botanical garden |
| 1 | 2 | 3 | 4 | 5 | X | Nature preserve with marked trails |
| 1 | 2 | 3 | 4 | 5 | X | Nature preserve without trails |
| 1 | 2 | 3 | 4 | 5 | X | Wild tall-grass prairie |
| 1 | 2 | 3 | 4 | 5 | X | Wetland, swamp or marsh |
| 1 | 2 | 3 | 4 | 5 | X | Large national or state park |
| 1 | 2 | 3 | 4 | 5 | X | Rivers and Streams |
| 1 | 2 | 3 | 4 | 5 | X | Lakes and lakeshores |

4. How comfortable are you with doing the following kinds of activities?

(1= very uncomfortable ... 5= very comfortable; X= do not know)

1 2 3 4 5 X Using restoration tools like loppers and shovels

1 2 3 4 5 X Spending time outdoors away from all roads, buildings and other manmade structures

1 2 3 4 5 X Working with a team to accomplish ecological restoration goals

5. To what degree do these words describe how you feel after spending time in nature?

(1= not at all ... 5= very much)

1 2 3 4 5 Energized

1 2 3 4 5 Overwhelmed

1 2 3 4 5 Effective

1 2 3 4 5 Relaxed

6. How often do you engage in the following activities?

(1= never ... 5= very frequently)

1 2 3 4 5 Recycling

1 2 3 4 5 Reusing old clothes or materials instead of buying new ones

1 2 3 4 5 Using local, seasonal or organic food

1 2 3 4 5 Taking short showers

1 2 3 4 5 Turning off the lights when you leave the room

1 2 3 4 5 Using natural light whenever possible

1 2 3 4 5 Biking/walking/carpooling to work

1 2 3 4 5 Buying biodegradable detergent

7. How often do you encourage others to engage in the following activities?

(1= never ... 5= always)

1 2 3 4 5 Recycling

1 2 3 4 5 Reusing old clothes or materials instead of buying new ones

1 2 3 4 5 Using local, seasonal or organic food

- 1 2 3 4 5 Taking short showers
- 1 2 3 4 5 Turning off the lights when you leave the room
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- 1 2 3 4 5 Discussion of the benefits of restoration with friends and family
- 1 2 3 4 5 Reading books, articles, newsletters etc on restoration

2. How often do you encourage others to engage in the following restoration activities?

(1= never ... 5= very frequently)

- 1 2 3 4 5 Invasive species removal
- 1 2 3 4 5 Seeding or planting of native plant species
- 1 2 3 4 5 Prescribed burns
- 1 2 3 4 5 Discussion of the benefits of restoration with friends and family
- 1 2 3 4 5 Reading books, articles, newsletters etc on restoration
- 1 2 3 4 5 Erosion control

3. To what extent do you agree with the following?

(1= strongly disagree ... 3= neither agree nor disagree ... 5= strongly agree; X= don't know)

- 1 2 3 4 5 X I find working outdoors satisfying
- 1 2 3 4 5 X I find working outdoors valuable
- 1 2 3 4 5 X I feel I am able to make a difference to improve natural areas

- 1 2 3 4 5 X Nature has value apart from human utility
- 1 2 3 4 5 X It is important to undo the damage humans have inflicted on the environment
- 1 2 3 4 5 X I feel connected to the land on which I live
- 1 2 3 4 5 X I think that nature has great monetary value
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process and has been re-meandered.

How much does each of these views of streams appeal to you?

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1 2 3 4 5 Stream Restoration (B)

1. How much do you agree with each of these statements?

(1= strongly disagree ... 3= neither agree nor disagree ... 5= strongly agree; X= don't know)

- 1 2 3 4 5 X Straightened streams manage water more efficiently
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Sedge Meadow Restoration

Some time ago this area was converted from a sedge meadow to farmland using drainage tiles to drain the area. The drainage tiles have since been plugged, allowing the water to remain on site, a key characteristic of sedge meadows. Another key characteristic is burnings to rejuvenate the sedge grass.

A flock of sand hill cranes has taken up residence in the sedge meadow. They would disappear if the meadow were burned.



2. How much does each of these components of the landscape appeal to you?

(1 = not at all ... 5 = very much)

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- 1 2 3 4 5 Sand hill crane

3. How much do you agree / disagree with each of these statements?

(1= strongly disagree ... 3= neither agree nor disagree ... 5= strongly agree; X= don't know)

- 1 2 3 4 5 X The plugging of the drainage tiles is a large step towards restoring the sedge meadow
- 1 2 3 4 5 X The difference between the current sedge meadow and the restored ideal
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4. In light of this description, how much do you agree with the following statements?

(1= strongly disagree ... 3= neither agree nor disagree ... 5= strongly agree)

- 1 2 3 4 5 I believe it is unjust that humans have disturbed the natural balance of this land
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- 1 2 3 4 5 I am intimidated by the amount of reed canary grass that needs to be removed in order to restore this habitat
- 1 2 3 4 5 I question whether it is worth devoting a great deal of human effort to restore this land
- 1 2 3 4 5 I think that human disturbance, even in the name of restoration, will continue to damage land. It should be left in the state that it currently is in

Appendix 14: Event Satisfaction Survey

We would appreciate your feedback about the event

1. How satisfied were you with each of the following?

(1= very unsatisfied, 5= very satisfied)

1 2 3 4 5 Format/layout of event

1 2 3 4 5 Sense of community/camaraderie

1 2 3 4 5 Cost

1 2 3 4 5 Knowledge acquired

1 2 3 4 5 Staff's instruction for outdoor work

1 2 3 4 5 Amount of time spent outdoors

1 2 3 4 5 Skill level required for field work

2. What was your favorite part of the event?

3. What was your least favorite part of the event?

4. What suggestions do you have about advertising this event in the future?

5. What, if any, other ecological restoration-focused events would you like to attend at Glacial Park?

6. Do you think that you will use Glacial Park as a recreational and educational resource in the future? How so?

7. Would you be interested in staying involved or learning about the progress of the wet-land restoration that was part of the workshop?

Appendix I5: Marketing Survey Template

Weekend of Restoration
Marketing Survey

-How did you first hear about this event? _____

-Where did you first hear about this event? _____

-Circle all of the marketing materials you encountered about this event and fill in the corresponding blank:

1. Poster Where? _____

2. Digital flier (PDF) Circulated by what organization? _____

3. Brochure Where? _____

4. Postcard received by mail from MCCD

5. Postcard received in person Where? _____

6. Newsletter Which organization? _____

7. Email from MCCD

8. Email from another organization Which organization? _____

9. MCCD "Landscapes" magazine

10. MCCD website

11. Another organization's website Which organization? _____

12. Social media Which social media site (i.e. Twitter, Facebook)? _____

 Which organization posted the update? _____

13. Word of mouth From who? _____

14. Other: _____

-Through which types of marketing materials would you have preferred to hear about the event?

-How much did each of these factors compel you to register for the event? (circle one ranking for each factor: 1 = not at all compelling, 5 = very compelling)

- a. Setting (Glacial Park) 1 2 3 4 5
- b. Low price 1 2 3 4 5
- c. Chance to participate in restoration 1 2 3 4 5
- d. Chance to learn from experts 1 2 3 4 5
- e. Chance to work in a group setting 1 2 3 4 5
- f. Opportunity to vacation while contributing to a cause 1 2 3 4 5
- g. Opportunity to get away for a weekend 1 2 3 4 5
- h. Someone I know was also going 1 2 3 4 5
- i. Location (northern Illinois/McHenry County) 1 2 3 4 5
- i. Other: _____ 1 2 3 4 5

-Had you ever heard of Glacial Park before learning about this event? Yes / No (circle one)

-Have you ever been to Glacial Park before? Yes / No (circle one)

If yes, for what reason or event? _____

-Have you ever participated in a previous Weekend of Restoration event? Yes / No (circle one)

If yes, which year? _____

-Did you invite anyone else to attend this event? Yes / No (circle one)

Appendix 16: Potential Marketing Partners

<u>Organization Name</u>	<u>Contact Person and Title</u>	<u>Contact information</u>	<u>Address</u>	<u>Preferred material</u>
Chicago area				
Field Museum	Rebecca Schillo, Conservation Ecologist in the Environment, Culture, and Conservation Department	(312) 665-7420, rschillo@fieldmuseum.org	The Field Museum Attn: Rebecca Schillo 1400 S. Lake Shore Drive Chicago, IL 60605	Print and electronic
North Park Village Nature Center	Julie Sacco, Director	(312) 744-5472, julianne.sacco@chicagoparkdistrict.com	North Park Village Nature Center Attn: Julie Sacco 5801 N. Pulaski Chicago, IL 60646	Print
Chicago Park District	Jason Steger, Stewardship Volunteer Coordinator	(312) 742-4072, jason.steger@chicagoparkdistrict.com	Chicago Park District Attn: Jason Steger 6th floor DNR 541 North Fairbanks Chicago, IL 60611	Print
Peggy Notebaert Nature Museum	Josie Elbert, Associate Director of Education Programs	(773) 755-5178, jelbert@naturemuseum.org	Peggy Notebaert Nature Museum 2430 N. Cannon Drive Chicago, IL 60614	Print and electronic
Forest Preserve District of Cook County (nature centers)	Kathy Wurster, Manager of Volunteer Resources	(773) 631-1790, kathy.wurster@cookcountyil.gov	Cook County Forest Preserve District Volunteer Resource Center Attn: Kathy Wurster 6100 N. Central Ave. Chicago, IL 60646	Print and electronic
Chicago Wilderness	Emilian Gezei, Leave No Child Inside Coordinator Lucy Hutcherson, Director of Conservation and Communication Programs	(847) 835-6834, emilian.gezei@chicagowilderness.org (708) 688-8253, luey.hutcherson@chicagowilderness.org	Chicago Wilderness 8 S. Michigan Ave. Suite 900 Chicago, IL 60603	Electronic
Chicago Center for Green Technology	Jenny Babcock, Resource Center Coordinator	(312) 746-9609, jenny.babcock@cityofchicago.org	Chicago Center for Green Technology Attn: Jenny Babcock Resource Center Coordinator 445 N. Sacramento Blvd. Chicago, IL 60612	Print
Brookfield Zoo	Sondra Katzen, Media Relations Manager	(708) 688-8351, sondra.katzen@ezs.org	Brookfield Zoo Public Relations Department 3300 Golf Road Brookfield, IL 60513	Print
River Trail Nature Center (Forest Preserve District of Cook County)	Sue Holt, Director	(847) 824-8360, susan.holt@cookcountyil.gov	River Trail Nature Center 3120 Milwaukee Ave. Northbrook, IL 60062	Print

Illinois

Peck Farm Interpretive Center (Geneva Park District)	Tina Rossi, Naturalist	(630) 262-8244, trossi@genevaparks.com	Peck Farm Interpretive Center Attn: Tina Rossi 4038 Kaneville Rd. Geneva, IL 60134	Print
Willowbrook Wildlife Center (DuPage County Forest Preserve District)	Sandy Fejt, Education Site Manager	(630) 942-6207, sfejtd@dupageforest.com	Willowbrook Wildlife Center Attn: Sandy Fejt 525 S. Park Blvd. Glen Ellyn, IL 60137	Print
Openlands	Kelly Wagner, Development Coordinator	(312) 863-6273, kwagner@openlands.org	N/A	Electronic
Volunteer Stewardship Network (The Nature Conservancy)	Karen Tharp, VSN Coordinator	(866) 876-5463 *824, ktharp@tncc.org	N/A	Electronic

Wisconsin

Nature Net	Brenna Holzhauser, Special Assistant to the Climate Education Center at Aldo Leopold Nature Center	(608) 221-0404 x5, info@naturenet.com	N/A	Electronic
Aldo Leopold Nature Center	Alanna Medears, Development and Communications Coordinator	(608) 216-9374, devcomm@naturenet.com	N/A	Electronic
Milwaukee Public Museum	Carrie Trousil Becker, Communications Manager	(414) 278-6198, becker@mmpm.edu	Milwaukee Public Museum Attn: Carrie Trousil Becker 800 West Wells Street Milwaukee, WI 53233-1478	Print
Milwaukee County Zoo	Laura Pedriani, Marketing Director	(414) 256-5414, laura.pedriani@milwcnty.com	Milwaukee County Zoo Attn: Laura Pedriani 10001 W. Bluemound Rd. Milwaukee, WI 53226	Print
Boerner Botanical Gardens	Monica Jeske, Education Manager	(414) 525-5659, mjeske@fbog.org	Friends of Boerner Botanical Gardens Attn: Monica Jeske 9400 Boerner Drive Suite 1 Hales Corners, WI 53130	Print
International Crane Foundation	Sara Moore, Communications Specialist	(608) 356-9462 x155, sgm@savingcranes.org	International Crane Foundation Attn: Darcy Love E11376 Shady Lane Road Baraboo, WI 53913	Print and electronic

Unconfirmed possible partners

<u>Chicago</u>	
Little Red Schoolhouse Nature Center (Forest Preserve District of Cook County)	Don Parker, Volunteer Coordinator (708) 839-6897, don.parker@cookcounty.il.gov

<u>Illinois</u>	
Emily Oaks Nature Center (Skokie Park District)	Lee Hansen, Manager (847) 677-7001, lahansen@skokieparkdistrict.org

<u>Wisconsin</u>	
University of Wisconsin-Madison Arboretum	Molly Murray, Outreach Programs Manager (608) 262-5522, mfmurray@wisc.edu
Wild Ones	Maryann Whitman, Vice President (248) 652-4004, comco@wildones.org
Retzer Nature Center (Waukesha County Park System)	Ginny Bocek, Parks Program Specialist (262) 548-7803, gbocek@waukeshacounty.gov
The Aldo Leopold Foundation (visitor center)	Jeannine Richards, Communications Coordinator (608) 355-0279 x25, jeannine@aldoleopold.org

Appendix 17: General Survey Templates

Weekend of Restoration

General Survey

Pre-Event Survey

(To be handed out to participants before the start of the event)

Past Experience

- 1.) Is this your first time visiting a park within McHenry County Conservation District?
Yes No I don't know

- 2.) Is this your first time visiting Glacial Park?
Yes No I don't know

If you answered "No," please indicate why you previously visited Glacial Park (e.g. past Weekend of Restoration events, certification workshops, daytime visits, Trail of History).

- 3.) Have you done any ecological restoration in the past?
Yes No I don't know

If you answered "Yes," please indicate what kind of restoration you have engaged in (e.g. erosion control, invasive species removal) and where the restoration took place (e.g. forest preserve, personal property).

Participant Background

- 1.) How knowledgeable do you feel about each of the following?
(1 = not at all knowledgeable ... 5 = very knowledgeable)

- | | | | | | |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | The history of Glacial Park |
| 1 | 2 | 3 | 4 | 5 | The history of ecological restoration |
| 1 | 2 | 3 | 4 | 5 | The impact of climate change on native Illinois landscapes
(woodlands, wetlands, and prairies) |
| 1 | 2 | 3 | 4 | 5 | The differing perspectives about the role of restoration work |
| 1 | 2 | 3 | 4 | 5 | The methods and techniques of ecological restoration |
| 1 | 2 | 3 | 4 | 5 | The impact of human beings on the landscape |
| 1 | 2 | 3 | 4 | 5 | Changes in restoration planning as a result of climate change |

- 2.) How comfortable are you with doing the following kinds of activities?

(1 = very uncomfortable ... 5 = very comfortable; X = I don't know)

- | | | | | | | |
|---|---|---|---|---|---|--|
| 1 | 2 | 3 | 4 | 5 | X | Using restoration tools (e.g. loppers, shovels, chainsaws) |
| 1 | 2 | 3 | 4 | 5 | X | Spending time outdoors away from all roads, buildings, and other
manmade structures |
| 1 | 2 | 3 | 4 | 5 | X | Working with a team to accomplish ecological restoration goals |
| 1 | 2 | 3 | 4 | 5 | X | Discussing moral or ethical aspects of ecological restoration |

3.) How often do you engage in the following restoration activities throughout the year?

(1 = never ... 5 = very frequently)

- 1 2 3 4 5 Invasive species removal
- 1 2 3 4 5 Seeding or planting native plant species
- 1 2 3 4 5 Prescribed burns
- 1 2 3 4 5 Erosion control
- 1 2 3 4 5 Discussion of the benefits of restoration with friends and family
- 1 2 3 4 5 Reading books, articles, and newsletters about restoration

4.) How much do you agree with the following statements?

(1 = strongly disagree ... 3 = neither agree nor disagree ... 5 = strongly agree)

- 1 2 3 4 5 I believe it is unjust that humans have disturbed the natural balance of the land.
- 1 2 3 4 5 I believe that it is our responsibility as human beings to restore the land.
- 1 2 3 4 5 I believe humans have the ability and knowledge to restore a habitat back to its pre-settlement state.
- 1 2 3 4 5 I question whether it is worth devoting a great deal of human effort to restoring the land.
- 1 2 3 4 5 I think that human disturbance, even in the name of restoration, will continue to damage land. It should be left in its current state.

5.) Age: <20__ 21-30__ 31-40__ 41-50__ 51-60__ 61-70__ 70+__

Gender: Female____ Male ____ N/A____

Occupation:_____

Current ZIP code:_____

Is there any specific land that you would like to conduct ecological restoration on after attending this event? If so, what type of land?

6.) Are there any environmental organizations that you are a member of or volunteer for?

If so, which ones?

Post-Event Survey

(To be handed out to participants immediately after the event)

Now that the Weekend of Restoration has come to a close, please answer the following questions based on you feel right now.

1.) How knowledgeable do you feel about each of the following?

(1= not at all knowledgeable ... 5 = very knowledgeable)

1 2 3 4 5 The history of Glacial Park

1 2 3 4 5 The history of ecological restoration

1 2 3 4 5 The impact of climate change on native Illinois landscapes
(woodlands, wetlands, and prairies)

1 2 3 4 5 The differing perspectives about the role of restoration work

1 2 3 4 5 The methods and techniques of ecological restoration

1 2 3 4 5 The impact of human beings on the landscape

1 2 3 4 5 Changes in restoration planning as a result of climate change

2.) How comfortable are you with doing the following kinds of activities?

(1= very uncomfortable ... 5 = very comfortable; X = I don't know)

1 2 3 4 5 X Using restoration tools (e.g. loppers, shovels, chainsaws)

1 2 3 4 5 X Spending time outdoors away from all roads, buildings, and other manmade structures

1 2 3 4 5 X Working with a team to accomplish ecological restoration goals

1 2 3 4 5 X Discussing moral or ethical aspects of ecological restoration

3.) How often do you engage in the following restoration activities throughout the year?

(1 = never ... 5 = very frequently)

1 2 3 4 5 Invasive species removal

1 2 3 4 5 Seeding or planting native plant species

1 2 3 4 5 Prescribed burns

1 2 3 4 5 Erosion control

1 2 3 4 5 Discussion of the benefits of restoration with friends and family

1 2 3 4 5 Reading books, articles, and newsletters about restoration

4.) How much do you agree with the following statements?

(1 = strongly disagree ... 3 = neither agree nor disagree ... 5 = strongly agree)

1 2 3 4 5 I believe it is unjust that humans have disturbed the natural balance of the land.

1 2 3 4 5 I believe that it is our responsibility as human beings to restore this land.

1 2 3 4 5 I believe humans have the ability and knowledge to restore a habitat back to its pre-settlement state.

1 2 3 4 5 I question whether it is worth devoting a great deal of human effort to restoring the land.

1 2 3 4 5 I think that human disturbance, even in the name of restoration, will continue to damage land.
It should be left in its current state.

Appendix 18: Event Satisfaction Survey Template

To ensure that the Weekend of Restoration continues to improve and meet your educational and recreational needs in future years, McHenry County Conservation District would appreciate your feedback.

Please rate how satisfied you were about each aspect of the Weekend of Restoration. If you were in any way unsatisfied with anything, please explain why. (1 = very unsatisfied, 5 = very satisfied)

1 2 3 4 5 The format or layout of event (e.g. the balance of activities, breaks, meals)

Comments:.....
.....

1 2 3 4 5 The opportunity to work with a group of people and build camaraderie

Comments:.....
.....

1 2 3 4 5 The cost of registration for the event

Comments:.....
.....

1 2 3 4 5 The knowledge gained during the event

Comments:.....
.....

1 2 3 4 5 The instructions received when doing restoration work

Comments:.....
.....

1 2 3 4 5 The amount of time spent outdoors

Comments:.....
.....

1 2 3 4 5 The amount of time spent doing ecological restoration

Comments:.....
.....

1 2 3 4 5 The level of difficulty of the restoration work

Comments:.....
.....

1 2 3 4 5 The lectures on FILL IN TOPIC(S) HERE

Comments:.....
.....

1 2 3 4 5 The meals (including dietary options, times, locations)

Comments:.....
.....

1 2 3 4 5 The literary aspects of the event (e.g. readings)

Comments:.....
.....

1. What was your most favorite aspect of the Weekend of Restoration?
2. What was your least favorite aspect of the Weekend of Restoration?
3. What suggestions do you have for improving the event?
4. What suggestions do you have about advertising this event in the future?
5. What, if any, other ecological restoration-focused events would you like to attend at Glacial Park?
6. How do you think you will use Glacial Park as a recreational or educational resource in the future?
7. Would you be interested in staying involved with or learning about the progress of the site that you helped restore as part of the Weekend of Restoration? How so?

Appendix 19: Commitment Form Template

Do Your Part to Protect the Planet Make a Commitment!

I, _____, agree to partake in the following new behavior _____ for at least three months after the McHenry County Conservation District's Weekend of Restoration.

I commit to engaging in this environmentally responsible behavior because I know that my personal choices make a difference. I also pledge to share my knowledge about this behavior with my friends and family and to encourage them to try it.

New behavior ideas

Small investment required:

- Use natural light whenever possible
- Buy eco-friendly household products
- Put a displacement object in your toilet tank to save water
- Unplug electronics chargers (e.g. cell phone) and appliances (e.g. toaster) when not in use
- Bring a reusable water bottle or coffee mug to cafes and other food venues
- Print double-sided pages, and use printers sparingly
- Use reusable grocery bags

Moderate investment required:

- Run your dishwasher only when full
- Winterize your home windows
- Replace your gas-powered mower with a push mower
- Buy and eat local, seasonal, or organic food
- Consider ways to repurpose items before throwing them away
- Take shorter and cooler showers
- Ask your energy company to pursue renewable energy options

Large investment required:

- Bike, walk, or carpool to work
- Make your own cleaning products
- Replace your lawn with native, low-maintenance ground cover
- Compost your food and yard waste
- Grow an edible garden
- Buy energy-efficient appliances
- Incorporate vegetarian or vegan meals into your diet
- Install a rain barrel
- Participate in Community Supported Agriculture (CSA) with your neighbors

Ecological restoration activities:

- Participate in volunteer work days
- Remove invasive species
- Plant native plants
- Reforest a deforested area
- Restore a wetland
- Perform erosion control

Signature:

Date:

A journey of a thousand miles begins with a single step.



**WEEKEND OF RESTORATION:
EVENT HANDBOOK**

**PREPARED BY:
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MCHENRY COUNTY CONSERVATION DISTRICT**

Introduction

This program handbook was developed by a master's project team from the University of Michigan's School of Natural Resources and Environment and is intended for McHenry County Conservation District to use when developing future Weekend of Restoration events. This handbook and the recommendations contained within were informed by a variety of factors: the team's observations and conversations with participants during a pilot event that occurred September 23-25, 2011, participants' responses to a series of surveys, and relevant background research. Each recommendation provides reasoning from these various sources of information. Appendices offer additional content, including a summary of the survey findings referenced throughout the handbook, as well as a resource list for further reading.

The handbook will guide each stage of the Weekend of Restoration: planning, marketing, implementation, and evaluation. It also provides in-depth site analyses for three potential restoration sites for future events. The handbook is organized according to these phases, and MCCD can reference it during the appropriate stage in the process of preparing for and running future events. It also supplies a variety of templates and sample materials that MCCD can adapt for future use. An accompanying checklist further distills this wealth of information into a quick-reference format.

It is the team's hope that with this guide, the Weekend of Restoration program will repeat indefinitely, leaving behind an ever-expanding group of environmentally minded ecological restorers within MCCD and elsewhere.



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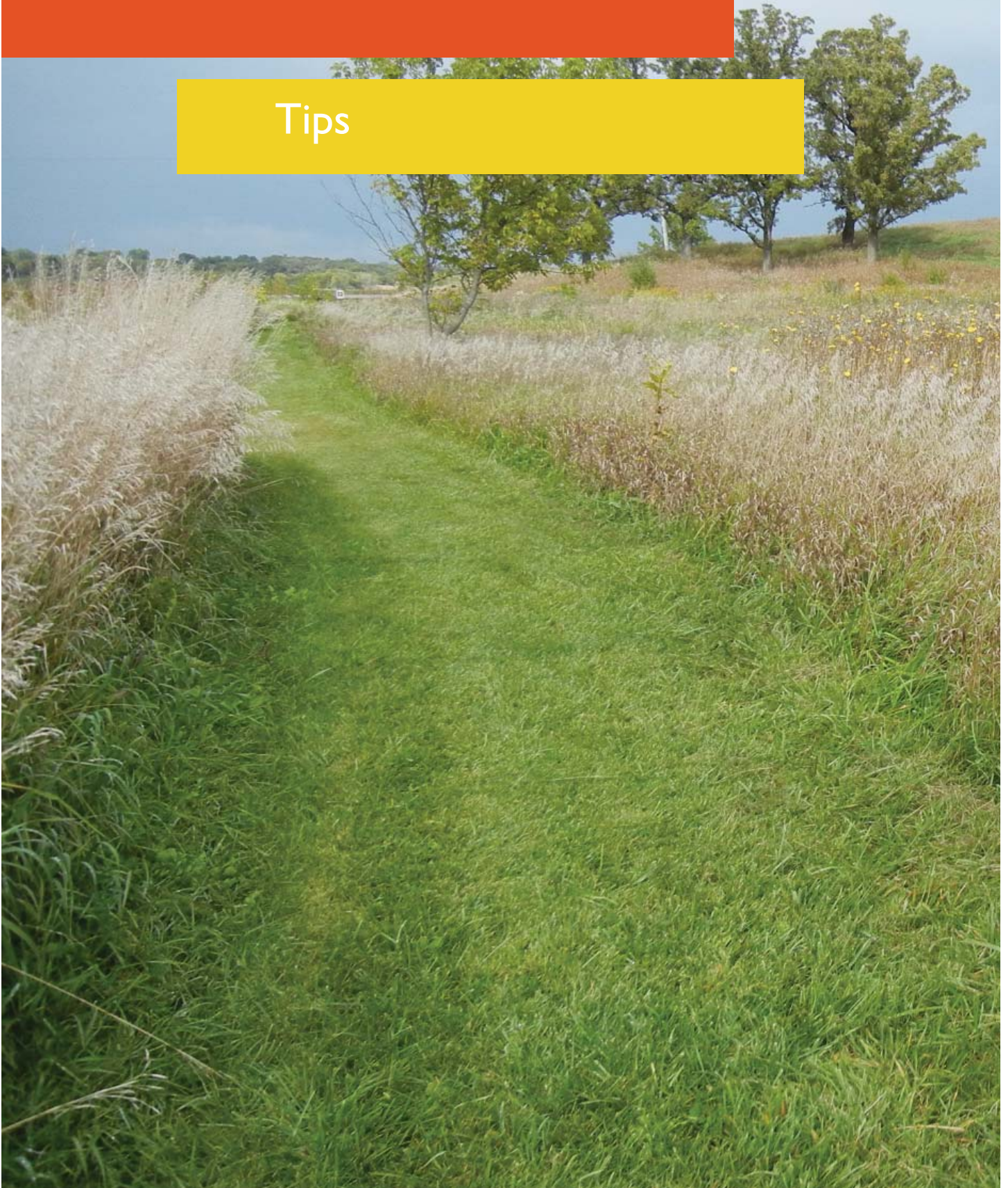
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Administrative Organization

Tips





Careful organization and planning are critical for ensuring that an event runs smoothly, employs best practices, and provides an optimal experience for participants. A great deal of planning went into the 2011 Weekend of Restoration, but as with any program, room for improvement exists. This handbook section provides recommendations for improving the planning and administrative organization aspects of the Weekend of Restoration program.



Administrative Organization

Tips

I **Create a cross-functional team (CFT) of staff members from several MCCD departments six months before the event to help plan, market, implement, and evaluate the Weekend of Restoration.**

- The CFT should consist of five or six relatively high-ranking individuals from the departments of natural resources management, education, and communications whose skills and knowledge complement each other (Webber, 2002).
- These staff members should have a history of mutual respect and working well together on past projects and should work at the same level within their own departments to limit any potential power inequalities within the group.
- However, the CFT should also engage junior staff members who can carry out lower-level tasks and ensure continued support for the event if older employees retire from the CFT or MCCD.
- Appoint one team member as the leader who has responsibility for facilitating discussions and making executive decisions as needed.
- Committed participation from CFT members will draw on experiences and resources from their respective departments. This comprehensive support will ensure that MCCD leaders view the Weekend of Restoration as a worthwhile project.

2

Assign at least one full-time intern or staff member to assist the program director in carrying out tasks for the duration of the planning, marketing, implementation, and evaluation of the Weekend of Restoration.

- This intern or staff member will devote the majority of his or her resources and time to the Weekend of Restoration for approximately six months preceding the event.
 - Potentially charge an experienced volunteer with some tasks, as well.
- Responsibilities should include but are not limited to:
 - Revision and distribution of printed and electronic marketing materials
 - Oversight of the completion and collection of participant marketing surveys at registration and event satisfaction surveys at the end of the event, as well as subsequent data entry
 - Preparation of supplies and materials for the event's ecological restoration work
 - Set up and cleaning of dining facilities used for event meals
- Five graduate students worked on the planning, marketing, implementation, and evaluation of the 2011 Weekend of Restoration during a 15-month period. Committed and educated staff and volunteers need to fill these roles for future events.

3

Communicate the Weekend of Restoration agenda to all staff members and volunteers involved with the event, especially staff members and volunteers who are not part of the CFT.

- During the 2011 Weekend of Restoration, staff members occasionally gave participants conflicting information about the type of food that would be served, the order of the day's activities, and the location of activities. This caused confusion among participants, resulting in frustration and delays in the starting times of some activities.
- Finalize the agenda and communicate it to all staff members, including those working at the front desk, a few days before the event.





4

Place a large Weekend of Restoration marketing poster and event agenda at the Lost Valley Visitor Center (LVVC) entrance and cafeteria for participants to refer to throughout the event.

- Research shows that people prefer to receive important information at key landmarks in their current environment, resulting in a reduction in stress and confusion about what is expected of them (Herzog & Leverich, 2003).





Tips

Existing Audience

New Audiences

Event Promotion

Marketing Evaluation

Marketing Survey Template

Potential Marketing Partners

Samples of Marketing Materials

Posters and Digital Fliers

Postcard

Brochure

Newsletter and Social Media

A photograph of a group of people in a forest. In the foreground, a man wearing a brown hat and glasses is looking to the left. In the background, other people are visible, including one wearing a black cap and another in a blue jacket. The scene is filled with green trees and foliage.

Marketing

Marketing plays a crucial role in generating interest in any event and securing a sufficient number of participants. The marketing campaign for the 2011 Weekend of Restoration reached primarily people already involved in MCCD activities. Expanding the program's marketing campaign may include reaching new audiences, developing a more diverse set of marketing materials, and forming partnerships with other conservation organizations. This handbook section provides recommendations for expanding the program's marketing campaign.



Marketing

Tips

Existing Audience

1 *Focus marketing to a large extent on MCCD's existing audience to continue building the program's foundation and ensure event participation, since this audience made up the majority of participants in 2011.*

- Fourteen of the 2011 Weekend of Restoration's 17 participants – about 82% – had previously visited Glacial Park for reasons such as classes and trainings, meetings, hiking, fishing, cross-country skiing, volunteering, ecological restoration, plant monitoring, and MCCD's Trail of History event. (See "Marketing Survey Results" in Appendix.)

2 *Promote the event through MCCD's print and electronic distribution networks, advertise it during MCCD's popular Trail of History program and other events, and encourage people to invite others.*

- MCCD's "Landscapes" quarterly magazine drew the most attention to the event, and multiple people learned about the event through MCCD's website, postcards, and other events or activities. Additionally, many people heard about the event through word of mouth. (See "Marketing Survey Results" in Appendix.)

3

Encourage MCCD employees – those who work at Glacial Park and those who work at other properties – to attend the event.

- Besides Weekend of Restoration leaders, only one other MCCD employee attended the 2011 event as a participant. (See “Marketing Survey Results” in Appendix.)
- This MCCD employee viewed the event as a very positive experience (Pettrak, 2011).
- Increased employee participation could raise awareness about the event and could increase employees’ interest and involvement in the planning process for future events.

New Audiences

1

To expand the program’s reach and attract new audiences, distribute printed marketing materials outside McHenry County and encourage people involved with MCCD to invite their friends, family, and coworkers to the event.

- The three event participants who had never heard of Glacial Park learned about the Weekend of Restoration through marketing strategies external to the MCCD network: a brochure at a nature center outside of McHenry County, from a friend, and from a family member. (See “Marketing Survey Results” in Appendix.)





2

Distribute printed materials in communities within an approximately 50-mile radius from Glacial Park, including Chicago.

- One participant, who had never before heard of Glacial Park, learned about the event through a brochure at Peck Farm Interpretive Center in Geneva, Illinois, which is approximately 35 miles south of Glacial Park. (See “Marketing Survey Results” in Appendix.)
- Another participant, who also was a newcomer to Glacial Park, lived in Chicago – about 50 miles southeast of Glacial Park – and learned about the event through word of mouth.
- The preponderance of well-known nature-related organizations in Chicago provides the opportunity to reach large audiences interested in environmental topics. In fact, nine nature organizations in Chicago, as well as six in Wisconsin and four elsewhere in Illinois, helped distribute print and electronic marketing materials to promote the 2011 Weekend of Restoration. They likely would agree to help promote future events. (See “Potential Marketing Partners” in Appendix.)

3

When targeting new audiences, encourage groups of people to sign up together. Offer an incentive, such as a partial event fee reimbursement, for those who bring someone to the event.

- The three participants who had never before heard of Glacial Park said the fact that someone they knew was also attending the event was a very compelling reason for signing up. (See “Marketing Survey Results” in Appendix.)

Event Promotion



When promoting the Weekend of Restoration, emphasize the content and location of the event, as well as the opportunities it presents to learn from experts, participate in ecological restoration, and work in a group setting.

- For example, highlight these factors through photos and descriptions that tell the stories of previous Weekend of Restoration accomplishments.
- The most compelling factors that motivated participants to sign up for the 2011 event included learning from experts, participating in ecological restoration, working in a group setting, and the event's location. (See "Marketing Survey Results" in Appendix.)
- Research shows that people feel satisfaction from working together as a team to accomplish a common goal (Maller, Townsend, Pryor, Brown, & St. Leger, 2005; Miles, Sullivan, & Kuo, 1998; O'Brien, Townsend, & Ebden, 2010). This kind of social contact also provides opportunities to network or to make friends (O'Brien et al., 2010; Schroeder, 2001.)
- Additionally, research shows that humans naturally seek out opportunities for learning, so the chance to explore through new experiences – such as ecological restoration – may motivate people to participate (Measham & Barnett, 2008).
- Participants in 2011 also viewed working outside and gaining ecological restoration skills as relatively high in terms of event satisfaction. (See "Event Satisfaction Survey Results" in Appendix.)
- Despite branding the 2011 event as a weekend getaway and a chance to make a difference during a vacation, participants did not view it as such. (See "Marketing Survey Results" in Appendix.)





2

Produce fewer printed materials, and target distribution locations more strategically.

- Despite distributing more than 2,000 printed marketing materials to MCCD facilities and 17 outside organizations, only six participants reported seeing printed marketing materials: four saw a postcard, one saw a poster, and one saw a brochure. (See “Marketing Survey Results” in Appendix and “Potential Marketing Partners” in Appendix.)

3

Lower the event cost, improve the benefits included in the price, and highlight what the cost covers. Try to quantify and emphasize what will be accomplished ecologically through the event fees.

- Participants rated the event’s price poorly in terms of event satisfaction. (See “Event Satisfaction Survey Results” in Appendix.)

4

Target people ages 51 to 60 who enjoy spending time outdoors, and highlight the outdoor components of the event.

- Seven of the 17 participants – about 41% – were ages 51 to 60, and many of them said they enjoyed spending time outdoors. (See “Demographics Survey Results” in Appendix.)
- After the event, many participants said they wished the event had included more outdoor time.

9

5

Target young professionals and students looking to build professional skills and engage in career networking in the natural resources field. Promote the event as an opportunity to learn from experts and engage in field work.

- Three of the event's 17 participants – about 18% – were students ages 18 to 20. (See “Demographics Survey Results” in Appendix.)
- Research shows that in the United States, young adults volunteer for environmental organizations at almost twice the rate of the general population (McDougle, Greenspan, & Handy, 2011).
- Many participants viewed the quality of the event's instructors and working with a group to do hands-on ecological restoration field work as extremely appealing aspects of the Weekend of Restoration. (See “Marketing Survey Results” in Appendix.)

6

Regularly update MCCD's website and social media channels with information about the event, and place items in MCCD's monthly e-newsletter several months in advance. Enable optional online registration.

- The Internet plays a major role in raising awareness about the Weekend of Restoration. Five participants learned about the event through MCCD's website, two saw it advertised in an email, and one read a digital flier. (See “Marketing Survey Results” in Appendix.)
- Therefore, MCCD should increase the frequency of digital communications about the event and should enable online registration to improve the convenience of registering for people who prefer to use the Internet as their main mode of communication.



10

Marketing Evaluation

I

Administer a marketing survey to participants registering for each Weekend of Restoration. Make improvements to the event's marketing campaign according to the results of current and past marketing surveys.

- Allow participants to complete the survey in the same format as their registration, either online or by mail.
- All 17 participants of the 2011 Weekend of Restoration completed marketing surveys when they registered for the event. Their responses shed light on what types of marketing materials participants encountered and what motivated them to register for the event. (See “Marketing Survey Results” in Appendix.)
- Administering similar surveys during registration for all subsequent Weekend of Restoration events, compiling results from all years, and altering the marketing campaign accordingly will ensure that the event's marketing strategy reaches the highest number of people in the most cost-efficient way. (See “Marketing Survey Template.”)
- Marketing survey results also will reveal whether MCCD is accomplishing its goals of expanding the event's audience.



Marketing Survey Templates ▷



Sample Marketing Materials ▷

Use the following sample promotional materials as a foundation from which to create print and electronic advertisements for future Weekend of Restoration events. Update or change all text related to event dates, cost, accommodations, contact information, theme, and restoration activity based on the details of each individual event.



Logistics

Tips

Budget

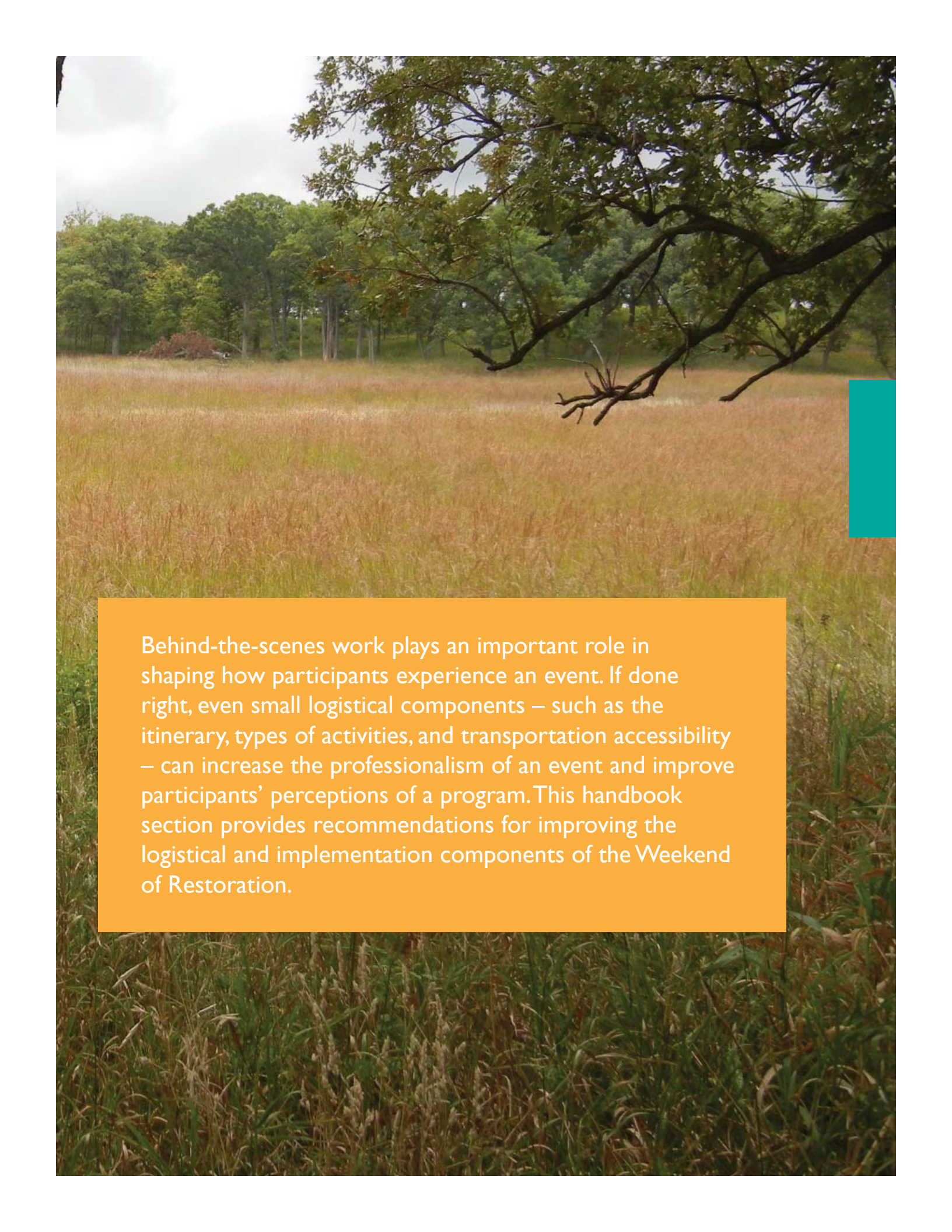
Agenda and Itinerary

Education

Field Work

Lodging and Transportation

Food

A photograph of a grassy field with a large tree branch in the foreground and a forest in the background. The field is filled with tall, golden-brown grasses. A large, dark tree branch hangs over the field from the right side. In the background, there is a dense forest of green trees under a cloudy sky. A teal square is visible on the right side of the image.

Behind-the-scenes work plays an important role in shaping how participants experience an event. If done right, even small logistical components – such as the itinerary, types of activities, and transportation accessibility – can increase the professionalism of an event and improve participants’ perceptions of a program. This handbook section provides recommendations for improving the logistical and implementation components of the Weekend of Restoration.



Tips

Budget

1

Budget for the Weekend of Restoration according to its goals.

- The philosophy behind the Weekend of Restoration was that participants' enjoyment and engagement with nature was as important as the restoration work accomplished. The budget for the event should appropriately reflect these dual priorities.

2

Allocate sufficient funds for participant needs, including meals, snacks, drinking water, and welcome packages containing maps, event agendas, and MCCD gifts.

- Participants' enjoyment stems in part from engaging in restoration work but also from feeling as if their needs are cared for in terms of food, drink, maps, agendas, and other helpful items. Do not skimp on these items or leave them to the remaining funds after purchasing all the restoration supplies.
- By adequately providing for participant needs, MCCD will convey the feeling of a well-organized event, which will motivate participants and attract future participants.



Agenda and Itinerary



Provide an agenda for participants that details the sequence and locations of events for the weekend. Try not to deviate from this set agenda.

- Research shows that learners can better absorb information during a trip or event when they are informed in advance of its logistical dimensions, such as the locations of restroom facilities or when breaks will occur. This puts them more at ease to enjoy themselves (Falk & Dierking, 1992).
- Abrupt deviations from the itinerary during the 2011 event led to confusion during which a few participants were left behind or went to the wrong activity site. The master's project team noticed a few instances in which participants were unsure what they needed to bring with them (e.g. jackets) because they did not know which activity was next. Diligently following a clear agenda would help alleviate some of these complications.
- In keeping with the idea of a set agenda, be sure to end the event on time. Participants felt tired by the end of the weekend, and one specifically listed the event running longer than expected as his least favorite part of the weekend.



2

Incorporate adequate breaks into the agenda, particularly at key transitional moments, such as between field sessions and indoor lectures or discussions.

- Participants expressed a desire for more breaks on the event satisfaction survey, with one specifically suggesting that a break between field sessions and indoor lectures or discussions would have been helpful. This would allow time for participants to use the bathroom, wash up, or eat a snack. Another participant listed feeling tired as a difficulty during the weekend, which also may have been helped by allowing participants a little bit of downtime. (See “Event Satisfaction Survey Results” in Appendix.)
- Though only a couple of the participants mentioned lack of breaks, the project team noticed that many participants lagged behind the group during these transitional periods because they were doing things that a break would have allowed for, such as using the bathroom or getting a cup of coffee. While the laid-back style of the weekend meant that their late arrival at the next activity was not intrusive, some may have felt less free to take time for these individual breaks or uncomfortable upon reentering an activity. In one case, more preparation time would have prevented leaving behind two participants.

3

Have alternate activities planned and posted in case of disruption from inclement weather. Include these alternate activities in the agenda.

- Many participants expressed that outdoor work was their favorite part of the weekend, and many expressed either appreciation or desire for variety. Therefore, alternate activities that replace hands-on field work should be similarly hands-on, if possible, and contribute to the overall theme of the weekend.
- Include some indication of what the alternate activity is in the agenda. If clutter is a concern on the agenda, then, at a minimum, include where participants should meet in case of inclement weather to await further instruction.

4

Distribute agendas and other helpful items upon participants' arrival on Friday evening.

- Provide gift bags containing the agenda, a map of Glacial Park and the restoration site, a water bottle and coffee mug that participants can use all weekend, a notepad, and a pen. Provide a list of plants that participants will plant at the site and the native plants already located at the site.

5

Incorporate variety into lectures and discussions to better accommodate the varied learning styles of audience members.

- Research shows that people learn in different ways, with some preferring that information be presented verbally and others preferring visual representations. Providing a combination of both formats will best meet the needs of all participants (Felder & Silverman, 1988; Felder & Spurlin, 2005).
- The hands-on nature of the 2011 restoration work was highly valued by participants, many of whom responded that it was their favorite part of the weekend. A couple of the participants indicated that they enjoyed learning about and discussing the morality and processes of restoration, while many others expressed that the lectures, philosophical discussions, and panel discussion were their least favorite parts of the weekend.
- While participants will inevitably disagree about their favorite and least favorite activities, incorporating a wider variety of styles – and potentially including presenters with differing backgrounds and styles – may help ensure that the event provides something for everyone.

Education



Use Glacial Park's landscape as an effective outdoor classroom.

- The 2011 traveling soils lecture provides a good example of an activity that took advantage of Glacial Park's diverse landscape by describing and illustrating the geological, ecological, and hydrological history and characteristics of the site.

- This activity could be enhanced by introducing the goals of the session, traveling together as a group from site to site, and concentrating on a theme relevant to the weekend's restoration work.

- While on-site instruction provides an excellent learning setting, it also poses challenges. It can be more difficult for participants to gather around an object of discussion and more difficult to hear when outdoors.

- Ensure that everyone has arrived before beginning a talking point, ask questions so participants can share what they already know and stay engaged, and pass around props or other visual aids.



2

Tie hikes in with the weekend's theme, and use them to introduce variety throughout the day.

- While some participants enjoyed the optional morning hikes during the 2011 event, planning them as activities integrated into the day's itinerary might lead more participants to enjoy them. One participant specifically suggested this in his survey responses.
- An educational hike in the middle of the day can break up work sessions and highlight similarities and differences between other restoration sites in the park. Participants consistently expressed a desire for more outdoor time, and this would introduce a bit more of it.
- Planning hikes so they tie into the weekend's theme and better complement the other activities, lessons, and discussions will provide a more cohesive experience. The team observed that the 2011 hikes did not have a strong wetland restoration component and amounted to general hikes around the park. A planned, guided hike can still have a comfortable feel while complementing the weekend's other messages effortlessly.

3

Use questions to consistently engage participants.

- While some participants are naturally inclined to join discussions or ask questions during a lecture, others need more encouragement. To avoid losing these or any other participants to distractions, pose questions to the group as a whole or individuals periodically. Make an active effort to engage participants who tend toward being passive observers (Hall, Strangman, & Meyer, 2003).
 - For example, when inspecting soil cores, pass them around and ask participants to describe what they notice or how the soil feels before pointing out key features. In lectures, ask participants to share what they already know about, for example, wetland functioning and ecosystem services. Building on the audience's prior knowledge will provide a better learning experience.



Field Work

1 *Provide all necessary supplies, have enough for all participants, and stock supplies at the site in advance. In the case of smaller items, such as gloves, put them on the vehicle going out to the site ahead of time.*

- Research shows that volunteers are highly motivated by working on projects that are well organized (Grese, Kaplan, & Ryan, 2001). Providing an appropriate amount of supplies and having them ready at the site will convey a sense that the event is well planned and organized because the preparations will be invisible to the participants.

- The master's project team observed that while some participants brought their own tools, such as gloves, other participants were less prepared and lacked materials that the event organizers assumed they would bring. Also, supplies occasionally ran out and participants had to wait while staff members replenished them. Having all materials at the site in advance will help work sessions run more fluidly. This will not only inspire greater confidence in the event leadership but also allow participants to focus on the work itself.

2 *Provide visual aids to help with instruction on site.*

- During the 2011 event, participants had trouble remembering which seed mixes corresponded with which areas of the wetland. Though the areas of the wetland were marked with flags and the seed bags were marked with the names of each area, a visual aid that graphically indicated the distinct sections and their corresponding seed mixes would have clarified the process.

- Visual aids, such as basic signs, can not only mark what needs to happen on the site itself but also label the location of supplies, where to return supplies, or the location of drinking water and snacks.

- Provide maps to participants en route to the restoration site so they can place their work in the larger context of the park and find their way around.

3

Center the field sessions on activities that are positive in nature, such as planting native plants rather than removing invasive plants, whenever possible.

- Participants consistently listed planting as their favorite part of the weekend. While it is difficult to tell whether they specifically enjoyed planting or whether they enjoyed field work in general, the project team's impression is that it is more uplifting to work on a positive activity that supports growth and renewal than one that entails removal or destruction – even invasive species removal, which is ultimately positive.
- When reflecting on progress made from removing invasive species, people can easily feel overwhelmed by the work remaining. On the other hand, reflecting on progress from planting or seeding is much more likely to inspire, regardless of the amount of work remaining.
 - During restoration projects that require invasive species removal (for example, see the proposed Wiedrich Woods project on page 47), frame the work in a positive light. Communicate that the goal is restoring ecological integrity by providing the context that removal of invasive species from the site will make possible the regeneration of native ecosystems.
 - Point out the progress made at the site, such as the volume of plants removed in a short period of time or the amount of newly cleared area.





Lodging and Transportation



Provide snacks, water, and breaks at the site during field sessions.

- To convey a sense of the event's organization and preparation, as well as to convey appreciation for participants' hard work, provide snacks and water at the restoration site.
- Taking breaks also allows interesting conversations and sharing to take place.



Pause en route to or from the site, in particular before the first and after the last field sessions, to view the restoration project in context and highlight the work accomplished.

- Putting the restoration project in its temporal and spatial context will help participants feel they are part of a larger effort, which can powerfully motivate volunteers (Schroeder, 2001; Miles, Sullivan, & Kuo, 1998).
- Viewing the work accomplished will help participants feel a sense of ownership of the site and motivate them to remain involved with it in the future.
 - o Participants listed the graduation ceremony as a valued component of the 2011 event, and the master's project team observed participants' appreciation and the sincerity with which they admired their collective accomplishment. In the following months, participants continued to visit the site and exchange photos, displaying a sense of ownership.

3

Provide an on-site lodging option, preferably camping, so participants can stay for the entire weekend.

- On-site lodging will help attract participants from a wider geographic area and may enable people who live farther away to attend the event.
 - One participant who traveled a long distance had difficulty finding reputable and affordable accommodations, while two other participants drove an hour each way all three days of the event.
 - Not everyone is able or willing to commute such distances, so providing an on-site option would widen the pool of potential participants.
- Staying on site would enhance the community-building portion of the weekend and make the entire event feel more all-inclusive, perhaps making it feel more like an escape or getaway.
- On-site lodging also paves the way for other community-building activities, such as a bonfire or night hike.

4

Provide transportation between on-site lodging, the visitor center, and the work site.

- Use 15-passenger vans or other MCCCD vehicles, driven by staff, to transport participants whenever motorized travel is required.
- As with lodging, having participants travel together during the weekend will make the experience feel all-inclusive and effortless.
- Traveling together in groups can prevent confusion during which participants may get lost or go to the wrong location. It will also encourage more community-building as participants move around as a group for the entire weekend.





Food

1 *Include a dietary limitations section on registration forms, and ensure that these needs are considered in menu planning and food preparation.*

- Though 2011 participants expressed dietary needs in advance, the caterer did not receive this information. When the master's project team cooked a separate meal for a vegan participant, a number of vegetarian participants then came forward expressing a desire for more vegetarian options. Although the caterer soon remedied the situation, two meals had already passed during which dietary needs were not taken into account. Discovering and communicating these needs ahead of time will prevent this snag in the future.

2 *Provide a substantial breakfast and healthy snack options.*

- Before participants go out into the field to perform hands-on work, they require adequate nutrition to support these activities.

3 *Display a preference for seasonal, local, and organic foods, in keeping with the event's environmental goals.*

- Although it may be more difficult and costly to insist a caterer adhere to this policy, providing environmentally-friendly food and drink whenever possible would go a long way toward demonstrating the seriousness of the event's pro-environmental goals and MCCC's pro-environmental mission. Ideally, this means that snacks would not be prepackaged or purchased from a large grocery store chain.

- Highlight MCCC's effort to buy these foods and encourage participants to continue this practice after the weekend.

4

Provide reusable containers and dishes.

- Again, in keeping with MCCD's pro-environmental mission and the pro-environmental theme of the weekend, provide reusable mugs and other dishware for participants. This may mean giving participants MCCD logo mugs or water bottles that they get to keep or simply using dishware from the kitchen more effectively.
- Highlight MCCD's effort to use these items and encourage participants to continue this practice after the weekend.

5

If MCCD or anyone involved with the Weekend of Restoration has composting facilities available, involve participants in composting their food waste.

- Composting would further contribute to the feeling that every part of the weekend benefits the environment.





Tips

General Evaluation
Event Satisfaction Survey

Survey Templates

General Evaluation
Event Satisfaction



Evaluation

Evaluation can help an environmental education program manager gain a better grasp of a program's effectiveness at achieving its goals, which can inform decisions related to future events. Weekend of Restoration evaluations may assess success at accomplishing goals such as diversifying the event's participant base, providing a high-quality and satisfying experience, encouraging conservation behaviors, and fostering feelings of environmental stewardship. This handbook section provides recommendations for evaluating future events.



General Evaluation

Tips

1

Conduct an evaluation of each Weekend of Restoration.

- An evaluation will allow the program director to identify specific strengths and weaknesses and then use that information to improve certain components of the event and tailor them to different audiences.
- To conduct an effective evaluation, follow closely the step-by-step guidelines provided by “My Environmental Education Evaluation Resource Assistant,” or MEERA, an online evaluation toolkit found at <http://meera.snre.umich.edu>.
- Refrain from jumping into the design of an evaluation before truly understanding what needs to be measured and what resources MCCD has available for conducting the evaluation.

2

Administer a summative evaluation immediately following completion of the event and again several months later to inform development of the next event.

- A follow-up evaluation given at a later time can also serve as an opportunity to encourage participants to engage in ecological restoration tasks outside of Glacial Park.
- The specific and thoughtful information generated by a well-conducted evaluation can lead to administrative support and funding for future events. This recognition could encourage other staff members to help organize and provide resources for future events (NOAA, 2004).

3

Conduct a formative evaluation early in the planning and development stages and throughout implementation to assess the effectiveness of certain aspects of the event.

- Conducting a formative evaluation during event development and implementation will help those creating the program focus on their objectives and make improvements as the event is in motion (Duvall, Higgs, & Wolske, 2007).
- Early evaluations also give the program director a chance to measure certain variables, such as baseline knowledge, before participants are exposed to the educational components of the event.
- Evaluations should be adaptive in that they should be tailored to each year's event, since different events will have different goals and different types of participants.

4

Use surveys to quickly and cost-effectively evaluate whether the event changed participants' levels of knowledge, skills, attitudes, and behaviors.

- While many evaluation methods exist, surveys may be particularly useful for evaluating the Weekend of Restoration because they are not costly or difficult to create, administer, and analyze (Schutt, 2001).
- If the event's goals include encouraging changes that are sustained after the event, MCCD should evaluate them several months later through a longitudinal survey to ascertain whether the changes proved durable.
- A follow-up survey can also serve as an effective reminder for participants to maintain those changes.

Event Satisfaction Survey

1 ***Encourage staff members to interact with participants to gauge how they feel about the event as it takes place. With permission, write down specific quotes to evaluate later.***

- Staff observations and interviews with participants can act as valuable feedback which can inform event planning and implementation in the future.
- MCCD can also use participant quotes in future marketing materials.

2 ***Practice active evaluation during the event, and be perceptive.***

- If staff members see tired and sluggish behavior, give participants the option to do something else to provide variety or better suit their interests.
- If participants seem especially engaged in a certain aspect of the event, make note of this and extend the duration of that activity during the current event and future events.



3

Encourage all participants to complete an event satisfaction survey at the end of the event before leaving Glacial Park.

- This survey will allow MCCD to determine whether some or all of the event’s objectives were met, including whether it provided an enjoyable and educational experience for participants as they gained knowledge and skills related to ecological restoration. (See “Event Satisfaction Survey Template.”)
- This platform can allow participants to voice comments, concerns, recommendations, and gratitude regarding the event.
- MCCD should use survey results to frame the development of future Weekend of Restoration events.

4

To determine how participants responded to the different components of the event, ask them to specifically evaluate each one on a scale from 1 to 5.

- For example: “How much did you enjoy the morning hike on Saturday? Please rate your enjoyment from 1 to 5, where 1=‘strongly disliked’ and 5=‘strongly liked.’ ”



5

In addition to scaled questions, ask open-ended questions so participants can express their compliments and constructive criticisms.

- For example:
 - o “What did you particularly like about the Weekend of Restoration?”
 - o “What would you have liked to see during the Weekend of Restoration that we did not include?”
 - o “Are there any other changes you would suggest?”

6

On the event satisfaction survey, ask participants whether they would like MCCD to contact them with updates about the site that they helped restore.

- If they would like MCCD to contact them, ask for their email addresses.
- Use this opportunity to also advertise future Weekend of Restoration events.



Survey Templates ▷

Use the following survey templates to evaluate future Weekends of Restoration. Update or change all questions to reflect the unique goals and features of each specific event.



Tips

Commitment


Prompts

Modeling and Social Networks

Feedback

Commitment Form Template

Behavior Change

A photograph of a grassy field with a line of trees in the background under a blue sky with light clouds. The foreground is filled with tall, dry grasses and some green plants. A purple text box is overlaid on the lower left portion of the image.

Fostering feelings of environmental stewardship and encouraging conservation behaviors – including ecological restoration activities and environmentally responsible daily behaviors – are goals of many environmental education programs, including the Weekend of Restoration. This handbook section provides recommendations related to various options for strengthening the event’s behavior change efforts, if MCCD chooses to focus on that aspect of the event.



Behavior Change

Tips

Commitment

1 ***Ask each participant to sign a written commitment form pledging to engage in one new environmentally responsible behavior (ERB) or ecological restoration activity during a specified time period, such as the three months following the event.***

- Research shows that making a commitment to a particular behavior can effectively motivate people to engage in that behavior and continue the behavior even after the commitment period ends. This occurs, in part, because people may internalize the motivation, attributing the cause of their behavior to their own attitudes (Katzew, 1996).
- Written commitments tend to yield better results than verbal commitments. In one study, people who signed written commitments recycled more often, larger amounts, and for longer periods of time than those who only verbally committed to recycling (Pardini & Katzew, 1983-84).
- Two months after signing commitment forms during the 2011 Weekend of Restoration, participants said they still engaged in about 42% of the behaviors to which they had committed. (See “Commitment Survey Results” in Appendix.)

**2**

Suggest that participants choose only behaviors they can reasonably accomplish within the specified time frame.

- Several attendees committed to long-term behaviors, such as winterizing a home or purchasing energy-efficient appliances, but indicated on their follow-up surveys that they had not yet had an opportunity to accomplish the behavior. (See “Commitment Survey Results” in Appendix.)

3

Make it clear that each participant should set a realistic goal and select a behavior he or she is actually capable of completing.

- Some participants selected multiple behaviors and subsequently did not uphold their commitments to all of them, and others selected behaviors that were not possible because of individual barriers. For example, one participant committed to growing an edible garden but reported in the follow-up survey that his or her condominium complex did not allow gardens. (See “Commitment Survey Results” in Appendix.)

4

Provide resources that could help participants change their behaviors or eliminate barriers.

- For example, give participants instructions about how to create a compost bin, or provide a list of upcoming ecological restoration work days.
- Research shows that providing free tools can increase compliance with commitments. In one study, a greater proportion of people who had committed to riding the bus and also received free bus tickets actually rode the bus, compared with those who only made a commitment but did not receive free tickets (Bachman & Katzev, 1982).

5

Ask participants to share their commitments publicly if they feel comfortable doing so.

- For example, participants could read their commitments aloud, write them on a sign in a common area, announce them at a graduation ceremony, or post them on a website.
- Research shows that people who are publicly associated with their commitments tend to honor their pledges better than those who commit privately. In one study, people who made public commitments used less energy than people who made private commitments, and they continued to save energy for a longer period of time (Pallak, Cook, & Sullivan, 1980).
- Additionally, publicly sharing commitments can lead to future ERBs aligned with the attitude expressed in the public commitment (Pallak, Cook, & Sullivan, 1980).



6

Provide a way for participants to highlight the ERBs and ecological restoration activities in which they already engage.

- For instance, when publicly sharing their commitments, participants could also give the group examples of ERBs they already perform. Alternatively, participants could write down their current behaviors, and MCCD staff could compile a list of all the participants' behaviors and share them with the group.
- When filling out commitment forms at the 2011 Weekend of Restoration, several participants expressed both verbally and in writing that they already did many of the behaviors listed, indicating discontent with the fact that the forms only asked them to select new ERBs and did not allow them to list their current behaviors. Some people incorrectly filled out the forms, selecting both new and current behaviors.

7

Give participants a smaller behavior change request the day before administering the commitment.

- For example, ask participants to answer short questionnaires about their current behaviors or sign forms saying they acknowledge they will soon be asked to make real commitments.
- Giving people a small, initial request before a large behavior change request – called a “foot-in-the-door” technique – can make commitments more effective. In one study, people who experienced a foot-in-the-door technique before making a commitment reduced their electricity consumption more than people who only made a commitment (Katzew & Johnson, 1984).



8

Give participants instructional information and teach them the skills necessary to engage in the proposed ERBs and ecological restoration activities. Explain the ways in which those behaviors will positively impact the environment.

- Research shows that people who possess more knowledge about environmental issues, more procedural knowledge about how to take action on environmental issues, or both, more often engage in ERBs than those with less knowledge (Hines, Hungerford, & Tomera, 1987).
- Behavior change interventions are most effective when they provide rationale for and precise information about the target behaviors, demonstrate that the behaviors can lead to benefits, and make available training and methods for maintaining the behaviors long term (Ester & Winnett, 1981-82).
- Some 2011 Weekend of Restoration participants reported engaging in erosion control activities and planting native plants more frequently two months after the event than before they attended the event. The program – which taught skills in native planting and erosion control – may have equipped participants to try these particular types of restoration for the first time on their own. For others, it may have increased their confidence, leading them to complete these restoration tasks more often. (See “Behavior Change Survey Results” in Appendix.)

Prompts



Soon after the event, send participants photocopies of their individual commitment forms. Also include in the envelope small reminder prompts, such as personalized index cards, and ask participants to hang the prompts near the location of the behavior.

- For example, mail a participant a prompt stating that he or she committed to using natural light, and ask that person to hang the prompt near a light switch.
- Research shows that prompts most effectively encourage behavior change when they are specific about the desired behavior, located in close proximity to the behavior, convenient, salient, direct, repeated, and intrusive (Ester & Winett, 1981-82).





Modeling and Social Networks

1

Ask MCCD staff members to publicly make behavior change commitments in front of the group and then tangibly demonstrate how they intend to honor those commitments.

- For example, if staff members wish to promote composting, start a composting bin at the Lost Valley Visitor Center and use it throughout the weekend.
- Research shows that early adopters of conservation behaviors often serve as behavioral models for others. When a model – usually someone of high local status – performs a target behavior, it often prompts others to follow suit (Ester & Winnett, 1981-82).

2

Provide demonstrations and training related to the behaviors participants want to change, and suggest ways that participants can maintain the behaviors long term.

- For example, demonstrate composting and then pass out instructions detailing how to create a compost bin.
- Research shows that in-person demonstrations, also called participant modeling, can effectively equip people to perform new behaviors and can increase the likelihood of behavior change. In one study, a modeling technique of providing step-by-step demonstrations of energy-efficient behaviors and retrofitting strategies led to reduced energy usage (Ester & Winnett, 1981-82).

3

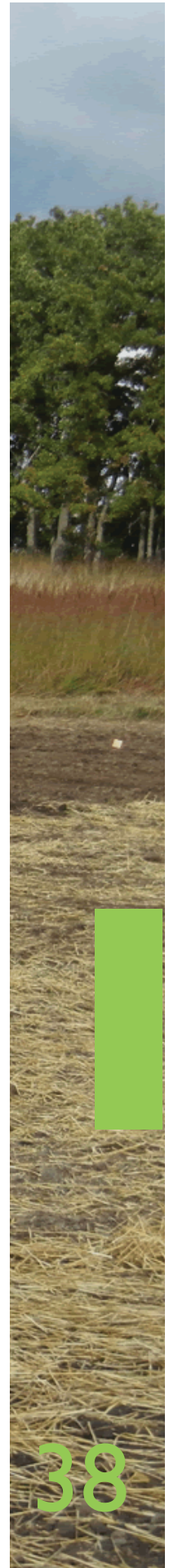
Ask a group leader or previous Weekend of Restoration participant to tell the group about his or her new ERBs – including ERBs committed to during the previous year’s event – and to encourage other participants to change their behaviors.

- Research shows that tapping existing local social networks – such as the Weekend of Restoration group – can help promote behavior change. In several studies, researchers have found that encouragement from influential others increased adoption of energy-conserving behaviors, and neighborhoods with strong, cohesive social networks conserved more energy than those with weak social networks (Ester & Winnett, 1981-82).

4

Incorporate modeling opportunities throughout the weekend to promote adoption of ERBs after the event.

- The 2011 Weekend of Restoration did not target ERBs to the extent that it targeted ecological restoration behaviors. Participants discussed and learned skills for engaging in ecological restoration but did not discuss or learn skills relevant to ERBs. They also engaged in only one behavior change technique – commitment – focused on ERBs.
- After the event, Weekend of Restoration participants did not engage in ERBs significantly more frequently than they did before the event. (See “Behavior Change Survey Results” in Appendix.)
- Therefore, if Weekend of Restoration leaders discuss and model ERBs more frequently throughout the weekend, it is possible that participants may be more likely to adopt ERBs after the event.





Feedback

1

Give participants individual feedback about their contributions to the event's ecological restoration task or about the ERBs they engage in during the event. Explain how their accomplishments fit into larger-scale efforts.

- For example, keep participants updated on how many pounds of seeds they planted or how many pounds of food scraps they composted during the event's meals.
- Research shows that providing performance-related feedback motivates people to act and improves performance. In one study, people given feedback increased the amount of paper they recycled (Katzev & Mishima, 1992).
- Additionally, the sense of ownership that comes from working on a site often serves as incentive to maintain and continually improve that site (Measham & Barnett, 2008).
- Research also shows that volunteers often find it meaningful to know that their ecological restoration work is part of a larger effort, spatially and temporally (Schroeder, 2001).

2

Provide comparative feedback allowing participants to see how their individual performance compares with the performance of other participants. Post a copy of this feedback – broken down by individual – in a common area.

- Research shows that feedback is even more effective at increasing desired behaviors when participants can compare their own results with those of their colleagues. In one study, people who received feedback on how their electricity usage compared with others' used less electricity than those who received only individual feedback (Pallak, Cook, & Sullivan 1980).

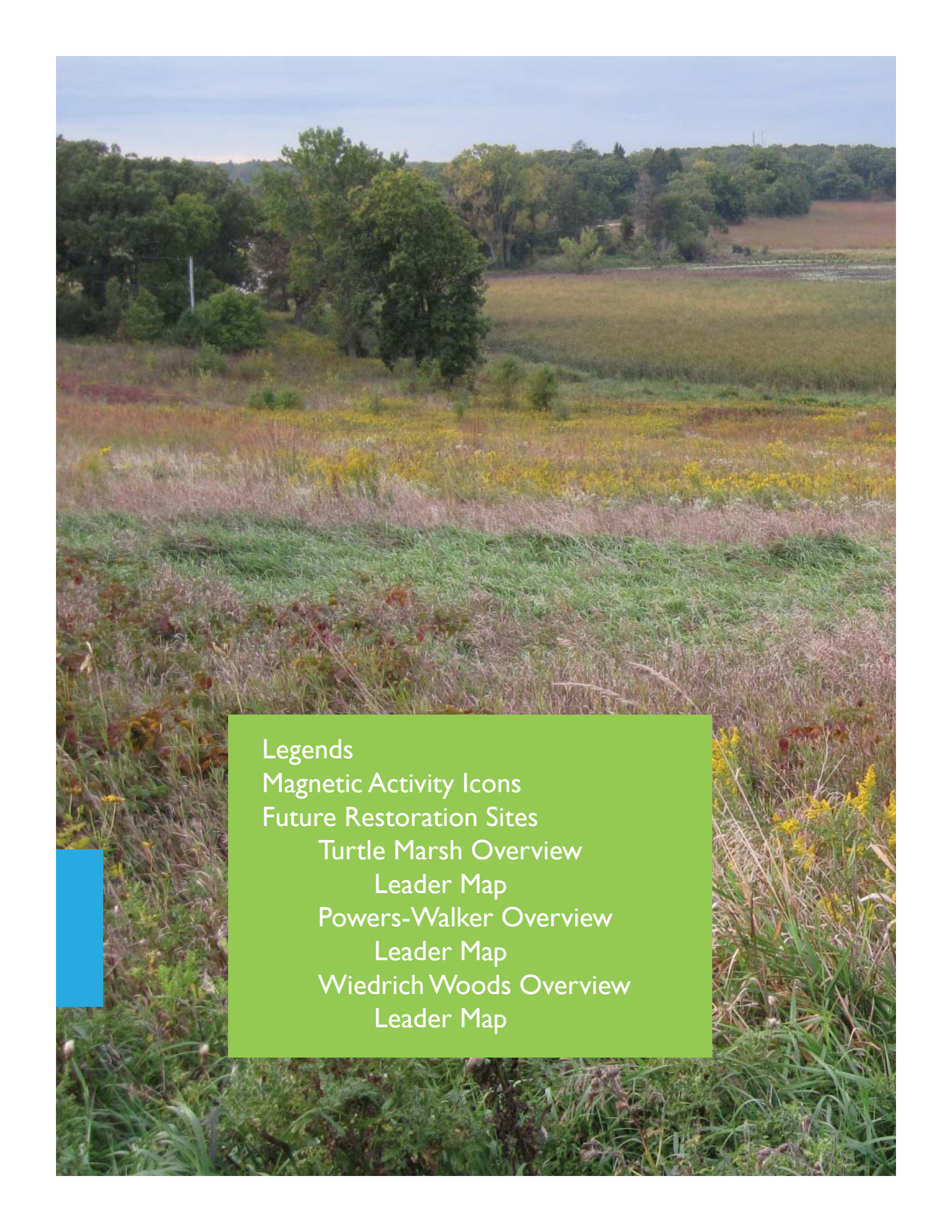
3

After the event, use a website or social media to provide participants with feedback about the progress of the restoration site. Provide a space where participants can post information about their own ecological restoration or ERB accomplishments; share information, articles, or upcoming events with one another; and ask questions.

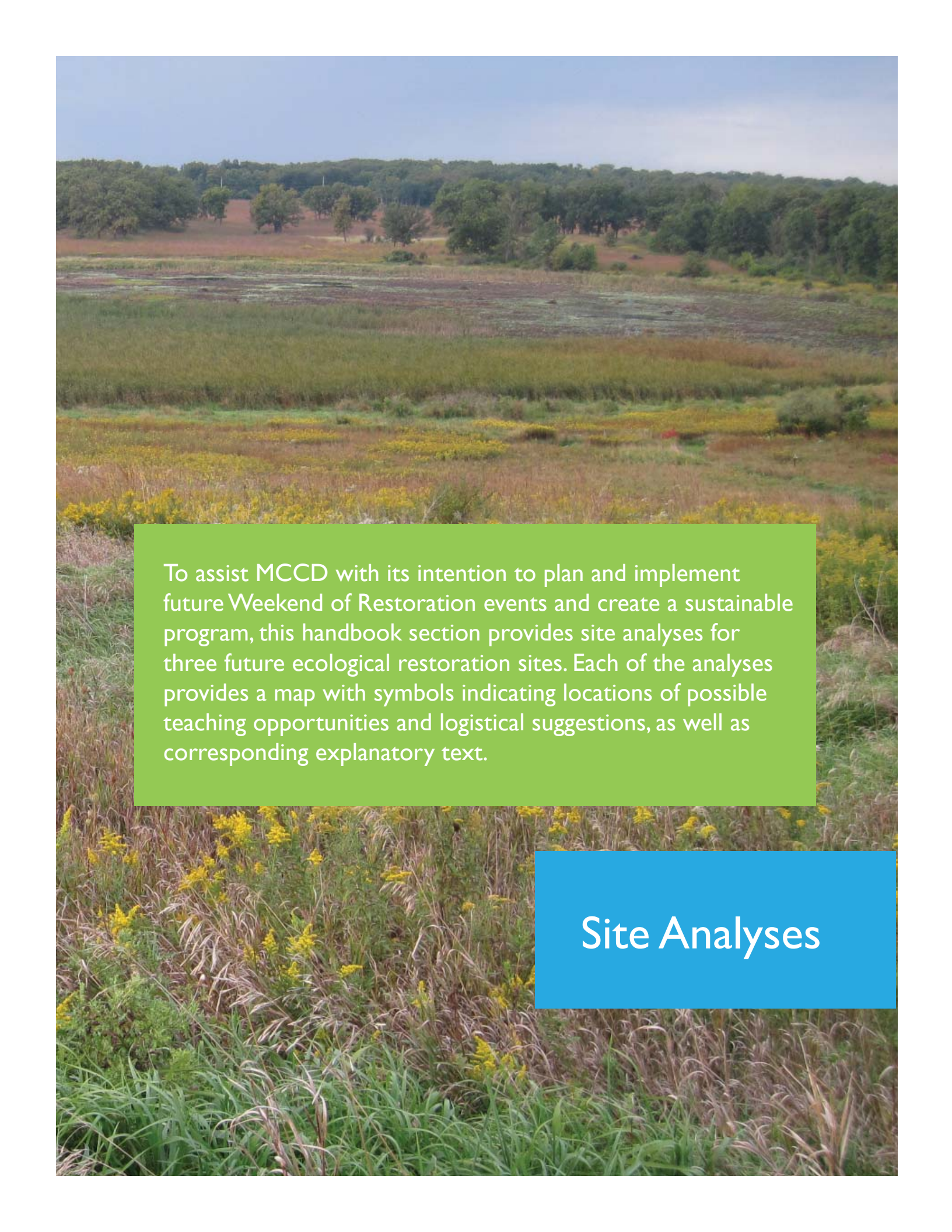
- Research shows that feedback involving two-way communications more effectively promotes behavior change (Ester & Winett, 1981-82).
- In the months after the event, Weekend of Restoration participants displayed a desire to remain connected to one another and to the restoration site. Several participants shared emails updating the others about progress they had observed at the site, and multiple participants joined a Facebook page dedicated to the event.
- After restoring a site, volunteers often find it rewarding to observe changes in that landscape, so providing frequent updates about the site could motivate participants to return to MCCD as visitors or long-term volunteers (Schroeder, 2001).
- Providing a digital communication outlet will help maintain and strengthen the group's social network, which could help encourage behavior change.



Commitment Form Template ▶



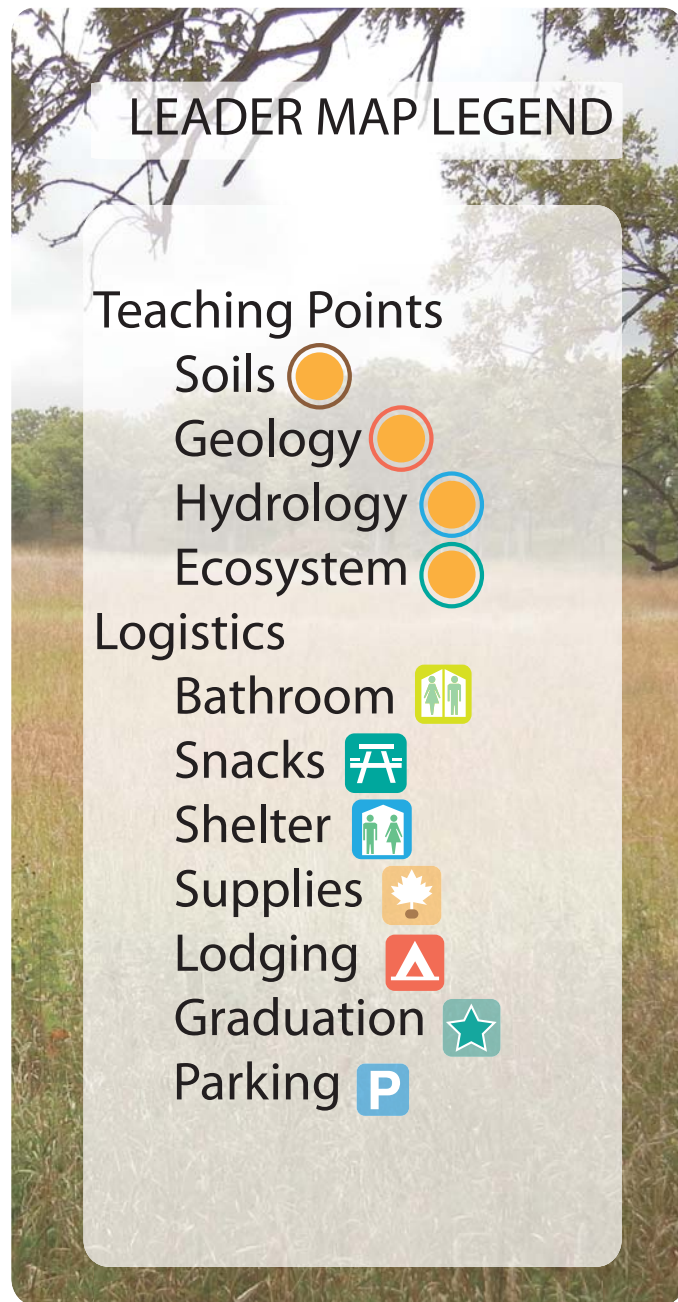
Legends
Magnetic Activity Icons
Future Restoration Sites
 Turtle Marsh Overview
 Leader Map
Powers-Walker Overview
 Leader Map
Wiedrich Woods Overview
 Leader Map



To assist MCCD with its intention to plan and implement future Weekend of Restoration events and create a sustainable program, this handbook section provides site analyses for three future ecological restoration sites. Each of the analyses provides a map with symbols indicating locations of possible teaching opportunities and logistical suggestions, as well as corresponding explanatory text.

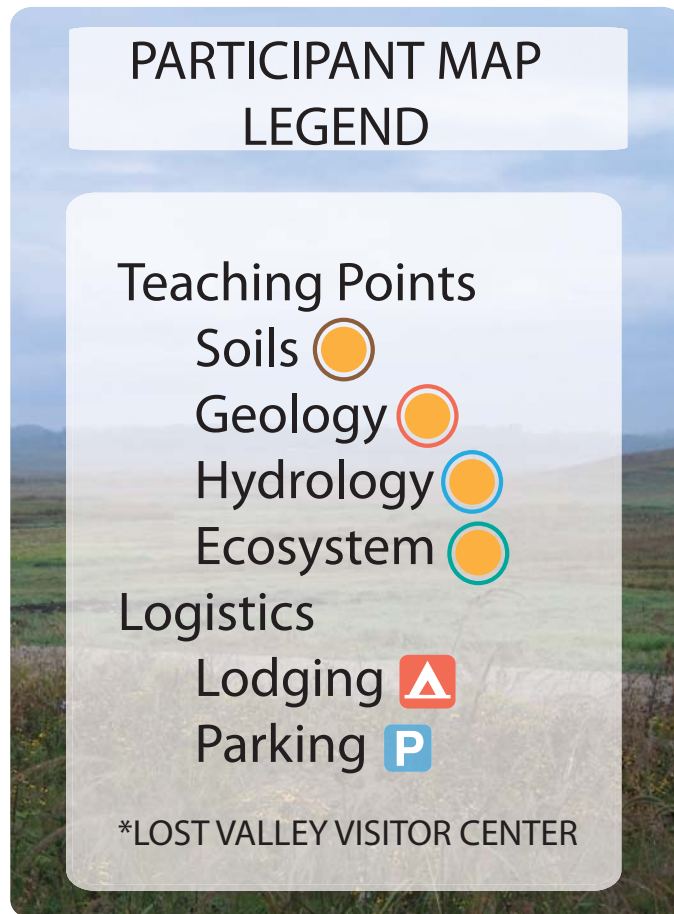
Site Analyses

Legends



Leader Map

For each possible future Weekend of Restoration, a leader map provides logistical information for the specific restoration site, allowing the event organizer to easily locate features such as the nearest bathroom and where to go in case of inclement weather, for example. In addition, each map also points out possible teaching opportunities in the surrounding areas of Glacial Park that can be used to enhance the formal lecture portions of the weekend. This map is meant to aid the leader in planning and running the event as smoothly as possible.



Participant Map

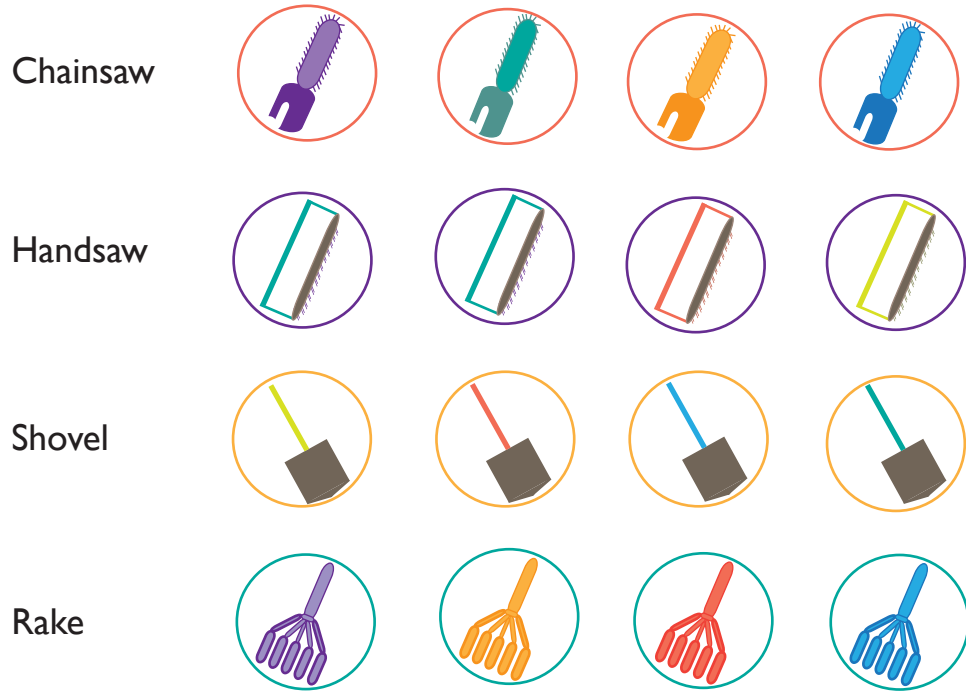
In addition to a leader map, each site analysis also contains a large, poster-sized map for participants to view during the Weekend of Restoration. This map includes relevant teaching opportunities and highlights the site that participants will restore that weekend. Several subset maps are located at the base of each poster, including a vegetation community map of each restoration site and surrounding area and a 1939 aerial view of each restoration site. Other subset maps include a 2011 aerial view of Turtle Marsh and Wiedrich Woods and a historical visual representation of the Powers-Walker House. These subset maps will give participants visual aids for the weekend, as well as provide context for the restoration work they will complete.

Each participant map includes a set of small magnets representing various restoration activities that the participants might engage in during a Weekend of Restoration. This provides a tactile way to engage participants in assessing their progress as they work to complete a restoration project over the weekend.

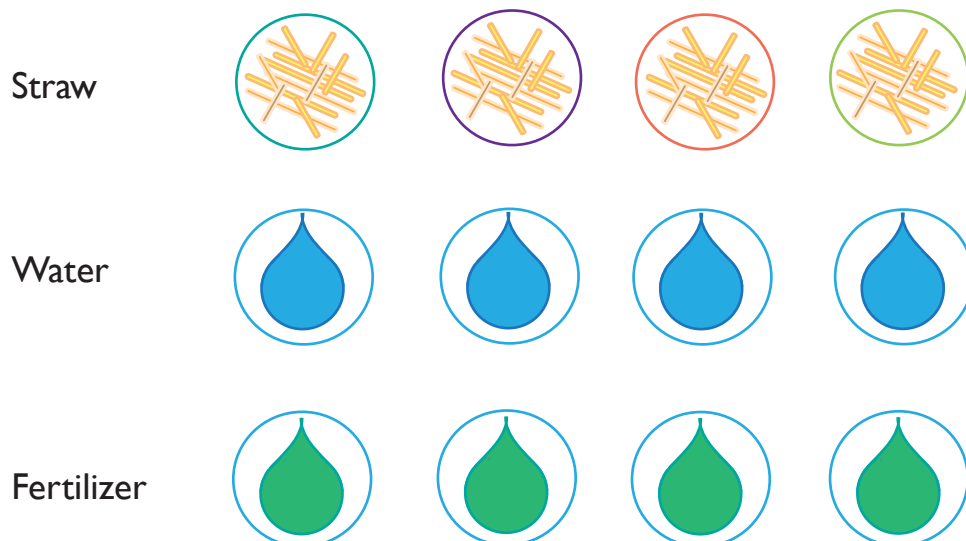
Magnetic Activity Icons

These icons (when placed on small ceramic magnets) can be used in conjunction with the Participant Maps and the Weekend Progress Charts in order to further engage the participants in the restoration activities. The focal map of the restoration site can be made magnetic by placing adhesive business card-size magnets on the back of the map.

































Tools



Application



Planting

Seed				
Seed II				
Seed III				
Seedling				
Seedling (Wet)				
Acorn				
Hazelnut				
Cherry				



Turtle Marsh Restoration

Trails (beginning at the LVVC)

- Drive participants to the Kettle Parking Lot east of Kettle Marsh. (1) From there, walk south along the road and then west down the nearby hill, following the trail. Then turn left and travel south to the site. (2)
 - Alternate route: After walking west down the hill, travel south through the tall grass to the oak stand on the small hill east of the site. (3)
- ATV access: Travel north along the main entry drive to Valley Road. Follow Valley Road west to Valley Road Spur, and then drive south. Travel off-road southeast to the Camelback Glacial Kame trail just past the Trail of History area and then to the site. (4)

Logistics

- Bathroom:
 - Outhouse at the Kettle Parking Lot east of Kettle Marsh
- Snacks:
 - In the surrounding prairie or in the oak stand on the small hill east of the site
- Adverse weather:
 - Take shelter in the oak stand on the small hill east of the site.
 - In severe weather, return to the vans and wait out the storm, or return to the LVVC for alternate activities.
- Supplies:
 - Before the event: Use an ATV to take bulk supplies, such as straw, seeds, and snacks, to the site via the ATV route.
- Lodging:
 - Intern house and yard
- Graduation:
 - Oak stand on the small hill east of the site
 - Graduation was held here for the 2011 Weekend of Restoration.

Teaching Points*

1. DeCarlo-Olsen Woods/Bielawa Woods

- Visual contrast between a restored oak savannah and a degraded oak savannah
- Bielawa Woods (1a): Restored fairly recently; example of a relatively high-quality oak savannah
- DeCarlo-Olsen Woods (1b): Unmanaged and degraded with substantial undergrowth and invasive species not typical of an oak savannah
- From LVVC: Drive from the LVVC parking lot to the research station.
 - Dedicate a significant amount of time to using these teaching points.
 - Staff should lead hikes since trail blazing is required.

2. Bog

- Contrast between the hydrology of the bog and a marsh, such as Turtle Marsh or Kettle Marsh
- Close to the restoration site, so can be referenced as needed

3. Kettle Marsh

- Marsh hydrology and unique history of this marsh
- Soil samples of hydric soils

4. Camelback Kame

- Geology and geologic history of the park
- Aerial view of the impact glaciers have had at the park

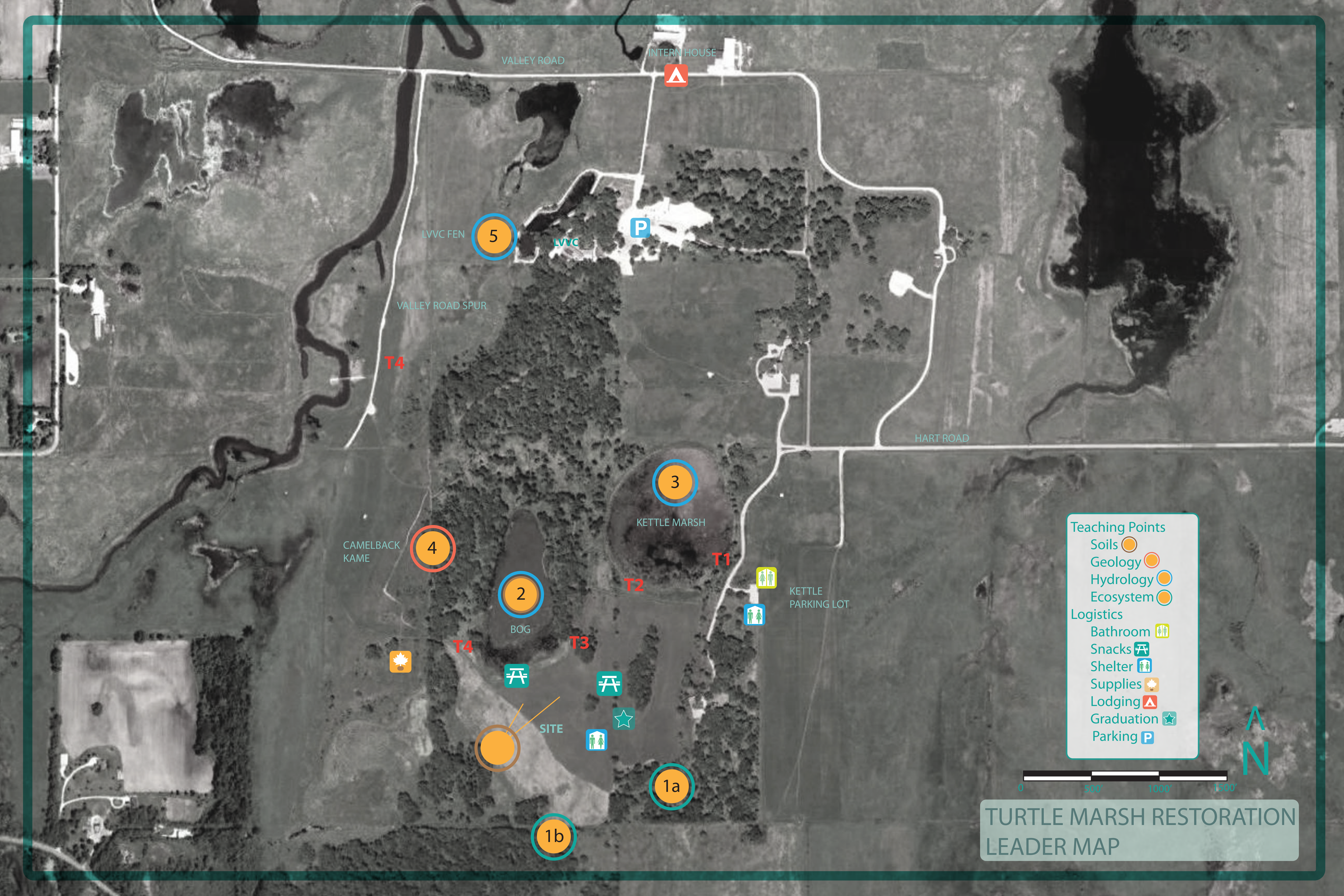
5. LVVC fen

- Fen restoration
- The role humans have played at this fen
- How this site has progressed after its restoration

6. Soil samples near and from the restoration site

- Soil from Turtle Marsh
 - Ways in which the marsh has changed since the last Weekend of Restoration
 - Alternate activity: Participants extract their own soil samples
- Soil from the surrounding prairie
 - Contrast between prairie soil and Turtle Marsh soil
 - Evidence of the area's agricultural history





VALLEY ROAD

INTERN HOUSE

LVVC FEN

LVVC

VALLEY ROAD SPUR

HART ROAD

KETTLE MARSH

CAMELBACK KAME

BOG

KETTLE PARKING LOT

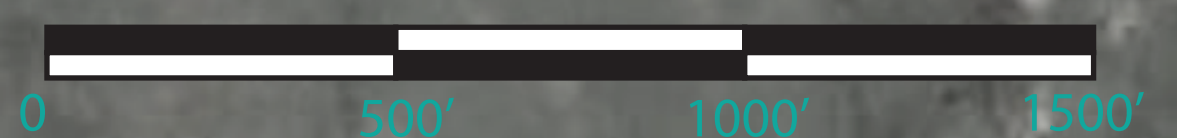
SITE

Teaching Points

- Soils
- Geology
- Hydrology
- Ecosystem

Logistics

- Bathroom
- Snacks
- Shelter
- Supplies
- Lodging
- Graduation
- Parking



TURTLE MARSH RESTORATION LEADER MAP

Powers-Walker Restoration

Trails (beginning at the LVVC)

- Walk east through the parking lot along main entry road, and then continue east across the horse trail over the hill. Cut across the field north of the debris ditch and the Powers-Walker barn, and continue to the site. (1)
 - Alternate route: Walk north along the gravel entry drive to Valley Road, and then follow Valley Road east to the site. (2)
 - This path does not provide a full view of the restoration site, so it may be best for return trips only.

Logistics

- Bathroom:
 - Outhouse (open year round) near the Powers-Walker barn
- Snacks:
 - On several picnic tables in the Powers-Walker yard
- Adverse weather:
 - Take shelter in the Powers-Walker barn.
 - To prevent the historical Powers-Walker house from getting muddy, avoid taking shelter there.
- Supplies:
 - Before the event: Use an ATV to transport large supplies or store them in the Powers-Walker barn.
 - From LVVC: Participants can carry small supplies to the site.
- Lodging:
 - (See Turtle Marsh lodging situation.)
- Graduation:
 - Historic well spring just east of the Powers-Walker yard on the edge of Lost Valley Marsh

Teaching Points*

1. Powers-Walker House

- Early settlers of the area and their treatment of the land
- Prairie destruction and consequences
- Humans in the historical context of the land
- Discussion about humans' definitions of "improvement" then and now
- *To prevent the house from getting dirty, complete activities at the house before participants do restoration work.*

2. Powers-Walker barn

- Historical activities such as chopping wood and weaving

3. Snowmobile trail and Pheasants Forever restoration

- Snowmobile trail
 - Remnant prairie in old railroad bed
 - Native prairie plant identification
 - Example of how Powers-Walker restoration site might eventually look
- Pheasants Forever restoration
 - Native plants identification using knowledge gained from the snowmobile trail native plant activity
 - Participants could ride in MCCD vans to the parking lot by the trail and then walk to the site from there.

4. LVVC fen

- Discussion about restoration and the role of humans in the environment
- Ways a completed restoration project progresses throughout the years
- Because of its proximity to the LVVC, use this site for many types of activities, including meals, impromptu outdoor breaks, and lessons.

5. Amphitheater east of caretaker's home

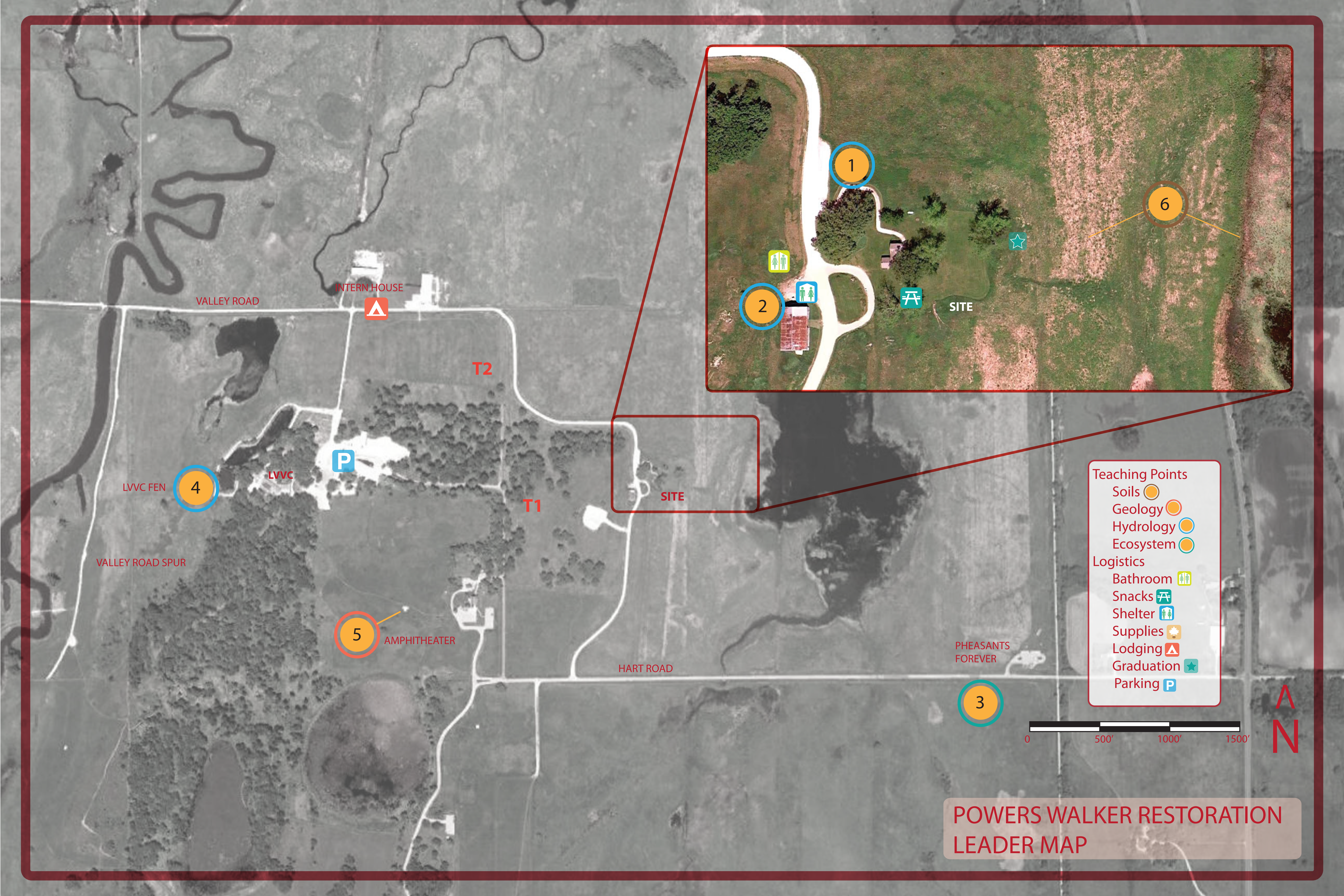
- Walk east through the LVVC parking lot and then travel south on the trail to the amphitheater. (3)
- Optimal location for lectures, performances, bonfire activities, and nature-related readings
- Short distance from the LVVC

6. Soil samples from the restoration site and near Kettle Marsh

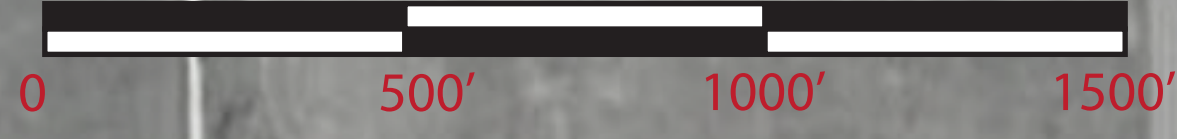
- Comparison of soil types and characteristics
- Alternate activity: Participants extract their own soil samples

*Number corresponds with map





- Teaching Points
- Soils (Yellow circle)
 - Geology (Orange circle)
 - Hydrology (Light blue circle)
 - Ecosystem (Dark blue circle)
- Logistics
- Bathroom (Green bathroom icon)
 - Snacks (Blue picnic table icon)
 - Shelter (Blue tent icon)
 - Supplies (Yellow star icon)
 - Lodging (Red triangle icon)
 - Graduation (Green star icon)
 - Parking (Blue P icon)



POWERS WALKER RESTORATION LEADER MAP

Wiedrich Woods Restoration

Trails (beginning at the LVVC)

- Walk south along the trail that is east of the LVVC picnic deck and skirts the hill. (1)
- Walk north along the gravel entry drive. Turn left at the first dirt crossing and travel south along the LVVC fen, then walk east up the hill. (2)
 - Participants could use the trails on the slope that past interns have created as they worked.
- Alternate site: (LVVC fen) Follow Trail (2), but stop at the fen instead of continuing east up the hill. (3)*

Logistics

- Bathroom:
 - LVVC
- Snacks:
 - On the slope of the hill
 - At the top or bottom of the hill
 - On the LVVC picnic deck
- Adverse weather:
 - Take shelter in the LVVC.
 - Be wary of increased slipperiness on the slope.
- Supplies:
 - Before the event: Station large supplies and power tools at the top of the hill.
 - From the LVVC: Participants can carry small supplies south to the site.
- Lodging:
 - (See Turtle Marsh lodging situation.)
- Graduation:
 - LVVC picnic deck

* Note: Two different restoration sites are presented here. Many of the teaching points are specific to one or the other, but logistics and trails recommendations are similar for both.

Teaching Points**

1. LVVC fen

- Explanation of why the slope of the Wiedrich Woods hill is so steep
 - Alternate site: Steps involved in restoring the fen

Slope Restoration: Oak Savannah and Invasive Species Teaching Points

2. Trail to Camelback Kame

- Features of an oak savannah, what species are present, and what species do not belong
- View of a somewhat degraded oak savannah
- Transition from the soil of a somewhat degraded oak savannah to the open gravel soil of the Camelback Kame

3. DeCarlo-Olsen Woods and Bielawa Woods

(Not shown on map. See Turtle Marsh site analysis a map of these woods.)

- Visual contrast between a restored oak savannah and a degraded oak savannah
 - Bielawa Woods(Ia): Restored fairly recently; example of a relatively high-quality oak savannah
 - DeCarlo-Olsen Woods(Ib): Unmanaged and degraded with substantial undergrowth and invasive species not typical of an oak savannah
- From LVVC: Drive from the LVVC parking lot to the research station.
 - Dedicate a significant amount of time to using these teaching points.
 - Staff should lead hikes since trail blazing is required.

LVVC Fen Restoration: Hydrology Teaching Points

4. Old wetland north of the LVVC

- From LVVC: Walk just northwest of the LVVC fen.
- Ephemeral pools and the park's natural drainage system
- Location of standing water that used to cover the area prior to the LVVC fen restoration
- Tile system; how and why tiles differ from the park's philosophical approach to land management



LVVC Fen Restoration: Hydrology Teaching Points (continued)

5. Nippersink Creek restoration

- From LVVC: Walk north along the main entry drive to Valley Road. Follow Valley Road west to Nippersink Creek, then briefly travel north to the visible meanders in the creek.
- Nippersink Creek hydrology; how the creek has been altered over time
- Restoration and re-meandering of the stream
- Alteration of kames to fill in the Nippersink Creek bed

6. Bog, Kettle Marsh, and Turtle Marsh

Not shown on map. See Turtle Marsh site analysis for a map of these sites

- Differences in the hydrology and ecology of three different types of wetlands
- Hike taking participants to all three wetlands
- Soil samples from the three different types of wetlands
 - Alternate activity: Participants extract their own soil samples

7. Hidden Fen

- From LVVC: Drive from the LVVC parking lot east past the caretaker's home to Harts Road, then travel east on Harts Road to the Harts Road Parking Lot. Walk north along the Creek.
- Features of this remnant fen; how it differs from the LVVC fen
- Native plant identification; characteristics of plants unique to fens
 - Alternate activity: Participants search for native plants

8. Soil samples near the LVVC fen and Wiedrich Woods slope

- Differences in soil moisture and plant variation that occur even within small areas on the slope
- How wetland soils differ from those within drier ecosystems
- Alternate activity: Participants extract their own soil samples





NIPPERSINK CREEK
5

VALLEY ROAD
4

INTERN HOUSE

OLD WETLAND

T3 T2

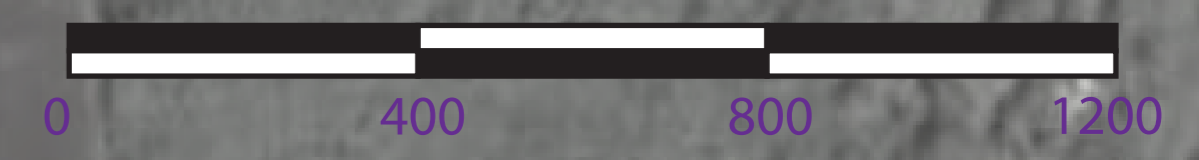
LVVC

WIEDRICH WOODS

SITE

7
HIDDEN FEN

- Teaching Points
- Soils
 - Geology
 - Hydrology
 - Ecosystem
- Logistics
- Bathroom
 - Snacks
 - Shelter
 - Supplies
 - Lodging
 - Graduation
 - Parking

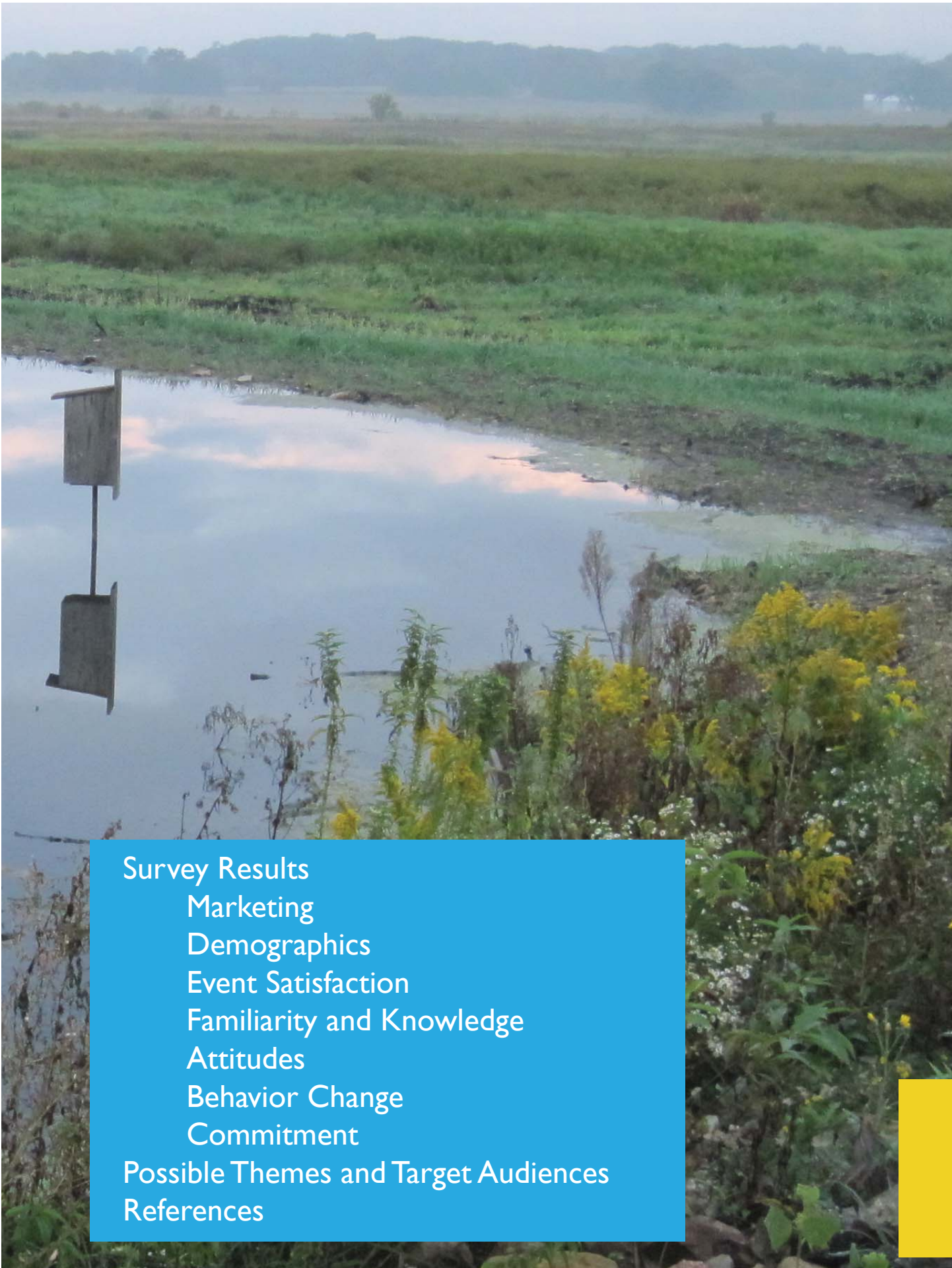


WIEDRICH WOODS RESTORATION LEADER MAP





Appendices



Survey Results

Marketing

Demographics

Event Satisfaction

Familiarity and Knowledge

Attitudes

Behavior Change

Commitment

Possible Themes and Target Audiences

References



Survey Results

Marketing

Familiarity with Glacial Park

Weekend of Restoration participants came to the event with varying levels of familiarity with Glacial Park. Of the 17 attendees, three had never before heard of Glacial Park, and 14 had previously heard of Glacial Park.

Event awareness

Attendees learned about the event in various ways:

- Seven participants read about the event in MCCD's "Landscapes" quarterly magazine.
- Six participants heard about the event through word of mouth.
- Five participants saw the event on MCCD's website.
- Four participants heard about the event through their involvement with MCCD activities.
- Four participants received a postcard about the event.
- Two participants saw the event advertised in an email.
- One participant read a digital flier about the event.
- One participant saw a poster about the event.
- One participant saw a brochure about the event (at Peck Farm Interpretive Center in Geneva, Illinois).
- One participant worked for MCCD.

Note: Survey respondents were counted more than once if they heard about the event from multiple sources.

Motivations

The factors that motivated participants to sign up for the event, ranked from most compelling to least compelling, are as follows:

- learn from experts in the field
- participate in ecological restoration
- work in a group setting
- the event's location
- the event's price
- they knew someone else who was attending the event
- the chance to get away for a weekend
- the opportunity to vacation while contributing to a cause

Demographics

- Seventeen participants attended the 2011 Weekend of Restoration.
- Of these, seven (41.2%) were female and the other 10 (58.8%) were male.
- The greatest proportion of participants (seven of the 17, or about 41%) was between the ages of 51 and 60. Of the remaining participants, three (about 17%) each were between the ages of 18 and 20, 41 and 50, and 61 and 70.
- Three participants were full-time high school or college students.
- The majority of occupations listed did not directly correspond with any type of restoration work, suggesting that participants' involvement in ecological restoration was largely extracurricular.





Event Satisfaction

After the 2011 Weekend of Restoration, participants rated their satisfaction with various aspects of the event using an ascending 1-to-5 scale and open-ended questions. The rating question asked about the format or layout of event, sense of community or camaraderie, cost of attendance, knowledge acquired during the event, staff instruction for outdoor work, amount of time spent outdoors, and skill level required for field work. The open-ended questions asked about most and least favorite parts of the event.

- Across the board, participants appeared greatly satisfied with the event, rating all aspects of the event at least 4 out of 5.
- Satisfaction with the amount of time spent outdoors was the lowest, demonstrating that people likely wanted to spend more time outside.
- More than half the participants stated that the actual ecological restoration work – including raking, seeding, and planting – was their favorite part of the weekend.
- Several participants also listed the opportunity to build camaraderie and work with a group of other people as their favorite aspect of the event.
- A few participants listed the lectures as their least favorite part of the weekend.
- Some participants were least satisfied with the panel discussion about climate change.
- Several participants voiced that the lack of breaks was their least favorite part of the event.
- No participant declined the opportunity to stay involved with or learn about the progress of the wetland restoration site that was part of the event.

Familiarity and Knowledge

Familiarity

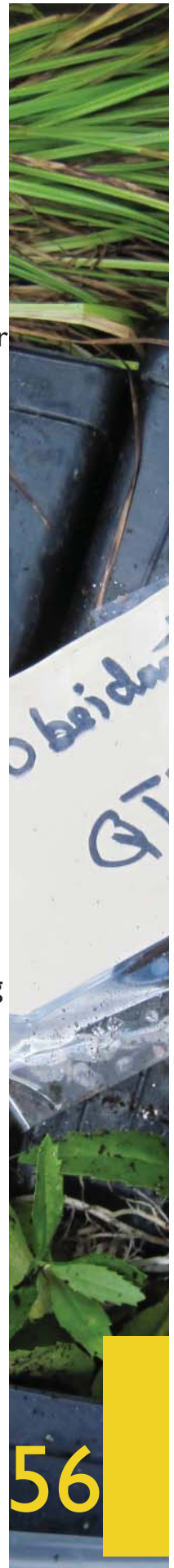
The 2011 Weekend of Restoration surveys measured familiarity based on two factors: experience and comfort. Through a variety of open-ended and Likert-scale rating questions, participants communicated their experience with ecological restoration and recreational outdoor activities before coming to the event. Through similar types of questions both before and after the event, participants also expressed how comfortable they felt spending time in natural environments, using ecological restoration tools, and engaging in restoration activities.

Experience

- Collectively, the 17 participants spent an average of about eight hours per week engaging in recreational outdoor activities.
- They spent about nine hours per week engaging in outdoor work-related activities, such as yard work or volunteering.
- Participants on average reported a high degree of experience with hiking, scoring 4.06 out of 5.
- They had the least amount of experience with hunting or fishing, scoring an average of 1.94 out of 5.
- Participants scored an average of 2.81 out of 5 on all questions assessing outdoor experience.

Comfort

- Immediately after the event, participants felt significantly more comfortable in nature preserves without trails and significantly more comfortable in wetlands, swamps, or marshes.
- Participants, who in general said they felt comfortable spending time outdoors before the event, collectively felt highly “energized,” “effective,” and “relaxed” both before and after the event.





Familiarity and Knowledge (continued)

Knowledge

The surveys assessed participants' perceived knowledge about a variety of ecological restoration themes and topics using one question with eight individual Likert-scale items. The question asked, "How knowledgeable do you feel about each of the following?" It listed items about the history of ecological restoration, the impact of climate change on native Illinois landscapes, and the changes in historical restoration planning as a result of climate change, for example.

- The mean rating for all knowledge items collectively showed a significant increase from before the event to immediately after. While ratings of these knowledge items dropped longitudinally, the increase over the baseline level was still significant.

Attitudes

The 2011 Weekend of Restoration surveys assessed changes in participants' attitudes toward the environment, including how they valued nature and restoration and the degree of responsibility they felt for degrading or improving the environment. Questions measured attitude variables on a Likert scale, on which participants rated their agreement with statements such as, "I find working outdoors satisfying," and, "People affect the environment both beneficially and detrimentally."

- Participants felt significantly more capable of improving natural areas immediately after the event than before the event.
- Participants more strongly agreed that they possessed the skills and knowledge necessary to engage in ecological restoration immediately upon completion of the event than before the event.
- The degree to which participants believed that people affect the environment both beneficially and detrimentally increased significantly from before to after the event.

Behavior Change

Participants rated the frequency of their involvement in various conservation-related activities using a Likert scale ranging from 1 (“never”) to 5 (“very frequently”) on a pre-event survey and a longitudinal survey two months after the Weekend of Restoration.

Interest in ecological restoration

- Participants read books, articles, newsletters, and other materials about ecological restoration significantly more frequently two months after the event than before the event (means 3.92 and 3.25, respectively; $p=0.025$).

Ecological restoration behaviors

- When combining all ecological restoration behaviors listed on the surveys into one collective measure, participants seemed to engage in ecological restoration a little more frequently two months after the event than before the event. However, this change was not significant.
- The frequency of engagement in specific ecological restoration tasks did not change significantly.
- However, some participants reported planting native plants and engaging in erosion control activities more frequently two months after the event than before the event, although this was not significant.

Environmentally responsible behaviors (ERBs)

- The frequency of engagement in individual ERBs varied substantially after the event, but most behaviors showed minimal increases. However, none of the changes was significant.
- The pre-event means for individual ERBs reached as high as 4.75 (for recycling), indicating that before the event, participants already engaged in ERBs fairly frequently.
- Participants varied substantially in the degree to which they acted as change agents by encouraging others to engage in ecological restoration or ERBs, and none of the changes was significant from before the event to two months later.





Commitment

- Two months after the event, participants were still engaging in a total of 24 environmentally responsible behaviors (ERBs) to which they had committed.
- Two months after the event, participants had failed to engage in 33 behaviors to which they had committed.
- Participants honored their commitments with a 42.1% success rate (n=11).

Non-target behaviors

- Two months after the event, attendees were engaging in a total of 31 new behaviors to which they had not committed.

Perceived level of commitment

- Participants, on average, rated their level of commitment to new ERBs in the two months after the event as 4.18, using a Likert scale ranging from 1 (“not at all” committed) to 5 (“very much” committed)

Barriers to upholding commitments

Based on observations and participant reports:

- When filling out the commitment forms, several participants expressed both verbally and in writing that they already did many of the behaviors listed. Some people incorrectly filled out the forms, selecting both new and current behaviors instead of only selecting new behaviors.
- A few participants encountered barriers to engaging in some of the ERBs, and several people committed to behaviors they could not realistically accomplish within the two-month time frame.
 - For example, one participant committed to purchasing energy-efficient appliances; however, at the time of the follow-up survey, that participant had not yet had an opportunity to do so.
 - For example, one participant lived in a condominium and therefore could not engage in several of the ERBs, such as growing an edible garden or replacing a gas-powered mower with a push mower.

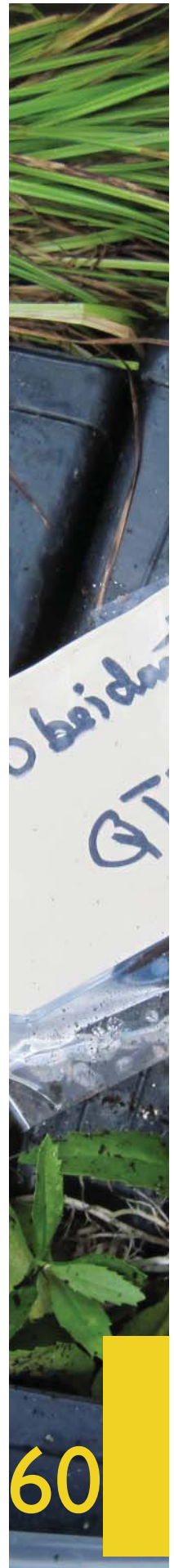
Possible Themes and Target Audiences

National Honor Society

- Volunteer hours required for graduation
- Contact: <http://www.nhs.us/>, (703) 860-0200
- High school juniors and seniors
- Service
 - Community service project for individuals
 - Yearly community service projects for chapters
- Another possible organization: Conservation Club for Teens

College students

- Skills modules
- Loyola University is close to Glacial Park
 - Contact: Dr. Christopher G. Peterson, Chair of Environmental Sciences, cpeters@luc.edu
- Invasive species removal techniques
- Identification of Illinois invasives and natives
 - Tree and shrub identification and measurement (i.e. height, crown size, diameter at breast height)
- Introduction to GPS
 - Invasive species mapping
 - Ecosystem mapping
 - Simple soil mapping during soil core lectures
- In-depth lesson about soil cores
 - Soil horizons identification
 - Soil classifications
- Collection and identification of various species
 - Bird watching and identification
 - Bird call recognition
 - Aquatic macroinvertebrate collection and identification and subsequent analysis (i.e. indicators of water quality)
 - Terrestrial macroinvertebrate collection and identification (i.e. prairie insect collection with nets)
 - Mammal observations
- Hydrology field experiments if restoring a wetland
 - Water quality monitoring (i.e. pH, conductivity)
 - Stream cross-section measurement (i.e. depth, width, flow)
- Small experiments to teach scientific process and experimental design
 - Indoor stations or outdoor experiment and control plots





Scouting programs

- For information about what programs MCCCD already provides for scouts groups, contact the volunteer coordinator:
(815) 338-6223 x 229 or Volunteers@MCCCDistrict.org
 - MCCCD typically requires an adult-child ratio of 1 adult for 10 kids or 2 adults for 12 kids
- MCCCD has the following:
 - Boy Scout Day of Service
 - Nature Crafts (ages 7 through 9)
 - Earth and Sky Try-it (ages 6 through 8)
 - Animal Try-it (ages 6 through 8)
 - Map and Compass (ages 9 through 11)
 - Soil and Water Conservation (ages 9 through 11)
- Phone registration required: (816) 479-5779
- Relevant Boy Scouts badges and awards:
 - World Conservation Award
 - Canoeing
 - Nature
 - Mammal Study
 - Plant Science
 - Soil and Water Conservation
 - For more information: <http://www.scouting.org/scoutsource/BoyScouts/AdvancementandAwards/MeritBadges.aspx>
- Relevant Girl Scouts badges
 - Junior
- Outdoors: Camping
- Naturalist: Flower
- Do-it-yourself: Gardener
- Animals: Animal habitats
 - Cadette
- Naturalist: Trees
- Adventure: Night owl
 - Senior
- Cook: Locavore
 - Girl Scouts Forever Green program:
<http://www.girlscouts.org/gforevergreen/>
 - For more information: <http://forgirls.girlscouts.org/badges/>

Master Gardeners

- For more information: <http://web.extension.illinois.edu/mg/>
- Support the Core Course Learning Objectives
 - Soils, Propagation, Landscaping, and Botany
 - For more information:
<http://web.extension.illinois.edu/mg/ilmg/default.cfm>

Junior Master Gardeners

- Service learning
- Contact: Monica David, Illinois Master Gardener Office, (217) 265-5256, modavid@uiuc.edu
- For more information: <http://www.jmgkids.us/>

Landowners

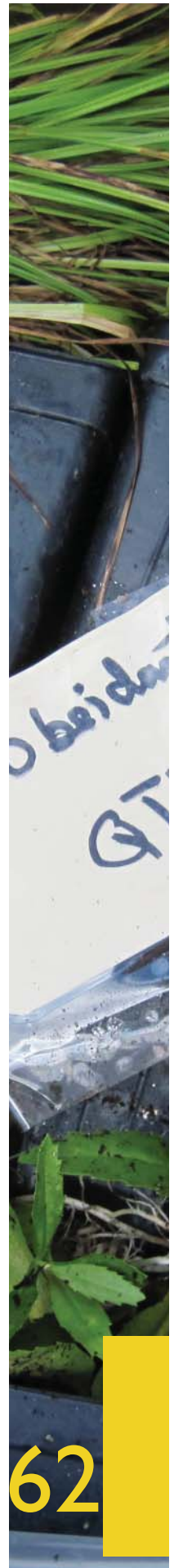
- Lectures centered on common invasive species in Illinois and how to combat them
 - Phragmites
 - Reed canary grass
 - Garlic mustard
 - Buckthorn
 - Russian and autumn olive
 - Wild parsnip
- Restoration project and skills not unique to Glacial Park but something landowners could apply to their own land
- Possible marketing partner: Environmental Defenders of McHenry County
 - <http://www.mcdef.org/>

Church youth groups

- Incorporate more philosophical discussions and reflection on the spiritual importance of nature
- Possible reading: “The Man Who Planted Trees”

Court-ordered community service workers

- One-day event only
- No camping on site
- More restoration work
 - Incorporate lectures into the work
- Contact: Land and Facilities Department, (815) 338-6223 x 211



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