CIVIC RECREATION: THE PROMISE OF UNITING OUTDOOR RECREATION AND ENVIRONMENTALISM IN THE 21ST CENTURY

by

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ABSTRACT

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Civic Recreation: The Promise of Uniting Outdoor Recreation and Environmentalism in the 21st Century

Thesis directed by Professor Deserai A. Crow

Though outdoor recreationists have not always been viewed as environmentalists, a latent potential exists to leverage outdoor recreation as a means toward cultivating environmental values and empowering communities to work collectively toward addressing environmental solutions. Evidence of this promise is emerging through examples of civic recreation – recreation-based stewardship and advocacy aimed at preserving, creating, and restoring recreational resources - that has gained significant traction in the past twenty years. Drawing from a mixed-method research design that combines a comparative case study of local civic recreation organizations with survey research, this dissertation aims to describe civic recreation in practice and explore how it fits into the larger environmental project of the 21st century. Specifically, the first goal is to understand why, how, and to what end these organizations emerge and function. Secondly, I explore the motivations of the individuals who volunteer for civic recreation practices and outcomes they report from their volunteer efforts. Finally, I attempt to unpack the complex nexus between outdoor recreation and environmentalism more broadly. I find that civic recreation organizations emerge either out of a threat to access or the vision of an innovative leader. These organizations primarily focus on direct stewardship, collaboration with land managers, and innovative private-public partnerships for the purposes of preserving or creating recreational resources. This model offers promise to an era of civic environmentalism

and collaborative natural resource management. At the individual level, I find that civic recreation volunteers are highly motivated by their desire to make a difference, express their environmental values, and enhance their community through recreation. Through volunteering, individuals report positive outcomes such as enhanced self-efficacy and learning, a deepened connection to nature and place, and a strengthened community of collaborative and shared responsibility for its natural resources. These findings are significant, as civic recreation volunteers may not see themselves as advancing an environmental or conservation agenda. Therefore, individuals may stumble into conservation and environmental citizenship through their passion for outdoor recreation.

DEDICATION

This project is dedicated to the Boulder Mountain Bike Alliance, an organization that gained significant traction after a tragedy struck a biker commuting home to her family up Boulder Canyon. That woman was my mother, killed by a driver who fell asleep at the wheel in 1991. She was riding on the road, as the access to the western entrance of the Boulder Bike path was closed due to issues with private land. Rallying around this incident, the BMA organized to change policy and improve access to off-road biking trails in the Boulder area. This connection was made during my first interview with the BMA volunteers – a surprise to both of us. Yet, it brought me much closer than I ever anticipated to the research I was embarking on.

ACKNOWLEDGEMENTS

Looking upon a project this big, I was initially overwhelmed and discouraged, feeling that I would never reach the finish line. Now, finding myself at the end of a four and a half year journey, I am so grateful for the many people who made this possible. First and foremost, my advisor, Dr. Deserai Crow, offered constant motivation, kindness, and gentle encouragement throughout the process. Never failing in her understanding, Deserai was always available, organized, and dedicated to providing critical and timely feedback. This project would not be possible without the inspiration from Dr. Marianne Krasny and the Civic Ecology Lab, who introduced me to a field of research that spoke to my heart. In addition, I am so thankful to the other faculty, Dr. Amanda Carrico, Dr. Steven Vanderheiden, and Dr. Sharon Collinge, on my committee who guided me through theory, statistics, or the prospect of being an academic.

My gratitude extends to the numerous staff and volunteers documented in this project who gave me access to the inner workings of their organizations and their own personal experience. Specifically, Tom Flynn and Tania Lown-Hecht at the Outdoor Alliance, Brady Robinson and Ty Tyler at the Access Fund, and Aaron Clark at the International Mountain Biking Organization helped me during the beginning of the research to define my scope, identify important cases, and disseminate my surveys. I also send my thanks to all my interview contacts, whose names I will withhold as their perspectives are represented in the text that follows.

I never would have even begun this endeavor without the encouragement and support from my family and husband. I am grateful for their belief in the importance of me pursuing my personal interests, their support and patient listening during my most frustrated moments, and the faith that they had that I would find success.

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CHAPTER 1: THE CASE FOR CIVIC RECREATION

The twenty-first century could arguably be defined as the age of the 'global environmental crisis,' in which myriad environmental and social issues challenge societies' ability to adequately address or resolve them. As these problems are highly complex, interrelated and interdependent, they demand novel approaches in understanding, managing, and conceiving humans' relationship to the natural world. Yet, how do we move toward sustainability when our modern world has structurally and psychologically disconnected us from our natural environment due to increasing urbanization, globalization, and technological advancement? This alienation from nature and the attitudes that result has been attributed as one of the root causes of present environmental problems (Leopold, 1949; Merchant, 1983; Louv, 2008; Worthy, 2008). Much attention in the environmental psychology and environmental education literature has been directed toward reconnecting people with their environment and the influence such a connection has on environmental values and actions (Wilson, 1984; Chawla, 1998; Nisbet et al., 2009; Louv, 2008).

Beyond our disconnect from nature, American environmentalism as it has traditionally been conceived is accused of failing to meet the needs of modern environmental problems (Shellenberger and Nordhaus, 2009). Historically, environmentalism, particularly the preservation and conservation movements, has been criticized of being only accessible to the wealthy and educated elite (Nash, 1982) and "never inspired a mass following" (Weber, 2000, p. 247). Furthermore, as Cronon (1996) argued, this preservation/wilderness ethic established a strict divide between "pure nature" and society and culture, privileging protection of pristine

environments and focused on keeping people out. "If we allow ourselves to believe that nature, to be true, must also be wild, then our very presence in nature represents its fall . . . We thereby leave ourselves little hope of discovering what an ethical, sustainable, and honorable human place in nature might actually look like" (Cronon, 1996, p. 17). From these critiques, I argue an environmentalism of the 21st century requires restoring an essential connection between humans and nature, fostering an environmental ethic that situates humans in nature whereby they can be a positive force in revitalizing and stewarding the environments in which they inhabit (Minteer and Manning, 2003; Krasny and Tidball, 2015).

Furthermore, the regulatory structure that emerged in the 1970s paved the way for significant gains in environmental quality, yet favored a top-down, command and control approach that led to defensive strategies on the part of environmental organizations which served to consolidate "political power among a handful of nationally based advocacy groups " . . . and passive participation " check-book environmentalism" among the movement's supporters, undermining the pluralistic and participatory ideology of the movement's roots (Weber, 2000, p. 247). These shortcomings of traditional environmentalism initiated some to call for more participatory, collaborative, and locally based approaches to address environmental problems generally (John, 1994) and particularly within natural resource management (Knopman et al., 1999; Weber, 2000; Baber, 2010).

Additionally, sustainability encompasses both social and environmental dimensions, which are intricately linked. Just as we have become alienated from our environment, we have also become alienated from each other. The last half of the 20th century witnessed the decline of social capital and civic engagement (Putnam, 2000), prerequisites for resilient communities, a vibrant civil society, and a functioning democracy. Many scholars contend that a move toward

sustainability requires a renewed and expanded view of citizenship that encompasses environmental values coupled with more deliberative and participatory democratic institutions (Dobson, 2003; Dryzek, 2006; Melo-Escrihuela, 2008). We need to create a democratic culture of nature where "members understand themselves as ecological citizens working simultaneously to restore nature and to restore the participatory and strong democratic elements of their local communities" (Light, 2002, p.159). This model relies on smaller scale, place-based action in which citizens come to know and interact with one another and their environment, and as a result, care more deeply and concretely about environmental issues where they reside. This place-based approach, in which people feel a particular connection and a sense of citizenship to their environment and community, is a promising model to foster environmental and civic engagement (Reid and Taylor, 2003; Light, 2002).

Outdoor recreation is one means by which individuals connect to their environment and each other. Indeed, much of the 20th century American environmental movement was strongly influenced by figures such as John Muir, Aldo Leopold, and David Brower, who drew their inspiration from adventure and an intimate connection to the land. The frontier and adventure narrative is a mainstay in American culture, with vestiges cemented in America's vast public land system. However, it could be argued that this legacy of outdoor adventure has now been commodified as leisure consumption, evidenced by a flourishing $646 billion outdoor recreation industry (Outdoor Industry Association, 2014). Certainly, outdoor recreation today does not immediately result in environmental values and actions and may simply be an expression of individualistic and consumer-driven pursuits (Rosenbaum, 2013; Arai and Pedler, 2003). Since scholars first started exploring this question, only a weak and tenuous positive relationship has been observed between outdoor recreation and environmentalism (Berns and Simpson, 2009).

Yet, a latent potential exists to leverage outdoor recreation as a means toward cultivating environmental citizenship and empowering communities to work collectively toward addressing environmental solutions. With support for the conservation movement waning and aging (8.5% of The Nature Conservancy's members are under the age of 45), leaders within the human-powered outdoor recreation community suggest outdoor recreation is key to creating future advocates for conservation and environmentalism in the 21st Century. Brady Robinson, Executive Director of the Access Fund, a national advocacy organization representing rock climbers, asserts, "I believe that human-powered outdoor recreation can help secure the future of the conservation movement . . . People need to know that conservation is in their own best interest or their efforts will fail . . ." He goes on to explain that conservation is not only about "keeping people out," but also "getting people out to see and bear witness to what's at stake" (Robinson, 2013). Through recreation, he argues, people form a deep connection with the land and their environment, which has the power instill a powerful environmental ethic capable of garnering continued support and citizen action for conservation objectives.

However, voices within the conservation movement have criticized outdoor recreationists and organizations advocating on their behalf as espousing an environmental agenda that it cannot, or will not, deliver on (Willoughby, 2015; Wilkinson, 2015). Journalist Todd Wilkinson (2015), in an interview with conservation biologist Dr. Reed Noss, writes:

> Noss is deeply troubled, however, by the societal shift away from wild country serving as a way to engage in slow, quiet, mindful reflection that, in turn, gives rise to greater appreciation about the species that find refuge there and have nowhere else to go. Instead, wild places often are treated as outdoor gymnasiums whose highest touted value is delivering rushes of adrenaline. Noss and scores of other big picture thinkers have seen little evidence supporting the contention advanced by some outdoor recreationists — and the powerful lobby of outdoor gear manufacturers standing behind them — that blazing more trails has yielded a stronger, more effective conservation movement.

Certainly, this debate reveals the ever-present philosophical battle between conservationists and preservationists and how land is best conserved or protected. In addition, it reveals the tension in the outdoor recreation space between "adventure junkies" and those who seek outdoor recreation as a means to connect with nature. Nevertheless, it also signals a renewed conversation about the role that outdoor recreation plays in the larger environmental movement and whether outdoor recreationists are, or could be, environmentalists of the 21st century.

Evidence of outdoor recreationists as 21st century environmentalists is emerging through examples of civic recreation – recreation-based stewardship and advocacy aimed at preserving, creating, and restoring recreational resources. The mission statement of the Outdoor Alliance, a coalition of five national human-powered recreation member organizations, best represents the goals of civic recreation. These organizations provide expertise, promote collaborative management and planning, and support volunteer stewards to enhance access to and health of recreational resources.

> The human powered outdoor recreation community has a direct and intensely personal interest in the conservation of our public lands. We are often the first to notice—and care—when something is wrong in our outdoor landscapes, and we are highly motivated to protect these places and the experiences they offer. Outdoor Alliance unites this community in order to protect our public lands and ensure that they are managed in a way that embraces the human powered experience. In doing so, we are building and nurturing a conservation constituency for the 21st century. (Outdoor Alliance, 2014)

At the local level, organizations such as the Boulder Climbing Community and Chicago Area Mountain Bikers are spearheading significant stewardship efforts on public lands, mobilizing volunteers to help build and maintain sustainable trails, serve on bike patrols to ensure responsible riding, monitor critical nesting habitats at popular climbing cliffs, and collaborate with land managers to create management plans and policies that protect the land

while also promoting access for recreation. In the Southeast, where more land is privately owned, organizations such as the Carolina Climbers Coalition and Friends of Muir Valley employ market-based strategies to achieve their goals, acting as land trusts for the purposes of conserving climbing areas. Similarly, mountain bike organizations such as the Moscow Area Mountain Bike Association have forged creative partnerships with private landowners to ensure trail-based recreation on private land. These examples, and other cases across the country, demonstrate how civic recreation can encourage individuals and communities to connect to their environment and each other as well as create collaborative and participatory governance strategies toward managing natural resources. Such promise is echoed in President Obama's America's Great Outdoors Initiative, an effort to empower "communities to protect, connect with, and restore the great outdoors; [leverage] public-private partnerships; and [increase] collaboration within and across agencies and sectors" (AGO Progress Report, 2012, p.3).

Acknowledging that through recreation, people can develop a strong connection with nature and place, I have focused my study of civic recreation on the following guiding questions: Can this connection be leveraged to mobilize the next generation of environmental stewards and conservation advocates? Can civic recreation be a catalyst for a more active and engaged citizenry? And finally, does civic recreation represent a promising model for an environmentalism of the 21st century? More detailed research questions and hypotheses that will be used to explore these questions will be proposed later in this dissertation.

Theoretical Orientation

This study is inspired by the philosophy of environmental virtue ethics, green political theory, and the new theory and practice of civic ecology. This section will outline the respective

literatures from which the study's objectives and design were conceived, highlighting important contributions that I hope to make through the following chapters of this dissertation.

Environmental Virtue and Stewardship Ethics

Many theorists have attributed present environmental problems to western philosophy and modernity, which alienated humans from the natural world and emphasized human domination over nature (White, 1967; Merchant, 1983). Merchant (1983) suggests our ability to dominate nature emerged from the Enlightenment and Scientific Revolution, which led to a mechanistic view of nature and our ability to finally control it. Worthy (2008) asserts, "modern life situates each person at the nexus of a series of elongated material and informational networks that separate individuals to an unprecedented degree from the origins of their sustenance, the destinations of their wastes, and the consequences of their actions" (p.148-149). This anthropocentric and domineering view of nature, alongside technology, capitalism, and social structures of power, has severed an important bond between humans and nature. Such a disconnect from nature, it is argued, leads to both environmental degradation through human dominance over nature and decline of human wellbeing and identity (Wilson, 1984; Barry, 1999).

An argument for reconnecting with nature is found in the philosophy of environmental virtue ethics, which focuses on “human excellence and flourishing” and establishes the grounds for environmental protection out of “enlightened self-interest” (Cafaro, 2001, p.3-4). These scholars implore us to accept our dependence and interconnection with our environment, not simply because it provides resources and inputs for our economic system, but as a way to connect more authentically with what it means to be human and what comprises a healthy community.

Aldo Leopold and John Barry best represent environmental virtue ethics in their notion of the land ethic and stewardship ethic respectively. Leopold (1949), perhaps the father of modern conservation and early proponent of an environmental virtue ethic (Cafaro, 2001), strongly criticizes societies' devotion to capitalism as producing a narrow perspective on what it means to lead a good and ethical life and estranging us from the natural world. Instead, he presents an alternative relationship with the natural world grounded in a new conception of the good life. Taylor (2002) writes that this includes:

> 1.) Moderation . . . We must use nature for both our economic and recreational needs, but we must also be moderate in this use and know when a humane life requires us to leave the natural world alone.
>
> 2.) 'Adventure.' A life filled with the 'dramatic,' 'mysterious and magical,' and 'risky' endeavors.
>
> 3.) Beauty . . . We are drawn to nature in the hope of experiencing beauty. This beauty is all around us, but requires our attention to be consistently and fully uncovered.
>
> 4.) Humility . . . [quoting Leopold]'one who is humbly aware that with each stroke he is writing his signature on the face of the land.' We become disciplined by the love of the land itself. (p. 175-176)

Indeed, Leopold's view directs our actions toward reconnecting with nature in a manner such that we see ourselves as citizens or members of a larger biotic community rather than conqueror of the land.

Similarly, Barry (2002) acknowledges the need for a different attitude and view toward the natural world, articulated by his ecological stewardship ethic. Such a virtue-based ethic is grounded in a respect for our dependence on the environment. He writes,

> That we depend on the earth is something that cannot be denied . . . However, for 'modern humans,' that is, those who do not live close to nature . . . this dependence is something likely to go unrecognized and unacknowledged in their everyday lives. Dependency is something that the modern society and the modern mentality finds hard to

> deal with, except in the sense of seeing dependency as a 'problem' to be eliminated or solved, a weakness within the 'human condition' to be overcome. (p. 133)

For Barry, virtues are dispositions that allow their "possessor" to cope with -- rather than conquer or submit to -- the contingent nature of the human experience. Thus, the virtue of ecological stewardship allows us to grapple with our dependence and vulnerability, and the dynamic quality of the human-nature relationship.

Barry (2002) outlines three main features of his stewardship ethic. It includes ecological sustainability for humans as an end goal, distinguishes between how we treat, value, and use the natural world, and encourages responsibility for repairing ecological damage. "The aim of ecological stewardship is to reconnect and remind us of our dependence upon nature (and its dependence upon us), and to premise a responsibility toward our use of nature on establishing this reconnection" (p. 138). A move toward ecological stewardship involves "a fundamental rethinking of identity, seeing oneself as a 'citizen-in-society-in-environment,' reflecting on one's sense of identity as both part of as well as apart from the order of nature" (p. 144). Embedded in this reconnection and new identity is a different notion of citizenship in which one's attitudes, character traits, and actions are consistent with meeting the goal of sustainability.

Indeed, both Leopold and Barry espouse more than individual actions to include civic engagement and participation. Ultimately, environmental virtue ethics presents a departure from a modern disposition toward the environment to one that embraces our intrinsic embeddedness in nature, viewing environmental virtues as means to living a more authentic life. This transition, it is theorized, will not only lead to a life of flourishing, but will also guide actions toward reducing one's impact and working toward environmental solutions.

Environmental Citizenship

Appeals toward an environmental virtue ethic are echoed in the literature on environmental citizenship, which extends the virtues of respecting and stewarding the environment into the civic domain (Dobson, 2003; Light, 2003; Bell, 2005; Carter, 2007; Gabrielson, 2008). Carter (2007) argues that, among green theorists "there is a consensus over the need for active ecological citizenship because of the recognition that the transition to a sustainable society requires more than institutional restructuring; it also needs a transformation in the beliefs, attitudes and behavior of individuals" (p.65). Citizens must hold particular values toward the environment and conceive of themselves as part of a global environmental politic. Dobson (2010) defines environmental citizenship as "pro-environmental behavior, in public and private, driven by a belief in fairness of the distribution of environmental goods, in participation, and in the co-creation of sustainability policy" (p.6). In this manner, environmental citizenship is more than simply individual virtues or behavior change toward better environmental ends. It is about collective action grounded in practices where local publics can "do something together" (Light, 2002, p. 167).

Central to the above notion of environmental citizenship is the shift toward participatory democracy and governance (MacGregor et al., 2005). The civic republican framework of environmental citizenship, which emphasizes deliberation, civic participation, and a commitment to the common good, is thus seen as a stronger and more powerful form of environmental citizenship than its liberal/neoliberal counterpart, which emphasizes rights over responsibilities. This view is based on the assumption that economic reforms, technological advancements, or individual lifestyle changes will not be enough to tackle environmental issues; citizen involvement in the decision-making process alongside revision of liberal institutions is seen as

vital (Light, 2003; Dryzek, 2006; Melo-Escrihuela, 2008). In fact, some scholars have heavily critiqued an individual lifestyle approach to sustainability. “When responsibility for environmental problems is individualized, there is little room to ponder institutions, the nature and exercise of political power, or ways of collectively changing the distribution of power and influence in society” (Maniates, 2001, p. 33). Maniates (2001) suggests that environmental issues need to be re-politicized such that the underlying structural and institutional drivers of these problems are highlighted. Furthermore, he advocates for a reframing of the environmental discourse that focuses on the institutions and political agency rather than individual acts of environmentally responsible behavior. Thus, the role of the individual is to partake in decision-making processes that give agency to a collective voice.

Civic Environmentalism

Recently, myriad examples of grassroots, community-based, and collaborative processes have emerged that echo the above philosophical sentiments. Such civic environmentalism can be viewed as a return to participatory democratic ideals in an effort to address certain environmental problems while also encouraging more civic participation and environmental stewardship at the local level (John, 1994; Shutkin, 2001; Land and Rubin, 2001; Light, 2003; Reid and Taylor, 2003). Knopman et al. (1999) write, "civic environmentalism is a cornerstone of a second generation of environmental stewardship. It shares the broad goals of the environmental movement - to improve the quality of the air, water, and land and to protect human health and species diversity. Yet it differs from the methods and approaches embodied by the first generation of federal era-environmental action," which applied regulatory frameworks irrespective of the particular characteristics of a place or community. By contrast, "civic environmentalism strikes a new balance between national standards and local solutions. It thrives

on innovative problem-solving in the private and public sectors, and when possible, harnesses market forces to drive better environmental performance" (p. 26). Through challenging the top-down regulatory approaches of traditional environmental policy, these efforts recognize the complexity and place-specific context of certain environmental problems while drawing from innovative, inclusive, and non-regulatory strategies to address them. Moreover, civic environmentalism relies on smaller scale, place-based action in which citizens come to know and interact with one another and their environment, and as a result, care more deeply and concretely about environmental issues where they reside. In this manner, citizens themselves become agents of change and "co-creators of democracy," getting "involved in politics and decision making through their actual work" (Fischer et al., 2012, p.29).

This movement is clearly underway as documented by scholarly work in the field of civic environmentalism (Shutkin, 2001), civic innovation (Sirianni and Friedland, 2001), urban ecological stewardship (Svendson and Campbell, 2008), civic environmental stewardship (Romolini et al., 2012) and civic ecology (Krasny and Tidball, 2010) which all point to a new form of environmentalism in America grounded in civic engagement, citizen-based and collaborative initiatives, and environmental stewardship. These practices unite a community around a shared interest, concern, or shock, utilizing grassroots efforts, networks of partnerships, and hands-on stewardship to revitalize the environment and community. As Light (2002) states, “the environment becomes the civic glue between various local publics” (p.169). Whereas the traditional environmental movement pitted environmentalists against policy makers and industry, civic environmentalism and its related permutations rely on a partnership model involving multiple stakeholders at the local and community level. Thus, the promise of civic environmentalism lies in its holistic approach that merges environmental issues with civic issues,

originating from the grassroots, and evolving toward innovative governance (Knopman et al., 1999; Weber, 2000).

Scholarship in the field of civic environmentalism has been primarily exploratory and descriptive of the new social movement. John (1994) was one of the first to identify civic environmentalism as an alternative to top-down environmental regulation, arguing for a promising new model of environmental governance. In their book *Civic Innovation in America*, Sirianni and Friedland (2001) devoted a section to civic environmentalism as an example of civic innovation, featuring case studies of the EPA working with local citizen groups in watershed management. Similarly, Shutkin (2001) documented four case studies across the United States, providing more evidence of the emergence of this new environmental movement. Svendsen and Campbell (2008) investigated the structure, function, and network of urban ecological stewardship efforts in the Northeast, finding "a dynamic social network of organizations within cities with a reserve of social capital and expertise that could be better utilized" toward stewarding and managing urban lands (p.22). Similarly, Romolini et al. (2012) and Wolf et al. (2013), in collaboration with the Pacific Northwest Research Station, created a research program exploring Seattle-based environmental organizations in the hopes of developing a framework of urban environmental stewardship, describe its practice, and ultimately explore its benefits. Within this body of work, researchers have placed very little focus on recreation-based civic environmentalism specifically, despite the fact that recreationists are increasingly involved in local natural resource management and environmental stewardship. This study adds to our overall understanding of how civic environmentalism is implemented and the outcomes that result, while also documenting a new area of civic environmentalism organized by the outdoor recreation community.

Summary

How to tackle the complexities inherent in today's environmental challenges has yet to be answered. This section has begun unpacking what an environmentalism of the 21st century should look like. First, the prevailing human-nature relationship, which is characterized by anthropocentrism, a mechanical and utilitarian view of nature, and a striking disconnect between humans and nature needs to be revised – we need to reconceive the value of the natural world and our place in it. Environmental virtue ethics offers a promising model of a more tenable relationship with the natural world, one where individuals are motivated to act for the environment and their communities "in order to preserve human possibilities and help us become better people" (Cafaro, 2001, p. 16). As reconnecting with nature through stewardship and outdoor recreation offer promising venues for cultivating environmental virtues, this research attempts to better understand the relationship between outdoor recreation, volunteer stewardship, and environmental values.

Coupled with environmental virtue ethics, actively participating in the democratic process is imperative to challenging and revising the institutions and systems that have promoted an unsustainable way of life. Democratic environmental citizenship entails both the individual (their awareness, knowledge, attitudes, values, and behaviors) as well as the collective (how they organize and act to advance environmental ends). Thus, democratic environmental citizenship is more than pro-environmental actions and behaviors enacted by individuals in private; it also requires collective and participatory decision-making in an effort to promote the common good. Moreover, citizenship should be viewed as a collective enterprise, both in terms of strengthening the civic commons (Light, 2003) as well as challenging current institutional and power structures to reimagine a democracy more conducive toward sustainability (Maniates, 2001). In this manner,

environmental citizenship is about collective action grounded in practices where local communities are actively working to improve the common good. Civic environmentalism, which situates collective action, participation, deliberation, and community building within the local context, provides a promising and practical model of cultivating environmental citizenship within the civic republican tradition.

While the theory of environmental citizenship is well established in the literature, empirical work to date is lacking about the best ways to promote environmental citizenship and the virtues therein and what this citizenship looks like in practice (Barnett et al. 2005; Jaggers and Matti, 2010). Given that outdoor recreation fosters a close connection to the natural environment and may be linked to environmental values and actions, my aim is to add to this literature by investigating environmental citizenship practiced by outdoor recreationists and the underlying motivations that influence these actions. Furthermore, I view civic recreation as a form of civic environmentalism. Understanding how civic recreation organizations and practices are structured and enacted, combined with the strategies employed, will help further characterize civic environmentalism within the context of natural resource management and better understand how it fits into the promising new vanguard of civic environmentalism.

Civic Recreation Framework

Given the numerous angles from which this phenomenon has been approached in the literature, and the fact that few have looked at recreation specifically in this context, my study is most prominently influenced by the work of Dr. Marianne Krasny and Dr. Keith Tidball at the Cornell Civic Ecology Lab. Civic ecology narrows the literature on civic environmentalism and environmental stewardship by focusing specifically on grassroots stewardship actions that reflect

community and environmental values while mapping the social-ecological benefits and outcomes of such practices. “Civic ecology emerges from the actions of local residents wanting to make a difference in the social and natural environment of their community and is recognizable when both people and the environment benefit measurably and memorably from these actions” (Tidball and Krasny, 2011, p.1). Civic ecology is 1) a philosophy grounded in Light’s civic environmentalism and Leopold’s conservation ethic, 2) a science which draws from the literature on social-ecological systems and resilience, as well as the psychological and community benefits of spending time in nature, and 3) a practice, such as community gardening, community forestry, community-based watershed restoration and management, and other small-scale citizen-led restoration efforts.

As a field of study, civic ecology applies a social-ecological systems perspective, which recognizes the coupled nature of human and natural systems, to better understand the interaction, feedbacks, and drivers of change within these systems (Timmerman, 1981; Adger, 2000; Liu et al., 2007). Thus, civic ecology scholars ask how self-organized stewardship efforts can catalyze individual, environmental, and community wellbeing through positive feedback loops. These small-scale isolated practices alone may not have much of an impact; yet when they are linked into a larger scale civic environmental movement, they have the potential to lead to social-ecological systems resilience. Whereas the perspective of environmental stewardship and environmental citizenship is on the individual, and civic environmentalism describes a social movement, civic ecology widens the scope of inquiry by examining the individual, community, and larger social-ecological system.

Civic recreation is closely related to civic ecology practices and often “serves as a gateway to civic ecology practices” (Krasny and Tidball, 2015, p.12; Krasny and Delia, 2015). In

fact, the term civic recreation is borrowed from Krasny and Tidball who have both alluded to recreation as an entryway into civic ecology practices in their various publications, but use the term more "informally . . . as a way of describing a process by which individuals discover larger scale conservation" (K. Tidball, personal communication, July 28, 2016).

Adapting Tidball and Krasny's (2011) civic ecology framework by drawing from the work of Wolf et al. (2013) on urban ecological stewardship and the integrated framework for collaborative governance proposed by Emerson et al. (2012), the following working framework is proposed to guide this study of civic recreation, presented in Figure 1. As with any framework, this is a simplification of reality and may not hold true in all instances. In addition, the entire framework is beyond the scope of this dissertation, but Figure 1 gives the reader a holistic view of where the variables studied in this dissertation are situated in the broader civic recreation framework. The shaded boxes are the subjects of this study. It also is important to note here that outdoor recreation contributes to the individual actors and resources box in a dotted line. This is meant to demonstrate that outdoor recreation has the potential to influence these variables, but may not always do so.

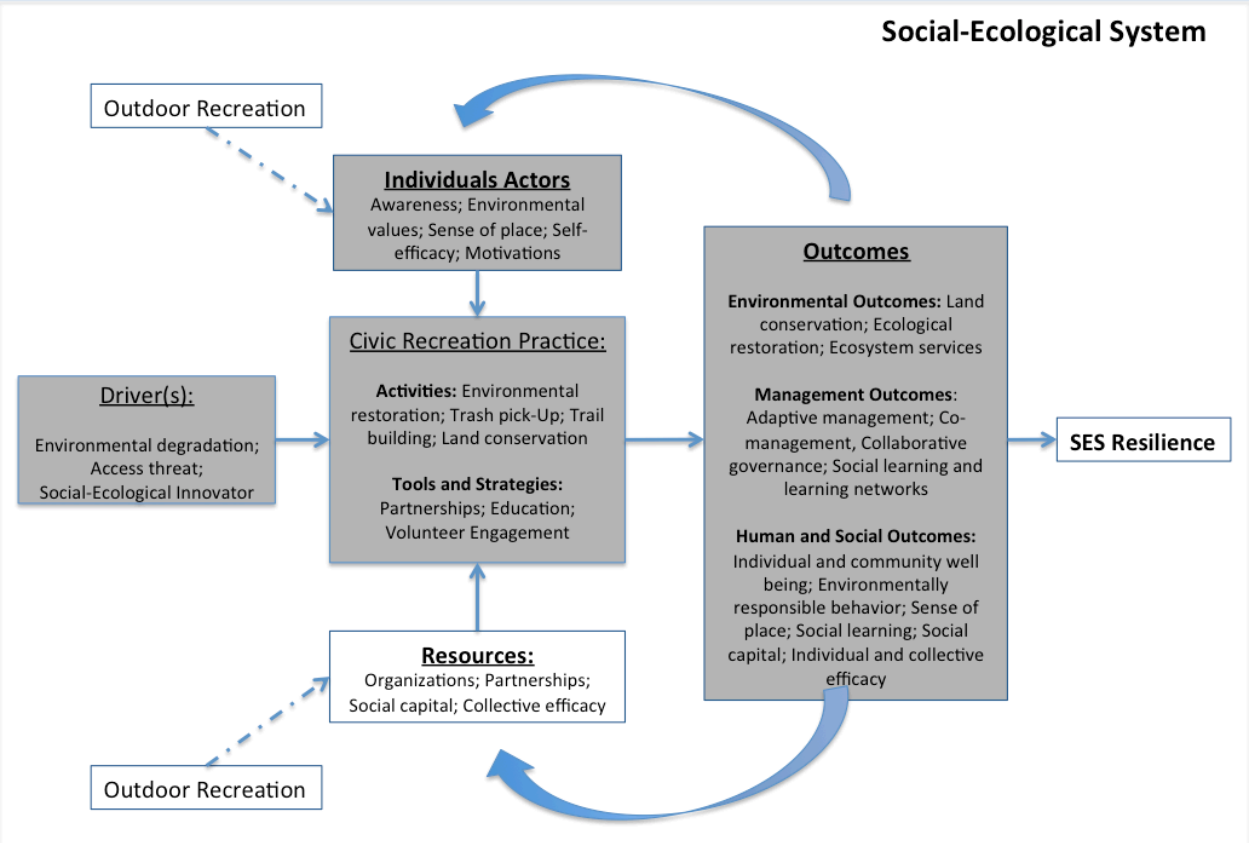


Figure 1.1 Civic recreation framework

Explanation of the Civic Recreation Framework

Civic recreation practices emerge from some form of driver, be it a threat to recreational access, environmental degradation, or simply an innovative idea to create more recreational resources originating from a "social-ecological entrepreneur" (Krasny and Tidball, 2015, p.161). These drivers, combined with inputs from individual actors and necessary and available resources, create civic recreation practices, which are generally organized and executed by a voluntary organization. Such practices may encompass ecological restoration, trash pick-up, trail building, and land conservation, to name a few. Organizations draw upon internal tools and strategies for effectiveness: partnerships, education and outreach, volunteer engagement, and advocacy that help them achieve their mission and goals. In addition, the organization may draw from external resources such as organizations that can provide technical and expert assistance.

While these tangible resources, such as financial, technical or expert support, are indeed important, less tangible resources that exist within a community also influence the ability for collective action. Two most important resources are social capital (Putnam, 2000) and collective efficacy (Bandura, 1986) that enable people to work together more effectively (Putnam, 1995, 2000; Davidsson & Honig, 2003; Cheung & Cheung, 2003; Bowles & Gintis, 2002). These variables are both inputs and outcomes of the civic recreation practice, thus they grow as a resource through the civic recreation practice itself.

Individuals are also an important resource for civic recreation organizations and may be motivated to participate for a whole host of reasons. Scholarship on volunteer motivations proposes that individuals volunteer to satisfy certain functional needs, which may include expressing one's values, gaining skills that may benefit them in their career or personal life, the desire to learn, strengthening social ties, and diminishing negative feels of guilt or other personal problems (Clary et al., 1998). Specific to environmental stewardship volunteers, several studies have concluded participants are highly motivated by their environmental values or concern for the environment (Grese et al., 2000; Ryan et al., 2001). Similarly, sense of place and connection to nature may be additional factors that influence individuals' motivations (Gooch, 2003; Krasny et al., 2014). While it may be intuitive that outdoor recreation and environmental values are positively correlated, research on this relationship has been mixed, finding only a weak positive relationship at best (Berns and Simpson, 2009). Thus, it remains unclear whether civic recreation volunteers are motivated by similar reasons as environmental volunteers.

Likewise, volunteering for civic recreation practices may be viewed as a form of pro-environmental behavior. Scholarship on pro-environmental behavior has identified myriad factors interacting in highly complex ways. Early environmental education research

hypothesized a linear relationship between environmental knowledge and environmental action; once an individual became increasingly knowledgeable about environmental problems they would become more motivated to change their behavior to promote better environmental quality (Ramsey and Rickson, 1976). Empirical findings, however, have consistently invalidated this simple relationship, asserting that psychological, cultural, and situational factors are also at play (Hungerford and Volk, 1990; Stern, 2000; Kahan, 2006). The literature is rife with constructs such as environmental concern, environmental attitudes, environmental awareness, environmental sensitivity, environmental literacy, and environmental citizenship, often used interchangeably and sometimes undefined. In addition, there are myriad other variables that influence environmentally responsible behavior such as connection to nature or nature connectedness (Mayer and Franz, 2004; Schultz et al., 2004; Nisbet et al. 2009), locus of control or self-efficacy (Hungerford and Volk, 1990), and sense of place (Vorkinn and Reise, 2001; Cheng et al., 2003; Scannell and Gifford, 2010) that have yet to be synthesized into a unified framework. This complex dynamic and relationships between variables makes this component of the framework particularly interesting and important, yet also very difficult to study in its entirety. Recognizing that outdoor recreation can foster a deep sense of place and connection to nature, my dissertation focuses specifically on these dimensions of environmentalism. Additionally, as civic recreation volunteers are volunteering, my hope is to better understand their underlying motivations. Finally, to address the bigger goals of this dissertation – specifically whether outdoor recreationists can be environmentalists of the 21st century – I explore the relationship between outdoor recreation and other forms of pro-environmental behaviors.

The potential outcomes of civic recreation practices extend into the environment, human,

social, and management domain, which then feed back into the inputs of the civic recreation practice itself in a positive, self-reinforcing cycle or virtuous cycle (Krasny and Tidball, 2015). Such feedbacks strengthen the capacity of the civic recreation practice while also potentially expanding the scale of the practice and creating networks of activities. Ultimately, this can lead to social-ecological resilience.

In the environmental domain, civic recreation practices are directly tied to ecological restoration, land conservation, and ultimately the provision and/or maintenance of ecosystem services. In particular, Krasny et al. (2013) suggest that civic ecology practices can generate cultural ecosystem services (Assessment, M.E., 2005), which directly influence other human and social benefits detailed below. Beyond the environmental outcomes, civic recreation practices may improve individual health and well-being (Hartig et al., 1991; Kaplan, 1995; Zelenski and Nisbet, 2014) while increasing an individual's sense of responsibility and efficacy toward stewarding their local environmental (Ryan, 2005) and build advocates for the environment (Grese et al., 2001). Furthermore, through working collectively to manage and steward recreational resources, civic recreation can strengthen a community's store of social capital and community capacity, important prerequisites to a sustainable community. Finally, within the management domain, civic recreation can add capacity to land managers and build buy-in from local stakeholders (Weber, 2000; Schuett et al., 2001). In some instances, these partnerships and collaborations can build the foundations of co-management, in which stakeholders are involved in shared decision-making and responsibility for the resource (Berkes, 1997; Plummer and Fitzgibbon, 2004).

It is important to note that my research does not attempt to directly measure these environmental and social outcomes; however, as an exploratory study, my research examines

perceived outcomes as reported by individuals and organizations. In this manner, I provide insight into the categories of outcomes that may result from civic recreation efforts as well as attempt to link these with relevant theory as a means to establish a strong foundation for future research in this area.

Research Questions

The relationships and dynamics modeled in the Civic Recreation Framework informed the research questions, design, and analysis. Research on recreation-based organizations is quite limited, particularly as it relates to the goals and objectives of these organizations, the reason that individuals get involved, and the outcomes that may result. Drawing on a mixed-methods research design that combines a multiple embedded case study design (Yin, 2014) with survey research, my dissertation specifically focuses on understanding and describing civic recreation organizations – their reason for being, the goals and objectives they have, the strategies they employ and barriers encountered in meeting their goals, and the outcomes of their actions. Additionally, I seek to understand the motivations of individuals who engage in civic recreation practices and the outcomes they report. Finally, my hope is to add some insight into the complex relationship between outdoor recreation and environmental values and behaviors. The following research objectives and associated specific research questions will be investigated in the chapters to follow.

Objective 1: Examine and describe civic recreation in practice (Chapter 3).

RQ1a*. Why do civic recreation practices emerge and what do they look like?*

RQ1b*. What are the goals and objectives of civic recreation practices?*

RQ1b.1 *Are there particular shared ideologies or environmental values associated with these practices?*

RQ1c*. What are the most effective strategies employed by civic recreation groups to accomplish their goals and objectives?*

RQ1d. *What are the current barriers that limit civic recreation groups from achieving their goals?*

RQ1e. *What are the various outcomes from civic recreation practices?*

Objective 2: Investigate how and why individuals participate in civic recreation practices (Chapter 4).

RQ2a. *How do individuals engage in recreation-based volunteerism?*

RQ2a.1 *What activities are most common and are there differences among different types of recreationists?*

RQ2b. *What motivates individuals to volunteer with civic recreation organizations?*

RQ2b.1 *Do these factors differ between types of recreationists or demographic characteristics?*

RQ2c. *Are there certain characteristics, values, or motivations that predict higher levels of volunteer engagement?*

RQ2d. *What outcomes do individuals experience from participation in recreation-based volunteerism?*

Objective 3: Investigate the relationship between outdoor recreation and environmental values and actions (Chapter 5).

RQ3*. What is the relationship between human-powered outdoor recreation, connection to nature, sense of place, and pro-environmental lifestyle behaviors?*

Dissertation Organization

This dissertation is organized to address each objective, and the subsequent research questions, as one chapter. As these topics are quite disparate and pull from very different

literatures and methods, each data chapter provides a literature review, methods section, and separate discussion and conclusion. As a result, some of the chapters will be minimally repetitive. My hope is that this structure provides more context and clarity for the specific research questions being addressed, the data that I present, and the conclusions that I am drawing. Each empirical chapter is also structured to be a separate manuscript or two for journal submission. An overview research methods chapter will be presented next (Chapter 2), followed by empirical chapters that address each objective outlined above (Chapters 3-5), and finally a conclusion chapter (Chapter 6).

CHAPTER II: METHODS

Research Design

This study investigates local civic recreation organizations, and the individuals who engage with these organizations, through a mixed method approach, drawing from a multiple embedded case study design combined with survey research. Johnson and Onwuegbuzie (2004) assert, "the mixed methods research paradigm offers an important approach for generating important research questions and providing warranted answers to those questions. This type of research should be used when the nexus of contingencies in a situation, in relation to one's research question(s), suggests that mixed methods research is likely to provide superior research findings and outcomes" (p.129). As this study is, in many ways, one of the first to look at recreation-based organizations through the lens of civic environmentalism and civic ecology, such a mixed-method approach will yield a more comprehensive picture of civic recreation in practice.

This chapter will broadly present the overall research design and data collection and analysis methods, but each will be presented with more detail in each empirical chapter to follow. First, this study employs a multiple-case embedded design (Yin, 2014) of two user groups within the Outdoor Alliance (rock climbers and mountain bikers) and two units of analysis (organizations and individuals). The case-study design enables the researcher to investigate "how" and "why" questions of "complex social phenomenon" that cannot easily be separated from its context (Yin, 2014, p. 4). This case study design, which uses both qualitative and quantitative methods, allows the researcher to develop a rich description and understanding

of the phenomenon under investigation. A multiple case embedded design identifies multiple cases that can be compared (based on similarities or differences) as well as examines sub-units of analysis within one case. By using multiple cases, the researcher is able to compare findings across cases, identify common themes and patterns, and ultimately produce more robust and generalizable findings. The choice to use multiple units of analysis provides a more detailed level of inquiry into each case, enriching the researcher's understanding of the phenomenon (Yin, 2014).

To complement the case study and probe further into the research questions, I implemented two surveys (Dillman et al., 2009), one to individual recreationists and the other to organizations affiliated with the Outdoor Alliance, a national advocacy organization representing the human-powered outdoor recreation community, which will be explained in more detail below. These surveys further our understanding of the role of local civic recreation organizations in practice and the individuals who engage with these organizations. Such survey research provides a means by which findings from the case studies can be validated and potentially generalized to the larger population. Figure 2.1 illustrates this mixed-method design. I compare two user groups – mountain bikers and rock climbers – using four local cases within each group. Within these local cases, both individuals and the organization itself are the subject of the research questions and separate units of analysis.

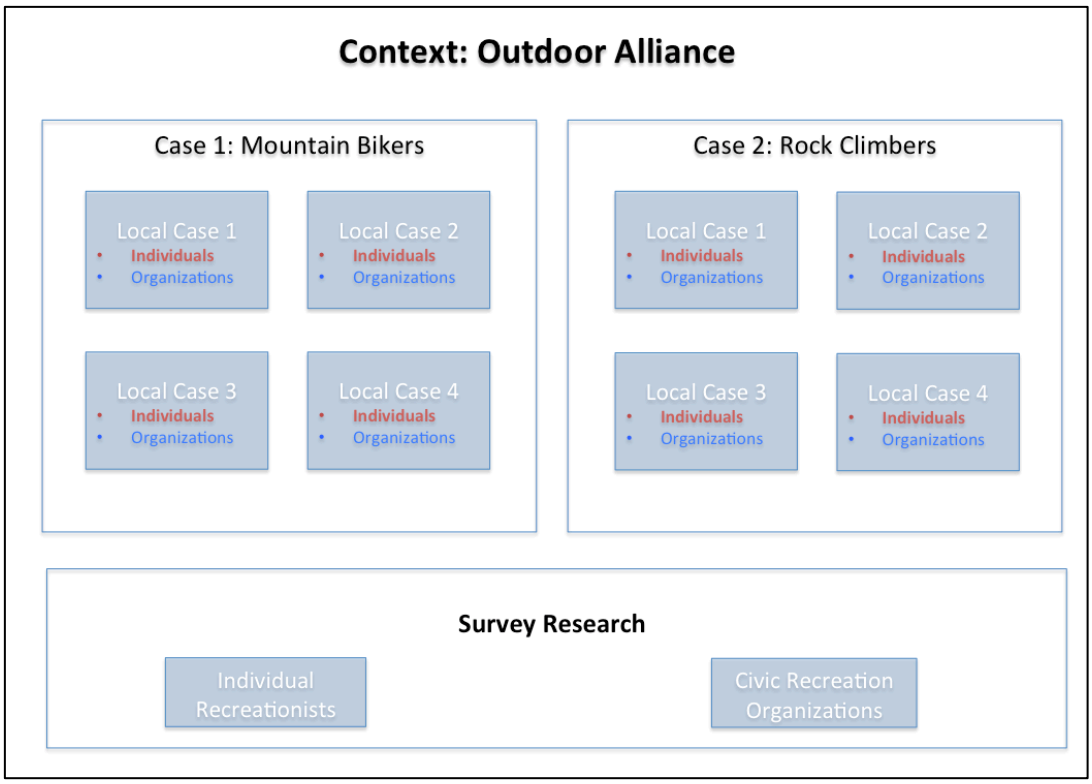


Figure 2.1 Research design

This research design was carried out in three phases. Phase I identified three initial cases – the Yosemite Climber Stewards, the Boulder Mountain Bike Alliance, and the Boulder Climbing Community. These initial cases were identified through interviews with key staff at the International Mountain Biking Association (IMBA) and the Access Fund (AF) as well as personal connections that I had and ease of access based on my location in Boulder. Interviews with key staff or volunteers were conducted, as well as documents and background materials about each case. This initial phase was used to refine the research questions, interview protocol, and other data collection needed, as well as illuminate general themes and insights to investigate in the next phases of the research. These data were not analyzed prior to moving forward during the next phase, but simply helped clarify the research questions and case study protocol. In

addition, these initial cases helped me to develop the two surveys, which were implemented in Phase II.

Phase II involved the design and implementation of two surveys: one to the entire list of the International Mountain Biking Association's and the Access Fund's network of local organizations, and the second to individual recreationists affiliated with the Outdoor Alliance. Once these surveys were closed, the remaining cases were identified from the survey respondents and the final cases were investigated during Phase III.

Multiple Case Embedded Design

Case Study Selection

User groups were chosen based on membership/affiliation with the Outdoor Alliance, a national organization that "protects and promotes the human powered outdoor recreation experience by uniting the voices of thousands of paddlers, mountain bikers, climbers and skiers to conserve America's public lands" (Outdoor Alliance, 2016). The Outdoor Alliance is a coalition of seven national advocacy organizations (American Whitewater, American Canoe Association, Access Fund, International Mountain Biking Association (IMBA), Winter Wildlands Alliance, the Mountaineers, and the American Alpine Club[1]) that represent various human-powered outdoor recreation user groups – backcountry skiers, hikers, mountain bikers, rock climbers, and boaters. These seven organizations have a collective membership of over 130,000 individuals and a national network of 1,100 local affiliates. Each organization not only provides a national voice for its members on policy issues, but they support a large network of grassroots organizations and volunteers who work on the ground to steward their lands and collaborate with managers on local management issues. For example, the International Mountain

[1] At the time of this research, only five organizations made up the Outdoor Alliance, which did not include the American Alpine Club (AAC). This is why the AAC was not used in informing the sample.

Biking Association has over 500 organizations in their network that "form a grassroots network of riders around the world" (Outdoor Alliance, 2016). Similarly, the Access Fund has a network of ninety-five local climbing organizations (LCO's) that it works with to advance their mission of preserving and protecting climbing resources around the country. Using the Outdoor Alliance and its affiliates provides a logical way to narrow the study population while addressing the human powered outdoor recreation community nationally. While this research does not specifically examine each national organization (i.e. how they work, what they do, etc.), the use of these organizations as selection criteria provides access to the user group through member lists and local case studies through their affiliate network. Moreover, some of the local cases are integrally connected with these national organizations.

Specifically, this study looks at two different larger cases within the human powered outdoor recreation community (rock climbers and mountain bikers), and two different units of analysis therein (local cases and individual volunteers). Understanding differences among outdoor recreation user groups is important to provide a more comprehensive description of civic recreation in practice. Additionally, as was discussed in Chapter 1, research on the relationship between outdoor recreation and environmental values highlights differences between different types of recreational activities. Both mountain biking and rock climbing vary by technology used, reliance on the natural resource, and scale at which the activity is generally pursued. These particular user groups were identified for two reasons. First, these user groups, especially rock climbers, have received little attention from scholars, making them a particularly interesting user group to study, especially as participation in rock climbing is notably increasing. Secondly, the strategies and actions they employ appear to be distinctly different from other recreational user groups. For example, many rock climbing organizations act as land trusts as a strategy to

preserve a climbing resource. Similarly, mountain biking organizations are forming co-management relationships with land managers, taking on the responsibility for building and maintaining a vast system of trails.

Eight local successful cases. Three initial cases were chosen based on suggestions from Access Fund and IMBA staff, demonstrated project success, and my level of personal connections or ease of access to these organizations. These cases were the Boulder Climbing Community, Boulder Mountain Bike Alliance, and the Yosemite Climber Stewards. These initial cases helped to clarify the research questions, case study protocol, and the development of a survey that was disseminated to the grassroots network of both the Access Fund and IMBA. From the survey, an additional 5 cases were identified based on the following criteria: self-reported mission success, land management structure, region, and willingness to further participate in the study. While all cases are examples of varying degrees of success in achieving their mission, I attempted to vary by region and land management structure so as to better understand important differences in activities, strategies, and various factors that contribute to an organization's success. Table 2.1 below details the local cases in this study.

Table 2.1 Case study characteristics

User Group	Name	Location	Type of Land Management
Rock Climbing	Stewardship in Yosemite: • Yosemite Climber Stewards • Yosemite Facelift	Yosemite, CA	Federal public land — National Park Service
	Friends of Muir Valley (FoMV)	Red River Gorge, KY	Private land owned by climbing organization
	Boulder Climbing Community (BCC)	Boulder, CO	Multiple — city, county, private, national forest, state park
	Carolina Climbers Coalition (CCC)	North and South Carolina	Multiple — State park, national forest, private (some owned by CCC)
Mountain Biking	Boulder Mountain Bike Alliance (BMA)	Boulder, CO	Multiple — city, county, national forest
	Chicago Area Mountain Bikers (CAMBR)	Chicago, IL	Multiple — city, county, state
	Trails Have Our Respect (THOR)	Eastern Nebraska and Western Iowa	Multiple — city, county
	Moscow Area Mountain Bike Association (MAMBA)	Moscow, ID	Private

Certainly, the case selection criterion has its limitations. All of the cases represent success to some degree, rather than failure. Success in this context is defined by mission success, reported by the organization itself either through an initial contact with an interview respondent or their answer in the organizational survey. In this way, the research is biased toward findings that explain success. However, given the lack of scholarship done in this area and the limits of time and scope of a dissertation, such a design is appropriate to address the research questions while also directing future research toward examples of unsuccessful efforts. Additionally, there are numerous other users within the outdoor recreation community that are not included in this comparative case study and survey research. The recreation user groups chosen for this study share similar values and challenges within the outdoor recreation community. I chose these groups over comparing different forms of recreation (e.g. appreciative vs. consumptive (Dunlap and Heffernan, 1975) or abusive (Geisler et al., 1977)) to limit confounding factors that may

influence the relationship between outdoor recreation and environmental values (Teisl and O'Brein, 2003).

Units of Analysis

This case study design examines two units of analysis: local organizations, described above, and individual recreationists and volunteers. Specifically, the study seeks to understand how and why local organizations emerged, their mission and goals, the strategies they employ and barriers they encounter, and outcomes they have experienced. In addition, individual volunteers who engage with and support these organizations are instrumental to the activities and successes of civic recreation groups. Not only does this research examine local cases in context, but it also attempts to understand these practices from the perspective of the individual. Thus, understanding the relationship between outdoor recreation and individuals' environmental values as well as their motivations for engaging in volunteerism is an important aspect of this research. This perspective was gleaned from interviews as well as through survey research, described below. Figure 2.2 below illustrates these units of analysis and the variables that I explored in this study.

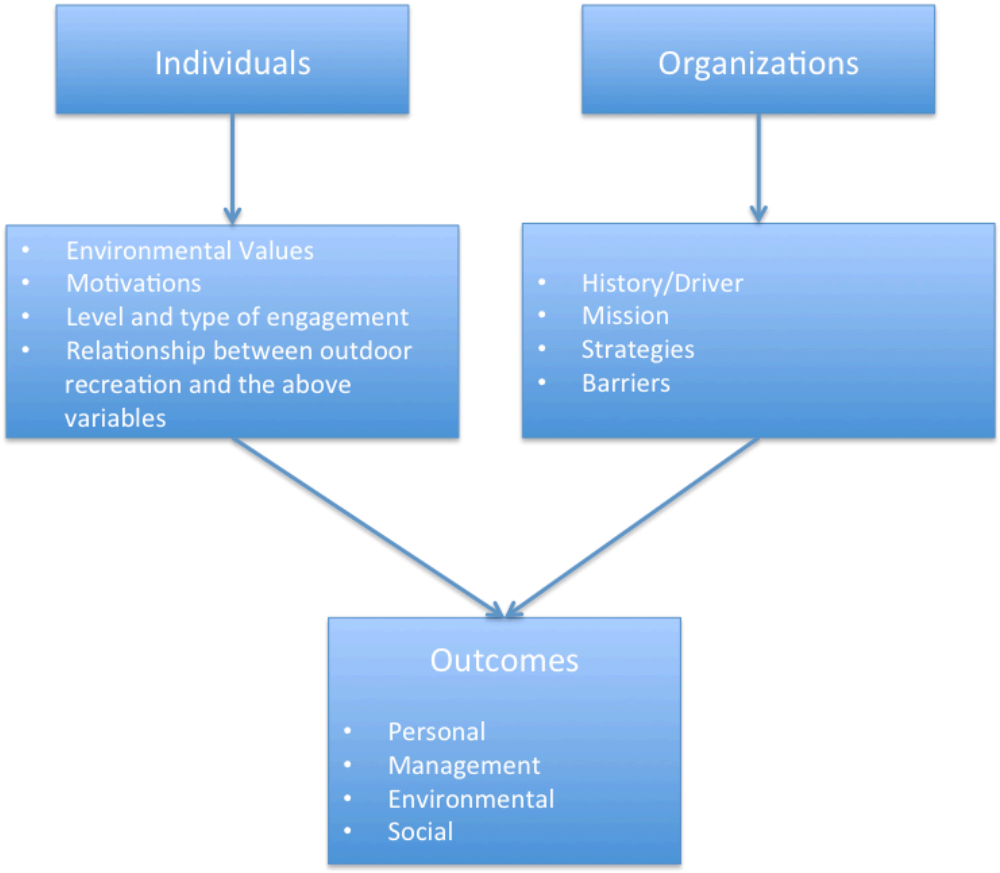


Figure 2.2 Units of analysis – Individuals and organizations involved in civic recreation practice

Case Study Data Collection

Data for the multiple case embedded design draws primarily from qualitative methods through the use of semi-structured interviews and organizational documents. Some quantitative data was gathered, as the majority of the cases also responded to the organizational survey. However, the quantitative data were used to fill in details about the case, but were not used in any cross-case analysis; rather, the quantitative data are used in the survey analysis, described below. This approach to data collection is beneficial in case study research as it "allows a researcher to address a broader range of historical and behavioral issues." Such "triangulation"

provides for findings and conclusions that are "likely to be more convincing and accurate" (Yin, 2014, p. 120).

Background documents. Historical and background documents were gathered for each case to provide context for the user group and local cases selected. There were two different sources of documents gathered to provide background information about the user group nationally as well as the local cases:

- Documents from national organizations – Documents such as membership communication materials, member resources (e.g. "Climbing Management: A Guide to Climbing Issues and the Development of a Climbing Management Plan" which the Access Fund published for local climbing organizations), and Annual Reports were collected. These documents enhance the understanding of each user group within the national or regional context, providing important information about the issues that they face, the strategies they use, and the culture/values of their members.
- Documents from local cases – Documents such as press releases, media, MOUs, reports and management plans that help to explain the emergence of the organization or group, tools and strategies employed, and outcomes resulting were gathered for each local case. It should be noted that many organizations do not have these documents, as they are limited in their capacity to produce publications, annual reports, and other formal documents. In this case, I relied on the organization's web presence (website or Face Book page).

Semi-structured interviews. Semi-structured interviews (Rubin and Rubin, 2012) comprise the majority of the data collected for each case. Inclusion criteria for subject selection was based on adults (over the age of 18) actively engaged in recreation-based stewardship

through their official professional or volunteer status and were often individuals who held a leadership position within these groups. Such information about the subject selection was obtained through names appearing in background documents within each case study, names listed under organizations' staff directories, and names obtained through a snowball sampling procedure.

First, to get a better understanding of civic recreation in context, it was important to gather background information about each user group: the issues and challenges they face, strategies and tools they employ, and who their members are and perceptions of why they become involved. To ascertain this information, I conducted interviews with several elite staff of the Outdoor Alliance and leaders of the two national member organizations representing rock climbers and mountain bikers (Access Fund and International Mountain Biking Alliance) (n=4). As described earlier, each national organization is integrally connected to the local case studies and provides support in terms of technical expertise, resources (grants, networks) and personnel. Moreover, as the case studies explore the user-group themselves, these organizations represent the user group from a national perspective. Example questions for these interviews are detailed in Appendix A.

Interviews with key leaders of the local cases were conducted to understand the history, structure, goals, and strategies of the organization. Each subject was asked about their own personal motivations for getting involved as a volunteer with the organization and the outcomes they had experienced. Finally, interview subjects were asked to speak generally about the connection between outdoor recreation, volunteerism, and environmentalism. See Appendix B for the specific interview protocol. Some of these interviews were held in person, while others occurred over the phone due to limited time and resources. Interview subjects were chosen based

on their role within the organization, as either holding a significant leadership position or being actively engaged with the project or organization during a significant time in the organization's history. It is important to note most subjects were also volunteers in their position; only a few subjects held paid positions. Table 2.2 details the characteristics of each interview subject and the subject codes associated that will be used to identify the qualitative data presented in the ensuing chapters.

Table 2.2 Interview subject characteristics

Organization	Role	Years Involved w/ Organization	Subject Code
Outdoor Alliance	Director	2	OA-01
Outdoor Alliance	Executive	6	OA-02
IMBA	Director	4	IMBA-01
Access Fund	Executive	8	AF-01
Access Fund/BCC	Director	5	AF-02
BCC	Executive/Volunteer	6	BCC-01
BMA	Executive/Volunteer	20	BMA-01
BMA	Executive/Volunteer	10	BMA-02
BMA	Executive/Volunteer	3	BMA-03
BMA	Volunteer	12	BMA-04
Yosemite Climber Stewards	Director/Co-Founder	7	YCS-01
Yosemite Climber Stewards	Volunteer	1	YCS-02
Yosemite Face Lift	Executive/Volunteer	12	YFL-01
FoMV	Executive/Volunteer	12	FoMV-01
MAMBA	Executive/Volunteer	6	MAMBA-01
THOR	Executive/Volunteer	2	THOR-01
CCC	Executive/Volunteer	7	CCC-01
CAMBR	Executive/Volunteer	20	CAMBR-01

Case Study Descriptions

This section provides a summary of each local case included in this research to provide the reader with background information prior to addressing specific research questions in the following chapters. Embedded in the descriptions are direct quotes from interview, documents, and online data. I include the source of the quote using subject codes (presented in Table 2.2

above) or the name of the document. The analysis and findings of these case studies will be presented in the ensuing chapters.

Boulder Mountain Bike Alliance. The Boulder Mountain Bike Alliance (BMA) is a recent chapter of the International Mountain Bike Alliance (IMBA) with the mission to "improve the trail experience for everyone," and the belief that "great communities build trails, and great trails build communities." BMA seeks to promote responsible mountain biking within Boulder, County and the Rocky Mountain region, assume a lead role in policy decisions and act as a liaison between different interests concerning mountain biking, ensure proper land use which includes multi-use trails and mountain biking access in certain places, and assist in building and maintaining trails. The organization supports this mission through group rides and events, advocacy, and trail building. BMA works on city, county, state, private, National Park, and BLM land.

The organization was originally established in 1991 as the Boulder Offroad Alliance as a response to the citywide closure of mountain bikes within the city of Boulder, Colorado. In 2006, the Boulder Offroad Alliance changed its name to Boulder Mountain Bike Alliance to more adequately describe its mission and focus. This history of advocacy as the primary focus began to lift as BMA made some strides and advances, although advocacy remains a large component of the organization's focus and efforts. As the organization evolved, efforts to partner with land managers, particularly those outside of the City, through trail building and maintenance and a volunteer bike patrol, began to gain support and momentum. BMA has successfully partnered with Boulder County and the Forest Service to build and maintain multi-use trails, drawing on volunteers and other partnerships to enhance the capacity of the land managers, provide expertise in building sustainable trails, and present a more positive view of mountain bikers to the larger

community. BMA also worked with the City of Boulder to create and fund the Valmont Bike Park, a great resource for the community and one of the first successful partnerships with the City. Additionally, the organization now boasts a membership 500-700 people with an active volunteer base, more acceptance of mountain biking generally within the region, and a consistent seat at the table when it comes to land management decisions.

Chicago Area Mountain Bikers (CAMBr). CAMBr is a chapter of IMBA with the primary mission to "educate bicyclists, promote responsible trail use, prevent trail closings, and maintain and build multi-use natural surface single-track and freeride cycling opportunities. [CAMBr seeks to accomplish its mission] through stewardship, environmental and social responsibility, education, and a spirit of cooperation among all trail users, the conservation community, and governing bodies." Currently, the organization is divided into two different regional chapters with a combined 750 paid members, 200 active volunteers, and a mailing list of over 4,200 people. CAMBr primarily works to build and maintain trails on city and county land.

Founded in 1993, CAMBr initially began as TURF, the Trail-Users Rights Foundation in response to the Forest Preserve District of Cook County deciding to ban bikes within the Forest Preserve. This closure was in reaction to user conflicts that had emerged as mountain biking became more popular. Several riders put together a petition and garnered 20,000 signatures, forcing the Forest Preserve to reconsider their policy. This created a contentious relationship with the land managers from the start, which made it very difficult for many years to work with them. They either said 'no' to new trails, or told them to build in areas that were not conducive to sustainable mountain biking trails.

Over its 20 year history, the organization has gone through some important shifts, moving from a more grassroots structure and feel to a "full grown association" (CAMBR-01)

with their own 501(c)3 and good business practices. Additionally, CAMBr has established credibility with land managers, as evidenced by the National Association of County Park and Recreation Officials awarding them the Volunteer Organization of the Year in Cook County and land managers now approaching the organization for help to build and maintain trails. These accomplishments, along with the hundreds of new multi-use trails that have been added to the Chicago region, make leaders of the organization feel it is moderately successful. However, there are still significant politics and stereotypes against mountain bikers among land managers and other user groups that could be improved.

Trails Have Our Respect (THOR). THOR is a recent chapter of IMBA dedicated to "developing and maintaining sustainable off-road recreational trails in Eastern Nebraska and Western Iowa by providing expertise, manpower, and resources." The organization works primarily on city and county lands, yet also does some work on state and private lands. While trail building and maintenance is the primary activity of the organization, THOR also provides education to users as a means to communicate trail conditions and leave no trace etiquette, community events, and a youth rider program through the Omaha DEVO program. THOR has successfully partnered with several other user groups, the Greater Omaha Trail Runnerz, the Psycowpath Mountain Bike and Trail Running Series, Live Well Omaha, and the Nebraska Bicycling Alliance to increase awareness, membership, volunteers, and collaboration.

Tony Naikelis, a "trail visionary and experienced rider who was ahead of his time" (THOR Ten Year Story, 2007) founded THOR in 1997 after attending an IMBA meeting in the area. This was in the early days when there were no trails designated for mountain bikes, so riders just rode where they could and did not ask permission. This led to a stereotype of "rebels" who were damaging the trails. Fueled by his passion for riding and concern for the environment,

Tony "built a grassroots following of mountain bikers" (THOR Ten Year Story, 2007) who began building and maintaining multi-use trails. In 1997, a large storm damaged and destroyed many of the local trails. THOR volunteers went out to help, and as word got out, THOR really gained momentum and support within the community.

Recently, the organization went through a transition, as the leadership wanted THOR to become more of a professional advocacy group instead of a "grassroots, let's go build trails" kind of group (THOR-01). During this transition, most of the board resigned as they brought on new people who had an expertise in non-profit management. At the same time, they became a chapter of IMBA. Now, the board is more professional and attends to the business aspects of the organization, supporting trail leaders with the resources they need to be successful. With this change, the leadership of the organization feels that it is in a very good place and is very successful.

> "There's a good balance between the number of trails that need to be maintained and kept up with against the memberships and people who come out and help." (THOR-01)

Moscow Area Mountain Bikers Association (MAMBA). MAMBA is an independent non-profit that acts as the liaison between the recreation community and private landowners of Moscow Mountain, four miles outside of the town of Moscow, Idaho. While the organization does not have a stated mission, the president expressed that MAMBA exists simply to promote "fun on the mountain" (MAMBA-01). They do this through building and maintaining multi-use trails, fostering relationships with landowners, and promoting responsible recreation to preserve access to these trails. MAMBA has 400 paid members and 500 people on the mailing list. Members get GPS access to the trail system, which does not have any on-the-ground signage due to the privately owned land management structure. Trails are built and maintained by volunteers, mostly from within the mountain biking communities or from the college.

MAMBA was founded in the mid-1990s by a local skier and mountain biker who saw an opportunity to build a recreational resource on the mountain. Riding around county roads, he envisioned a system of multi-use trails that would be accessible from town. He approached the landowners to propose a trail system, and over the years, secured access to and built 30 miles of singletrack. Since then, the area has been expanded to 70 miles of singletrack, all built and maintained by MAMBA volunteers. Most of the land is owned for the purpose of timber. While there are no official agreements securing access, and the land could be sold or logged at any time, the landowners appreciate recreationists being out there because it stops illegal activity. MAMBA acts as the clearinghouse for information by staying up to date with landowner activities, such as logging or fire mitigation, and informing the community of trail closures during that time.

Stewardship in Yosemite Valley. Climber stewardship in Yosemite Valley is occurring in myriad ways, some disjointed and others better organized and coordinated. As this was one of the initial cases, I was initially interested in the Climber Steward Program and did not fully understand how all of the efforts were linked. Through interviews and visiting Yosemite, two projects were identified to further explore: the Climber Stewards Program and the Yosemite Facelift. While both of these projects are government-public partnerships, they vary in their origin, structure, and function. However, they both represent the goal of building a culture of stewardship within the climbing community, mending relationships with land managers, and collaboratively caring for the iconic Yosemite National Park.

Yosemite Climber Stewards. Established in 2011, the Yosemite Climber Stewards program invites volunteers to live, work, and climb in Yosemite for a season as official "Volunteer Interns" of the Park Service. With an expertise in climbing, these volunteers work on

average 32 hours a week to build a culture of stewardship, educate climbers and other park visitors, perform high-angle stewardship projects, and get involved with other stewardship projects: trail work, peregrine falcon monitoring, and a "climber steward thesis" or project of their choice. As non-federal employees, volunteers have a bit more liberty to walk within a gray line between climbing and management. As such, they can directly get involved in keeping up climbing conditions, like replacing bolts or putting up new fixed lines, that climbing rangers are not able to do. In this manner, they also serve as important liaisons between the climbing community and park service to express any issues between the two.

Yosemite Climber Stewards was the vision of a former Climbing Ranger who worked with the Access Fund (AF) and the American Alpine Club (AAC) to initially fund and launch the program. As the founder explained, it was

> Born from a series of conversations between [a formed climbing ranger] . . . who has been involved for a long time in trying to build a community of climbers who are interested in preserving access and protecting the resource . . . Her work [and the success of the Yosemite Face Lift] really inspired me because it talks a lot about how John Muir [and other early climbers] was a climbing steward. (YCS-01)

Support has grown to include a grant from the Yosemite Conservancy. In 2014, the AAC and the AF became an official park partner through a formal MOU, which enables them to work together without being viewed as an interest group. Since 2011, this model has been expanded to Joshua Tree National Park and there are conversations about introducing it to other National Parks across the United States.

Yosemite Face Lift. The Yosemite Face Lift is a five-day volunteer event in the fall during Public Lands Day, focused on trash cleanup and stewardship in Yosemite Valley. Over 2,000 volunteers from around the world take part in the event, either for one day or the entire time. Mostly, this is linked to a climbing trip, but some come just come to participate in the

event. In exchange, they have access to limited free camping, food and evening programs, raffles and prizes, and just a good time.

The founder of the Yosemite Climbing Association and a long-time Yosemite local and guide, frustrated by the amount of trash in the area and the poor relationships and perceptions between the climbing community and Park Service, started the Facelift in 2004 in response. The Yosemite Climbing Association's mission is to preserve and protect climbing history; the founder reasoned that if things got so bad that climbing was banned in the Park, there would be no history to preserve. On a whim, he organized a three-day event with about 360 people. In that first year, they picked up 23 truckloads of trash. Over the years, it has grown in both size and recognition. The founder suggests they have "picked up over 1 million pounds of trash," and are now working on other service projects beyond trash cleanup. The Park Service is now an official partner and the Facelift has seen recognition from the media and Washington, DC as a model for other Parks.

Through both of these projects, combined with other efforts on both the part of the National Park Service and the climbing community, relationships between climbers and land management have been greatly improved, the environmental quality of the park is significantly better, policy makers and land management agencies in Washington DC have noted these efforts and worked to replicate them in other areas, and a shared culture of stewardship has blossomed.

Boulder Climbing Community (BCC). The BCC is an independent non-profit "that connects and supports climbers, climbing organizations, land managers and businesses in the Boulder, Colorado area, in order to protect and care for the climbing areas we all love." The primary focus of the organization is to support land managers through trail stewardship. Their hallmark program is the Front Range Climber Stewards, a team of three paid trail professionals

who work on long-term trail projects throughout the Front Range and even into Utah. This crew draws from volunteers throughout the project, sometimes hosting 2-3 at a time over the week while other times hosting large volunteer trail days. In addition, the organization supports a raptor monitoring program in partnership with the Forest Service, distributes "wag bags" throughout popular climbing areas to mitigate irresponsible disposal of human waste, and has a flourishing bolt replacement program. The BCC has an active membership of 300 people and often collaborates with the two other local climbing organizations in the area.

While the history of local climbing organizations in the Boulder area spans 20 years, the BCC was recently founded in 2010 in part to present a different philosophy of how the climbing community should steward lands in the Boulder area and work with land managers, and in part to mend relationships with land mangers that were "toxic." In many ways, the founder believed that climbers should better manage themselves and take responsibility for the impact they created:

> There appeared to be a need for some other climbers to work in a different way with [one] particular land manger and really support them. (BCC-01)

The BCC believes in collaboration and dialogue, supporting land managers through added trail stewardship capacity, connecting the greater climbing community, and advancing win-win situations. Through their efforts, they have become a welcome partner to land managers in the area and built a community culture around stewardship. Still, they remain a newer organization facing the challenge of building awareness and capacity and finding their niche within the larger ecosystem of climbing oriented non-profits in the Boulder area. Additionally, they have been more successful with some types of land management agencies (e.g. city of Boulder, Eldorado Canyon State Park) whereas working with the Forest Service, who owns and manages much of the climbing in Boulder Canyon, presents challenges due to the bureaucracy and culture.

Friends of Muir Valley (FOMV). The Red River Gorge is one of the world class climbing destinations in the Southeast. The climbing is extensive, accessible, and aesthetic. Much of the climbing exists on Forest Service land, yet the area is patched together with acres of private land. Recently, several organizations have purchased land exclusively the purposes of climbing. Now, probably 70% of the climbing in the Red River Gorge is on private land. Joining in this movement, Rick and Liz Weber purchased and created the Muir Valley Nature Preserve in 2004. The couple, originally from Indianapolis, enjoyed climbing in the Red and sought out property to have a place to stay when they visited the area. They purchased an old farm, not necessarily realizing the extent and potential of climbing on their property. Quickly, they realized the opportunity that existed and Friends of Muir Valley was formed to support peopled develop routes and create trails.

Early on, the Webers indicated their wish to donate the property to Friends of Muir Valley. This intended gift came with the stipulation that Friends of Muir Valley needed to raise $200,000 to provide operational funding necessary to maintain and oversee the property. With the support of the Access Fund and over 400 individual donors, they raised $230,000 in nine months and in March, 2015, the Webers gifted the entire 250-acre climbing valley.

The organization is responsible for 1) Owning, operating, and managing the nature preserve; 2) Providing and organizational structure to manage and maintain the Muir Valley; 3) Exhibiting good community citizenship, both with respect to climbing and general community; 4) Engaging the community in volunteer activities to support the goals of FOMV; 5)Educating the climbing community on Leave No Trace, stewardship philosophy, resource protection, and climber safety; and 6) Fostering, expanding, and promoting the sport of climbing, hiking, and the study of nature and conservation. Muir Valley sees over 45,000 visitors a year, most of them

climbers, comparable to a nearby state park, which recorded 60,000 multi-use visits in one year. There is one large volunteer day each year, with an average attendance of 150-200 people. It has gotten so popular, that sometimes they have to turn people away. In addition, throughout the year, numerous college groups come out to help for a week or so at a time.

Carolina Climbers Coalition (CCC). The CCC is an independent non-profit representing climbers in North and South Carolina. To meet its mission of "preserving, protecting, and expanding your climbing opportunities," the CCC engages in advocacy to be the voice of the climbing community to land managers and other stakeholders, supports land managers on climbing related management, educates and informs the climbing community about responsible recreation and relevant issues, promotes volunteerism through trail stewardship and other avenues, and purchases/manages climbing areas. The organization owns three climbing areas – Laurel Knob, six acres of Rumbling Bald State Park, and Hidden Valley, West Virginia – and leases two other properties for climbing – Sauratown and the Asheboro Boulders in N. Carolina. They have also created an MOU with the National Park Service to manage climbing along the Blue Ridge Parkway and are involved in a collaborative planning process with the Forest Service for this area as well. The Coalition currently has a membership of about 250 people and sees itself as extremely successful.

The CCC was created in 1995 as a result of an unfounded rumor that Crowder's Mountain would be closed by the State Park due to a fatality. While this was not the case, it garnered support and concern from the climbing community, and in a meeting with the State Park officials to resolve the matter, over 100 climbers voted unanimously to create a coalition to help preserve climbing access in the region.

> It was just a rumor, it was completely unfounded, but it kind of galvanized a bunch of people. They got together and said we need to get a group together to represent climbers to the state parks. (CCC-01)

Originating as a grassroots-advocacy organization, the CCC has gone through several evolutions in response to growing needs within the climbing community. Most notably, in 2005 the CCC purchased its first property, Laurel Knob, which is one of the largest cliffs in the southeast.

Through their persistent positive engagement with land managers and willingness to support land managers' goal, the CCC has developed strong relationships and credibility that has enabled them to achieve their mission. Recently, they have begun partnering with other user-groups on land policy processes to present a more unified voice of recreational interests. According to the President:

> As an organization, we're probably right now at the best place that we've been in terms of how engaged we are with land managers in N. and S. Carolina, the opportunities that are coming our way, our ability to get access to project money to do things . . . Because we have a track record . . . I think it's 20 years of slow, progressive advancing and demonstrating that we know what we're doing and we can stick around and do those things, we can accomplish these big projects, we can pay off ¼ million dollar loans. (CCC-01)

Still, fundraising around non-project based objectives, organizational capacity, turnover with land managers, rogue and irresponsible climbers, and persistent rifts within the conservation community present consistent challenges that the CCC must continue to address.

Case Study Data Analysis

Both Miles and Huberman (1994) and Yin (2014) recommend using a logic model or conceptual framework as one way to analyze case study data. "A conceptual framework explains, either graphically or in narrative form, the main things to be studied – the key factors, constructs or variables – and the presumed relationships among them" (Miles and Humberman, 1994, p.

18). Not only does this framework bound the study by determining what will and will not be examined, it provides a useful logic model to begin analysis. Drawing from the Civic Recreation Framework presented in Chapter 1, I attempted to link each variable identified to the framework and say something about the relationship within the whole framework.

First, interviews were recorded and transcribed verbatim. Based on the literature review and the research questions, a priori codes were developed to help lump the data into categories and intellectual "bins" (Miles and Huberman, 1994, p.18). However, new codes were added throughout the analysis, as this is a new area of research and theory is not well developed in this field (Miles and Huberman, 1994; Auerbach and Silverstein, 2003) and coding is itself a heuristic and analytical process (Saldana, 2012). I used NVivo, a qualitative coding software during this analysis. Table 2.3 displays the parent level codes used during this analysis. The complete codebook can be viewed in Appendix C. From this coding, I first created an individual case synopsis that aimed to distill the essential elements unique to each case. Not only did this serve to help organize the vast quantity of qualitative data, it clarified "ideas about the meaning of [the] data" which could lead to deeper analysis, while also pointing to additional data that was needed (Miles and Huberman, 1994, p. 89).

Table 2.3 Parent codes for qualitative data analysis

Code	Description
ORGHSTY	Anything that has to do with organizational history, specific description of events, reason for being.
DRIVER	Reasons for the organization or project to emerge
MISSION	Describes the goals and objectives of the civic recreation organization/group (note: this is different from strategies the organization employs. Here it is an end, whereas strategies are a means).
ACTIVITIES	Describes civic recreation practices and activities of the project or group.
EFFECTIVE	Feelings and assessment of how effective or successful the organization has been at achieving its mission, goals, and objectives.
LIMITS	Types of limits or barriers that prevent the organization from achieving its mission, goals, or objectives.
STRATEGY	Types of strategies that the organization employs to achieve its mission, goals, and objectives.
OUTCOMES	Different outcomes that have been observed as a result of civic recreation practices
VOLMOTIVES	Reasons that volunteers get engaged with the civic recreation organization or activity (these codes created through PCA survey analysis)
VOLOUTCOMES	Types of outcomes that either the individuals experienced themselves or observed from other volunteers
ACTORS	Describes qualities, characteristics, and values of the individual actors
WHYREC	Reasons that the individual expresses for doing their recreational activity
EVDYNAMIC	Discusses the relationship between civic recreation and environmental values and behaviors

Once the data collection was complete, I prepared a within-case summary of each local case and drafted a brief case description. These summaries helped move the analytical process from "description to explaining" as well as highlight patterns and themes that were emerging from within and between the case (Miles and Huberman, 1994, p. 93). Finally, a cross-case comparison was conducted to reveal similarities and differences, "deepen understanding and explanation," and enhance generalizability of the findings (Miles and Huberman, 1994, p. 173).

Survey Research

Expanding upon findings from the three initial cases, two surveys were designed and disseminated to probe the research questions further and provide more comprehensive data to the study. First, a survey was sent out to civic recreation organizations representing rock climbing and mountain biking to expand on findings from the comparative case study. Following this, a survey was distributed to individual recreationists affiliated with the Outdoor Alliance to better understand and test hypotheses about outdoor recreation and environmental values and better understand volunteer motivations and outcomes. The data from both surveys serve to improve our understanding of the two units of analysis in this study and provide for more generalizability of the results.

Survey of Individual Recreationists

In order to better understand how and why individuals engage in recreation-based stewardship, as well as the relationship between recreation, volunteerism, and environmentalism, a survey of the broader recreation population was implemented. While all of these individuals were in some way connected to the Outdoor Alliance, their level of engagement and participation varied significantly, enabling an investigation into the variables and interactions that predict volunteerism and the outcomes that ensue. Thus, this survey research can provide a complimentary method to qualitative interviews in exploring these relationships and establishing more empirical and generalizable support for the findings.

Prior to the development of the survey instrument, I conducted semi-structured interviews (Rubin and Rubin, 2012) with ten active staff or volunteers associated with civic recreation organizations. This qualitative interview data, combined with a review of the relevant literature, informed the development of the online survey instrument. Once the survey was developed, I

piloted it with twenty individuals through an online platform to ensure that participants understood the questions they were being asked and that the survey instrument flowed in a logical fashion. These twenty individuals were identified through previous interviews or my personal connections and were directly targeted to take the pilot survey. The survey instrument can be found in Appendix D.

Ideally, I would have liked to distribute the survey to all members of the five organizations that comprised the Outdoor Alliance (Access Fund, International Mountain Biking Association, American Whitewater, American Canoe Association, and the Winter Wildlands Alliance) to ensure a known sampling frame and thereby produce more reliable and generalizable results. However, the above organizations were wary and protective of their member lists and did not want to violate their members' email and privacy. This is a common concern among membership-based organizations. As such, the survey was distributed through social media, newsletters, and other communication channels within each organization. In this manner, the survey used a non-probability sampling method. The survey was open for two months in the spring of 2015. I worked with the Communications Director of the Outdoor Alliance to craft language encouraging people to take the online survey. Several reminders were sent out throughout the time frame in which the survey was live. A total of 721 individuals started the survey. However, I deleted any responses that were labeled "unfinished" in the Qualtrics platform and any respondents who stated they did not participate in an outdoor recreation activity, yielding 480 total responses (n=480).

Survey instrument. The survey instrument (Appendix D) consisted of eighty-five questions grouped in the following categories:

- *Level and type of participation in outdoor recreation activities*: These questions ascertained which activities the respondent consistently participated in, if one was more important to their life than another, and how long they had participated in these activities. Six different options were provided (rock climbing, mountain biking, fresh water boating, backcountry winter sports, hiking, and other).
- *Membership and level and type of volunteer participation with civic recreation organizations*: These questions determined whether the respondent was an active member of any civic recreation organization(s), and if so, for how long. Additionally, the respondent was asked whether they volunteered for a civic recreation organization and, if so, what types of activities they participated in. Respondents were also asked to identify which organization they volunteered for (if there were multiple) was most important to them.
- *Questions about individual's motivations to volunteer:* These questions attempted to identify the motivations behind an individual's volunteer participation. Questions were informed by Clary et al.'s (1998) Volunteer Functions Inventory and a more recent paper directly examining volunteer motivations in recreation-based voluntary organizations (Lu and Schuett, 2014). Several other questions were added at the recommendation of pilot participants.
- *Questions about what volunteers gained from their volunteer experience:* These questions revealed self-reported outcomes as a result of volunteering. Volunteers may experience a sense of satisfaction for contributing to greater good, more connection to the place they volunteer or nature generally, and more connection to and trust of their community or people within their organization.

- *Questions about sense of place:* From the literature and my previous interviews, it is clear that experience in the outdoors can create a stronger connection to place and this connection may be a motivator of volunteer involvement (Gooch, 2003; Krasny et al., 2014). Questions were adapted from Jorgensen and Stedman (2006) and Payton et al. (2005).
- *Questions about environmental values and behaviors:* I used a pre-existing scale, the Nature Relatedness Scale (Nisbet et al., 2009), to measure the cognitive, affective, and physical connection to nature while also measuring environmental worldview and environmental awareness and concern. As it is clear that environmental values are not always linked with pro-environmental behavior, several questions regarding an individual's level of pro-environmental behavior on a weekly and yearly time scale were also included to help clarify this relationship.
- *General demographic information:* These questions measured age, race, political affiliation, level of education, income, employment status and degree of free/leisure time. Such demographic information is useful in comparing the survey population to the membership of the Outdoor Alliance organizations. In addition, these variables can help provide more information about individual's beliefs or why they act in a particular way.

Survey of Local Civic Recreation Organizations Across the U.S.

Similar to the process described above, this survey was created after the initial case study phase of the research to better understand civic recreation organizations across the country. This survey attempts to provide further understanding of civic recreation in practice: characteristics, activities, strategies, barriers and outcomes from a wider sample of civic recreation

organizations. The survey instrument (Appendix E) consisted of 19 items comprised of multiple choice, likert scale, and open-ended questions. Questions were grouped into the following categories: 1) Mission/Goals and perceived mission success; 2) Strategies employed and barriers encountered in working toward mission/goals; 3) Outcomes observed as a result of the organization's efforts; and 4) Organizational structure and characteristics including size, budget, and land management regime. Staff at the Outdoor Alliance and several of the case study interview respondents reviewed the survey instrument before implementation. A question was included in the survey asking whether the organization wished to participate in a follow-up interview. If they said yes, they could enter their email information so that I could contact them at a later date to schedule an in-person or phone interview. The interview protocol in Appendix B was used for these interviews.

The survey was administered in the winter of 2015 to a list of 97 rock climbing groups and 200 mountain biking groups compiled from the Access Fund's and International Mountain Bikers Alliance's (IMBA) list of affiliates and partners on their website. It is important to note that most organizations included in the comparative case study also took this survey, with the exception of stewardship in Yosemite Valley. Contact information from each organization was gathered through the Internet, as the Access Fund and IMBA were resistant to provide me with contact information. As such, many of the contacts gathered were generic info@ . . . email addresses or contact forms on the website. Following the protocol outlined by Dillman et al. (2009), survey subjects were contacted via an initial email with a web link to the survey, hosted on Qualtrics. Two follow-up emails were sent at one-week intervals as reminders for subjects to take the online survey. Survey respondents were instructed that only one survey be completed for each organization

One hundred and forty-two organizations completed the survey, yielding a 48% response rate. It should be noted that while this survey was intended specifically for rock climbing and mountain biking organizations, the list of affiliates spanned beyond these two user groups. As such, multi-use groups such as "all trail users" or "all forms of bicycling," were included in the sample. Of the 142 respondents that completed the survey, 18% (n=26) were rock climbing organizations, 56% (n=79) were mountain biking organizations, 15% (n=21) supported all trail users, and 11% (n=16) supported all forms of cycling.

Survey Data Analysis

Survey data was analyzed statistically using SPSS software using the research questions and civic recreation diagram to inform analysis and testable hypotheses. Open-ended survey questions were coded in NVivo with the same or similar codes that were applied to qualitative data. The specific analysis and statistical tests run will be explained in each chapter.

Conclusion

The objectives of this research are both exploratory and explanatory. As this is really one of the first studies to look at recreation-based organizations and stewardship as examples of civic environmentalism and civic ecology, an exploratory approach is appropriate to better understand and describe what is happening. However, many theoretical relationships do exist, as presented in the Civic Recreation Framework in Chapter 1. To better understand these relationships, an explanatory and quantitative approach is suitable. Thus, the mixed-method research design employed in this research is necessary to achieve the multiple objectives of the dissertation. A comparative case study with multiple units of analysis can be both descriptive and theory building. Complimenting this case study design with two surveys can further validate the findings from the case study and enhance our understanding of the theoretical relationships. In

the coming chapters, the data, along with the relevant methods and analysis, will be presented to answer each research question sequentially.

CHAPTER III: CIVIC RECREATION IN PRACTICE

American environmentalism, in many ways, was born out of early adventurers and outdoor enthusiasts who sought to preserve and protect the country's seemingly endless frontier from development. Despite this legacy, recreational interests have continually been pushed aside from the most influential organizations in the conservation movement: The Nature Conservancy and Wilderness Society, to name a few (B. Robinson, personal communication, Nov. 28, 2014). Within this context, groups representing recreational user groups have emerged in the last thirty years to advocate for and help steward local recreational resources. While many of these groups originated from the grassroots, they now find a national voice through organizations such as the International Mountain Biking Association (IMBA), Access Fund, and Outdoor Alliance. Meanwhile, as these national organizations have gained momentum through significant achievements in the public policy sphere, and are even being asked to rejoin the table to advance conservation interests,[2] they support a continually growing grassroots base of local human powered outdoor recreation user groups. This new civic recreation movement may be an important addition to the larger vanguard of civic environmentalism, while also adding an important constituency to the environmental movement of the 21st century.

Literature

Civic Environmentalism and Natural Resource Management

Groups representing user interests in natural resource management have significantly grown in the past thirty years (Weber, 2000). Many of these groups could be classified as voluntary associations who join together voluntarily to advance a common goal (Salamon and

[2] Recently, a wilderness policy process in the Dragoons, Arizona brought together an unlikely crew of climbers, bikers, and wilderness advocates to find workable solutions for all stakeholders (Robinson, personal communication).

Anheier, 1997). Voluntary associations can be broken down into expressing either expressive or instrumental purposes (Jacoby and Babchuck, 1963; Dennis and Zube, 1988). Instrumental groups aim to provide opportunities and benefits to their members, whereas expressive groups work to achieve wider goals that provide an outlet for a particular set of values and beliefs and bring benefits to the general public. Lu and Schuett (2012) suggest organizations such as the International Mountain Biking Association represent an instrumental function, whereas the National Audubon Society is an example of an expressive function. This is an important distinction to keep in mind when understanding recreation-based voluntary organizations' mission and goals and how they may play a role in the larger environmental movement.

Despite the rise in recreation-based organizations, little research has looked at the mission and activities of these organizations or how they work to achieve their goals. Recently, Lu and Schuett (2012) explored the role of recreation-based voluntary associations in forest management, focusing on the functions and goals of these types of organizations in natural-resource management. They found three main goals expressed by these voluntary organizations: "(1) promotion of recreation activities through stewardship activities; (2) public education and communication on recreation and conservation; and (3) partnerships with public officials and other organizations to influence recreation resource decision- making" (p.343). These findings demonstrate the "growing trend of grass-root associations forming for the purpose of enhancing recreation and environmental quality" (p.342).

While research on recreation-based organizations specifically is sparse, scholarship on related activities may aid in better understanding civic recreation practices, strategies, and outcomes. Recently, a body of work exploring civic environmental or ecological stewardship (Svendson and Campbell, 2008; Shandas and Messer, 2008; Romolini et al., 2010; Fisher et al.,

2012; Westphal et al., 2014) civic ecology (Krasny and Tidball, 2015), grassroots ecosystem management (Weber, 2000), and citizen science (Cooper et al., 2007) or community-based monitoring (Conrad and Daoust, 2008) has identified local groups working to restore, steward, and co-manage local environmental and cultural resources.

Krasny and Tidball (2015) hypothesize civic ecology, or grassroots urban stewardship and ecological restoration efforts emerge from a sudden shock, decline, or social-ecological innovator that mobilizes a group to organize to revitalize their community. Their work has documented in-depth numerous examples of community-based environmental stewardship across the country. Similarly, Svendsen and Campbell (2008) investigated the structure, function, and network of such urban ecological stewardship efforts in the Northeast, finding "a dynamic social network of organizations within cities with a reserve of social capital and expertise that could be better utilized" toward stewarding and managing urban lands (p.22). Similarly, Romolini et al. (2012) and Wolf et al. (2013), in collaboration with the Pacific Northwest Research Station, created a research program exploring Seattle-based environmental organizations in the hopes of developing a framework of urban environmental stewardship, describe its practice, and ultimately explore its benefits. Fisher et al. (2012) embarked on a related project, to document the organizational structure of urban environmental stewardship. Not only does their research provide a census of the myriad public agencies, formal professionalized non-profits, and informal community groups that unite to steward urban areas in New York City, they also link the organizational structure (professionalism, age, tax status) with the types of stewardship activities they engage with. For example, highly professionalized organizations participate in projects requiring technical expertise and significant resources, whereas small community groups that rely solely on volunteers may focus more on activities such as community gardening. What

is distinctive among all of these activities is their focus away from traditional advocacy strategies of environmental organizations to more direct acts of stewardship through volunteerism. Moreover, their research points to a new era of collaborative, community-based, and co-management of environmental and cultural resources.

Potential Outcomes of Civic Recreation

Increasingly, collaborative and participatory management of natural resources is seen as a more effective alternative to top-down management strategies (Armitage, 2005) as it allows for involvement of multiple stakeholders in the decision-making processes (Brinkman et al., 2012) and incorporation of multiple forms of knowledge, thereby leading to more buy-in among stakeholders (Cooper et al., 2007). Depending on the land management or ownership regime that situates civic recreation practices, a continuum of management outcomes can be achieved. From the most basic and traditional management structure, civic recreation practices can foster partnerships between land managers and stakeholders, which has been demonstrated to add to the capacity of land managers while building support from local stakeholders (Weber, 2000; Schuett et al., 2001). In an era of decreased funding for land managers, partnerships with voluntary associations can "enhance the sustainability of [natural] resources and leverage existing resources . . . " (Lu and Schuett, 2012, p. 344).

Voluntary associations can also be important actors in collaborative natural resource management (Kant and Lee, 2004; Lu and Schuett, 2012), which can lead to myriad benefits that "mitigate social impacts of conservation, incorporate local needs and concerns, enhance the quality and durability of decisions, increase trust among stakeholders, increase economic benefits for local people, and increase [the] quality of experience of recreational resource users (Wondolleck and Yafee 2000; Leach and others 2002; Imperial 2005)" (Lu and Schuett, 2012, p.

335). In some instances, these partnerships and collaborations can build the foundations of co-management, in which stakeholders are involved in shared decision-making and responsibility for the resource (Berkes, 1997; Plummer and Fitzgibbon, 2004). Adaptive management (Holling, 1978) and/or adaptive co-management (Carlsson and Berkes, 2005) are also potential outcomes that can emerge from civic recreation practices. Adaptive management emphasizes learning by doing, thereby theoretically building resilience into the management system.

In addition to these management benefits, voluntary associations, or the non-profit sector more broadly, strengthen civil society and enhance social capital, adding an important dimension to a democratic society and collective action (Putnam, 1995; Putnam, 2000). Literature on social capital suggests communities that have dense social networks, a high level of trust, and increased cooperation experience better community outcomes (Davidsson & Honig, 2003; Cheung & Cheung, 2003; Bowles & Gintis, 2002). According to Ostrom (1997) social capital is ‘‘created and maintained by the very process of working together’’ (p. 178). As such, scholars have begun to focus on social capital and its role in collaborative management of natural resources (Pretty and Ward, 2001; Pretty, 2003; Grafton, 2005; Plummer and FitzGibbon, 2006; Wagner and Fernandez-Gimenez, 2008; Gutierrez et al., 2011). Plummer and FitzGibbon (2006) propose that social capital "acts as a catalyst helping groups progress through the stages of the co-management process" (p.53). Gutierrez et al. (2011), in their study of 130 co-managed fisheries across the world, conclude, "this robust social capital serves as a buffer against changes in institutional arrangements, economic crises and resource overexploitation, and fosters sustainable co-management systems" (Gutierrez et al., 2011, p.388).

Through increased social capital and feelings of collective efficacy, a community develops capacity to respond to additional environmental threats or issues. Brinkman (2012)

defines community capacity as “the interaction of human capital, organizational resources and social capital existing within a given community that can be leveraged to solve collective problems and improve or maintain the well-being of that community” (p. 295). Such community capacity can then translate into community empowerment – the ability to “gain knowledge about a problem, ascribe responsibility to contributors to the problem, to perceive solutions to the problem and to employ skills to enact change," a requisite condition to advance positive environmental change (p. 738).

Certainly, the outcomes proposed in the literature above are not always achieved. A number of significant barriers to successful collaborative natural resource management and/or organizational success have been identified. Regarding civic environmentalism broadly, scholars have criticized this strategy as falling short when addressing large, complex, or regional/global environmental problems (Weber, 2000; Morris, 2008). Moreover, the promise of public participation delivers insofar as the institutional structures permit. Simply because the process becomes more participatory does not necessary result in broader or more democratic participation and may serve to strengthen existing power structures at the local level (Abel and Stephan, 2000).

Specific to voluntary associations involved in collaborative natural resource management, scholars have identified lack of funding and capacity, both on the part of the voluntary association and the land managers (Fisher et al., 2012; Lu and Schuett, 2012), user conflicts (Lu and Schuett, 2012), and rigid institutional structures that impede innovation, experimentation, and participation (Weber, 2000) as significant barriers to success. Importantly, this chapter will assess the goals and strategies of civic recreation organizations, the perceived outcomes they report, and the barriers to successful outcomes that organizations experience.

Research Objectives

As noted above, little research has looked at the activities of recreation-based groups or their role in the civic environmental movement (Lu and Schuett, 2014). This is the goal of this chapter, to map the terrain of civic recreation in practice and describe what could be a new, and influential force, in the environmental movement. Through a comparative case study of the rock climbing and mountain biking user groups, combined with a survey of local organizations affiliated with the Access Fund and the International Mountain Biking Association (IMBA), this chapter aims to answer the following research questions:

> ***RQ1a***. *Why do civic recreation practices emerge and what do they look like?*
>
> ***RQ1b***. *What are the goals and objectives of civic recreation practices?*
>
> > ***RQ1b.1*** *Are there particular shared ideologies or environmental values associated with these practices?*
>
> ***RQ1c***. *What are the most effective strategies employed by civic recreation groups to accomplish their goals and objectives?*
>
> ***RQ1d***. *What are the current barriers that limit civic recreation groups from achieving their goals?*
>
> ***RQ1e.*** *What are the various outcomes from civic recreation practices?*

This chapter is organized to answer each research question successively, using both case study and survey data to address the specific research question.

Methods

This study employs a comparative case study design (Yin, 2014) of eight recreation-based organizations or projects within the human-powered outdoor recreation community combined with a survey of local civic recreation organizations across the country. This study specifically targeted only two user groups – rock climbers and mountain bikers; however several

other user groups are presented in the findings due to the nature of the survey sampling method. Case studies of eight local organizations or projects within the rock climbing and mountain biking user groups were conducted using both qualitative and quantitative data. To complement these qualitative case studies and explore this phenomenon in a wider scope, a survey was administered a broader set of rock climbing and mountain biking organizations affiliated with the Outdoor Alliance, as explained below.

Comparative Case Study

In the first phase of the research, three initial cases were chosen based on suggestions from Access Fund and IMBA staff, demonstrated project success, and ease of access due to their location. These cases were the Boulder Climbing Community, Boulder Mountain Bike Alliance, and the Yosemite Climber Stewards. These initial cases helped to clarify the research questions, case study protocol, and the development of a survey that was disseminated to the grassroots network of both the Access Fund and IMBA. From the survey, an additional five cases were identified based on the following criteria: self-reported mission success, land management structure, region, and willingness to further participate in the study. While all cases are examples of success, I attempted to vary by region and land management structure so as to better understand important differences in activities, strategies, and various factors that contribute to an organization's success. Table 3.1 and 3.2 below detail the organizational characteristics of each case explored in this study.

Table 3.1 Organizational characteristics of mountain biking cases

Characteristics	Boulder Mountain Biking Association (BMA)	Moscow Area Mountain Bikers (MAMBA)	Chicago Area Mountain Bikers (CAMBr)	Trails Have Our Respect (THOR)
Year founded	1991	1995	1993	1997
Driver	Access threat – city closed all trails to mtn. biking	Social-ecological innovator – saw an opportunity to create local recreational resource	Access threat – county banned mtn. biking in forest preserve	Social-ecological innovator – One person was a "trail visionary"
Organizational Structure	Chapter of IMBA	Independent non-profit	Chapter of IMBA – multiple chapters in region	Chapter/Affiliate of IMBA
Region	Boulder County	Moscow, Idaho	Four counties in Chicago area	W. Iowa and E. Nebraska
Land Management Type	City, County, National Forest, BLM	Private land – Moscow Mountain	City and County land	City, County, State, Private
Annual Budget	$50,000-$100,000	Data not available	$10,000 - $50,000	$1,000 - $10,000
Membership	500 -700	400 members, 500 people on mailing list	750 members, 4200 on mailing list	250 members, 1700 friends on Face Book

Table 3.2 Organizational characteristics of rock climbing cases

Characteristics	Boulder Climbing Community (BCC)	Friends of Muir Valley (FOMV)	Climber Stewardship in Yosemite		Carolina Climbers Coalition (CCC)
			Face Lift	Climber Stewards Program	
Year founded	2010	2004	2004	2011	1995
Driver	Social-ecological innovator – motivated by stewardship philosophy and addressing "toxic" relationships	Social-ecological innovator – wanted to create a recreational resource for the community, owned by the community	Social-ecological innovator – both projects were born out of a desire to do stewardship and improve relationships btw climbers and land managers		Access Threat – rumor that a state park would be closed to climbing due to an accident.
Organizational Structure	Independent non-profit	Independent non-profit	Partnership w/ Park and non-profit	Partnership w/ Park and nonprofit	Independent non-profit
Region	Boulder County, some work in Utah	Red River Gorge, KY	Yosemite National Park, CA		North and South Carolina
Land Management Type	City, County, State, FS, BLM	Private	National Park		State, Private, FS
Annual Budget	$100,000 - $200,000	$75,000	Data not available	Data not available	$10,000 - $50,000
Membership	300 members	Non-member based org.	Non-member – 2,000 volunteers/year	Non-member – 3 Climber stewards/yr	250 members

Case study data collection methods

Data for the comparative case study draws primarily from qualitative methods through the use of semi-structured interviews and organizational documents. Some quantitative data was

gathered, as the majority of the cases also responded to an organizational survey, described below. However, the quantitative data were used to fill in details about the case, but were not used in any cross-case analysis.

Background documents. Historical and background documents were gathered for each case to provide context for the user group and local cases selected. There were two different sources of documents gathered to provide background information about the user group nationally as well as the local cases:

- Documents from national organizations – Documents such as membership communication materials, member resources (e.g. "Climbing Management: A Guide to Climbing Issues and the Development of a Climbing Management Plan" which the Access Fund published for local climbing organizations), and Annual Reports were collected. These documents enhance the understanding of each user group within the national or regional context, providing important information about the issues that they face, the strategies they use, and the culture and values of their members.
- Documents from local cases – Documents such as press releases, newsletters, MOUs, reports and management plans that help to explain the emergence of the organization or group, the tools and strategies they employ, and outcomes that result were gathered for each local case. It should be noted that many organizations do not have these documents, as they are limited in their capacity to produce publications, annual reports, and other formal documents. In this case, I relied on the organization's web presence (website or Face Book page).

Semi-structured interviews. Semi-structured interviews (Rubin and Rubin, 2012) comprise the majority of the data collected for each case. Inclusion criteria for subject selection

was based on adults (over the age of 18) actively engaged in recreation-based stewardship through their official professional or volunteer status and were often individuals who held a leadership position within these groups. Such information about the subject selection was obtained through names appearing in background documents within each case study, names listed under organizations' staff directories, and names obtained through a snowball sampling procedure. Specific characteristics about the interviewees were presented in Chapter 2, Table 2.2.

First, to get a better understanding of civic recreation in context, it was important to gather background information about each user group: the issues and challenges they face, strategies and tools they employ, and who their members are and perceptions of why they become involved. To ascertain this information, I conducted interviews with several elite staff of the Outdoor Alliance and leaders of the two national member organizations representing rock climbers and mountain bikers (Access Fund and International Mountain Biking Alliance) (n=4). As described earlier, each national organization is integrally connected to the local case studies and provides support in terms of technical expertise, resources (grants, networks) and personnel. Moreover, as the case studies explore the user-group themselves, these organizations represent the user group from a national perspective. Example questions for these interviews are detailed in Appendix A.

In addition, interviews with key leaders of the local cases were conducted to understand the history, structure, goals, and strategies of the organization or project. Appendix B presents the specific interview protocol. Some of these interviews were held in person, while others occurred over the phone due to limited time and resources.

Case study data analysis methods

Both Miles and Huberman (1994) and Yin (2014) recommend using a logic model or conceptual framework as one way to analyze case study data. "A conceptual framework explains, either graphically or in narrative form, the main things to be studied – the key factors, constructs or variables – and the presumed relationships among them" (Miles and Humberman, 1994, p. 18). Not only does this framework bound the study by determining what will and will not be examined, it provides a useful logic model to begin analysis. Drawing from the Civic Recreation framework presented in Chapter 1, I attempted to link each variable identified to the framework and say something about the relationship within the whole framework.

Both interview data and documents were coded in NVivo, a qualitative coding software, using an established codebook. Based on the literature review and the research questions, a priori codes were developed to help lump the data into categories and intellectual "bins" (Miles and Huberman, 1994, p.18). However, new codes were added throughout the analysis, appropriate to this being a new area of research and theory is not well developed in this field (Miles and Huberman, 1994; Auerbach and Silverstein, 2003) and coding is itself a heuristic and analytical process (Saldana, 2012). Table 3.4 displays the codes used that are relevant to the research questions explored in this chapter. From this coding, I first created an individual case synopsis that aimed to distill the essential elements unique to each case. Not only did this serve to help organize the vast quantity of qualitative data, it clarified "ideas about the meaning of [the] data" which could lead to deeper analysis, while also pointing to additional data that was needed (Miles and Huberman, 1994, p. 89).

Table 3.3 Codes for qualitative data analysis

Code	Description
ORGHSTY	Anything that has to do with organizational history, specific description of events, reason for being.
DRIVER	Reasons for the organization or project to emerge
Ev Degredation	Mentions environmental degradation or desire to improve environmental quality
Access Threat	Mentions access threat, recreational area being closed to access
Access Improve	Mentions desire to gain access or improve access to the recreational resource
Innovator	Mentions an individual or group of individuals who saw an opportunity to create/improve on the recreational resource
MISSION	Describes the goals and objectives of the civic recreation organization/group (note: this is different from strategies the organization employs. Here it is an end, whereas strategies are a means).
Access	Secure access to the recreational resource
Advocacy	Build support for and promote policies and actions
Trails	Build and maintain trails
Conserve	Conserve the recreational resource
Educate	Educate the user group
Community	Build community
Life	Promote healthy lifestyles and quality of life
Policy	Change or influence policy
Rec	Promote the recreational activity
Resp-rec	Promote responsible recreation
Safe	Promote safety in the recreational activity
Steward	Work to steward the recreational resource
Vol	Promote volunteerism
Youth	Engage and/or educate youth
ACTIVITIES	Describes civic recreation practices and activities of the project or group.
Trail	Mentions stewardship activities that pertain to trail building or trail restoration
Trash	Stewardship activities that pertain to trash removal or cleanup
Restore	Stewardship activities that pertain to restoring the environment
Advocacy	Mentions organizing
Acquisition	Purchase and acquisition of land
ED	Mentions activities aimed at educating the user group
Ed-Com	Mentions activities aimed at educating others about the recreational activity or user group
Events	Mentions organizing events to engage the community
Access	Mentions activities oriented to address access issues
Pub-pol	Mentions activities aimed at influencing, engaging in, or changing policy
Vol	Mentions activities oriented around engaging volunteers
EFFECTIVE	Feelings and assessment of how effective or successful the organization has been at achieving its mission, goals, and objectives.
Def	Mentions the definition of success
Unsuccess	Mentions being unsuccessful at achieving mission, goals, objectives
Success	Mentions being successful at achieving mission, goals, and objectives
LIMITS	Types of limits or barriers that prevent the organization from achieving its mission, goals, or objectives.
Capacity	Mentions lack of financial, staff, time, volunteers, or other capacity that limits the organization from achieving its goals
Politics	Mentions local politics as a barrier
Land-Mgmt	Mentions land management structure or land manager as an impediment
Org-Effect	Mentions lack of organizational effectiveness (e.g. poor management, apathetic volunteers, lack of vision, etc.)
Policy	Mentions policies that limit the organization
Recreationists	Mentions uneducated or rogue recreationists that impede the organization's efforts

STRATEGY	Types of strategies that the organization employs to achieve its mission, goals, and objectives.
Advocacy	Mentions organizing to build support for and promote policies and actions
Stewardship	Stewardship activities that do not involved trail building and maintenance
Trail	Building and maintaining trails
Education	Educating the user group about responsible recreation
Events	Organizing events to build community cohesion or engagement
Volunteer	Promoting volunteer engagement
Nat-Support	Gaining support from national organizations like the Access Fund, IMBA, or Outdoor Alliance
Org-Partner	Forming partnerships with other organizations
Mgr-Partner	Forming partnerships with land managers
Relationships	Mentions how building relationships has promoted success
OUTCOMES	Different outcomes that have been observed as a result of civic recreation practices
Ev-Improve	Mentions that the environment has been improved, preserved, or conserved
Rec-Improve	Mentions that the quality of the recreational resource has been improved, preserved, conserved
Access-Improve	Mentions that access to the recreational resource has been improved
Relationships-Mgrs	Mentions that relationships with land managers has been improved
Partnerships	Mentions that there are better relationships and collaboration with other organizations or partners
Res-Rec	Mentions that the user group is now more responsible
Community	Mentions that the local community is now more cohesive and willing to work together
Vol-Engage	Mentions that volunteer engagement is higher or better as an outcome
Devlpmt	Mentions the economic and/or community development as a result of activity
Credibility	Mentions that the organization is now more credible

Once the data collection was complete, I prepared a within-case summary of each local case and drafted individual case descriptions. These summaries helped move the analytical process from "description to explaining" as well as highlight patterns and themes that were emerging from within and between the case (Miles and Huberman, 1994, p. 93). Finally, a cross-case comparison was conducted to reveal similarities and differences, "deepen understanding and explanation," and enhance generalizability of the findings (Miles and Huberman, 1994, p. 173).

Organizational Survey

Based on the qualitative data collected in the case studies, a survey was developed to better understand civic recreation organizations across the country, probe the initial findings from the first three cases, and identify additional cases to explore. This survey attempts to

provide further understanding of civic recreation in practice: characteristics, activities, strategies, barriers and outcomes from a wider sample of civic recreation organizations.

The survey was administered in the winter of 2015 to a list of 97 rock climbing groups and 200 mountain biking groups compiled from the Access Fund's and International Mountain Bikers Alliance's (IMBA) list of affiliates and partners on their website. It is important to note that most organizations included in the comparative case study also took this survey, with the exception of stewardship in Yosemite Valley. Contact information from each organization was gathered through the Internet, as the Access Fund and IMBA were resistant to provide me with contact information. As such, many of the contacts gathered were generic info@ . . . email addresses or contact forms on the website. Following the protocol outlined by Dillman et al. (2009), survey subjects were contacted via an initial email with a web link to the survey, hosted on Qualtrics. Two follow-up emails were sent at one-week intervals as reminders for subjects to take the online survey. Survey respondents were instructed that only one survey should be completed for each organization

One hundred and forty-two organizations completed the survey, yielding a 48% response rate. It should be noted that while this survey was intended specifically for rock climbing and mountain biking organizations, the list of affiliates spanned beyond these two user groups. As such, multi-use groups such as "all trail users" or "all forms of bicycling," were included in the sample. Of the 142 respondents that completed the survey, 18% (n=26) were rock climbing organizations, 56% (n=79) were mountain biking organizations, 15% (n=21) supported all trail users, and 11% (n=16) supported all forms of cycling.

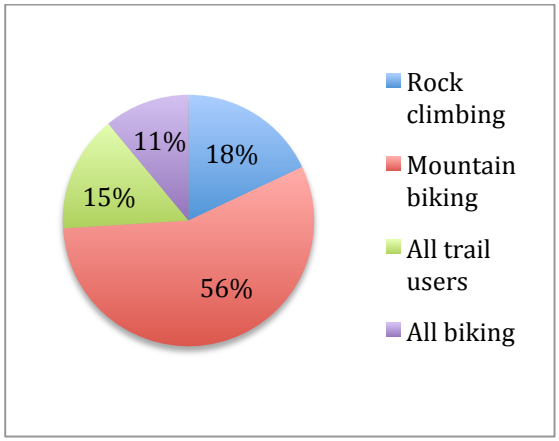


Figure 3.1 Type of user group in sample

The survey instrument consisted of 19 items comprised of multiple choice, likert scale, and open-ended questions. Questions were grouped into the following categories: 1) Mission/Goals and perceived mission success; 2) Strategies employed and barriers encountered in working toward mission/goals; 3) Outcomes observed as a result of the organization's efforts; and 4) Organizational structure and characteristics including size, budget, and land management regime. Staff at the Outdoor Alliance and several of the initial case interview respondents reviewed the survey instrument before implementation. A question was included in the survey asking whether the organization wished to participate in a follow-up interview. If they said yes, they could enter their email information so that I could contact them at a later date to schedule an in-person or phone interview. The interview protocol in Appendix B was used for these interviews.

Survey data analysis. Survey data was analyzed statistically using SPSS software using the research questions and civic recreation framework to inform analysis and testable hypotheses. Open-ended survey questions were coded in NVivo with the same codes that were applied to qualitative data. The specific analysis and statistical tests run will be explained in below.

Drivers and Functions of Civic Recreation Organizations or Projects

Drawing from both survey and case study data, this section describes the drivers of civic recreation practices and what those practices look like in action — primary activities, organizational structure, and scope —in an attempt to answer RQ1a.

RQ1a*. Why do civic recreation practices emerge and what do they look like?*

Survey Findings

Results from the survey of the 142 biking and rock climbing organizations illuminate the organizational structure and primary functions of civic recreation organizations. Table 3.4 details the organizational characteristics of the survey respondents. About 51% of these organizations are independent non-profits (n=73), 43% are chapters of a larger non-profit (n=61), and 5% are some other form of organization (n=7). The median age of the organization is 10-15 years old and the most common annual budget is under $10,000/year, except for all bicycling organizations ($10,000-$50,000/year).

Table 3.4 Organizational characteristics of survey respondents

	Climbing	Mt. Biking	Trail	All Biking
N	26	79	21	16
Age (median)	10-15 years	10-15 years	10-15 years	10-15 years
Annual Budget (mode)*	Less than $1,000	$1,000-$10,000	Less than $1,000	$10,000-$50,000

*Indicates significant difference (X^2=48.88, df=9, p=.00)

Respondents were asked how much time and resources their organization devoted to various programmatic functions. A one-way ANOVA revealed significant differences between user groups within stewardship (p=.00), land acquisition (p=.04), advocacy (p=.01), community and outreach initiatives (p=.03), and volunteer programs (p=.00). Post-hoc tests using either

Tukey's post-hoc or Games-Howell, depending on whether the equality of variances assumption had been violated, indicated that mountain biking groups devote 17% more time and resources (±5.29, p=.02) to advocacy than all bicycling organizations. Additionally, mountain biking organizations allocate 27% more time and resources to stewardship efforts than all bicycling organizations (±7.88, p=.00). Along these same lines, all biking organizations devote 10% (±7.6) more time and resources to community and outreach efforts than mountain biking organizations. Mountain biking organizations devote 26% (±6.55, p=.00) time and resources to volunteer programs than all bicycling organizations, and 20% (±7.1, p=.04) more time and resources than rock climbing organizations. Finally, rock climbing organizations allocate 23% (±6.23, p=.01) more time and resources to land acquisition than all bicycling organizations.

Table 3.5 Percent time and resources devoted to programmatic functions

	Climbing	Mt. Biking	Trail	All Biking	F or Welch statistic	p-value
N	26	79	21	16		
Stewardship	39%	54.5%	40%	27.8%	5.88	<.00**
Land acquisition	27%	12%	10%	3%	2.98	.04*
Access	47%	44%	34%	24%	2.69^	.06
Advocacy	40%	37%	21%	20%	4.95^	.01*
Education	23%	22%	22%	16%	1.29^	.29
Events	36%	34%	26%	30%	.51	.68
Community Outreach	33%	36%	27%	17%	3.43^	.03*
Volunteer Programs	22%	42%	30%	15%	5.88^	<.00**
Public Policy	32%	27%	17%	18%	1.48	.24
Electoral Policy	13%	14%	3%	18%	.47	.70

^Welch statistic used b/c assumption of equality of variances was violated

These results suggest that mountain biking organizations devote a significant portion of their time and resources to stewardship efforts. This goes hand in hand with their emphasis on volunteer programs and advocacy: hands-on stewardship requires a significant amount of

volunteer labor and mountain biking trails require a significant level of access and permission by land managers and the public. In contrast, organizations that represent all forms of cycling tend to be more focused on building community. Rock climbing organizations, while also focused on stewardship, access, and advocacy, devote a significant amount of resources to land acquisition, which is unique within the other forms of human-powered outdoor recreation community. This distinctiveness will be discussed further through the case study analysis.

The majority of the organizations work at the local scale (76%); whereas 11% work at the state level and the remaining 11% work at the regional or national level. There were no significant differences between the user groups, as assessed by a Chi-Squared test for association. The most common land management structure that these organizations work on is county (62%), state (62%), and city (56%) land. There were significant differences between user groups in how much they work on private land, city and county land, National Forest, National Park, and Wilderness. Rock climbing organizations tend to work the most on private, National Park, and wilderness land. Mountain biking organizations tend to work the most on city land, and trail-based organizations tend to work the most on county land.

Table 3.6 Civic recreation organizations' scope and type of land management

	All	Climbing	Mt. Biking	Trail	All Biking	X^2	p
Scope of work						9.53	.15
Local	76%	62%	84%	71%	69%		
State	11%	15%	10%	10%	13%		
Multi-state	11%	23%	5%	19%	6%		
Type of land							
Private	42%	65%	29%	57%	50%	13.6	<.00**
City	56%	27%	67%	62%	50%	12.56	.01*
County	62%	31%	68%	71%	69%	13.22	<.00**
State	62%	50%	66%	62%	63%	2.08	.56
National Forest	47%	58%	43%	62%	25%	6.67	.08
National Park	17%	35%	14%	14%	6%	7.70	.05*
BLM	30%	35%	26%	48%	13%	6.18	.10
Nat'l Wildlife Refuge	3%	8%	1%	5%	0%	3.71	.30
Wilderness	13%	31%	10%	14%	0%	9.99	.02*
Land Trust/Easement	32%	42%	27%	48%	19%	6.01	.11

Case Study Findings

Case study findings confirm the survey findings presented above; these organizations are relatively young, local grassroots organizations. In addition, this qualitative data provides more description about why these organizations emerged, contributing to a richer understanding of the drivers. Most of the eight case studies explored in this study formed in the last twenty-five years as non-profit membership-based organizations. Many of the organizations emerged as grassroots voluntary associations and progressed to form their own non-profit status. Several mountain biking organizations have recently become a chapter of IMBA to access more support and increase capacity. The exceptions are Friends of Muir Valley, which does not have a membership business model, and the Yosemite Climber Stewards Program, which is a partnership between several non-profits and the National Park Service. Membership enables a captive audience,

critical mass to represent the organization's goals and interests, a volunteer pool, and consistent source of revenue. Organizations appeal to members based on supporting the cause and receiving other benefits, such as access to particular areas or discounts and deals.

> Membership dues are the primary way we fund acquisitions and activities that preserve and protect the areas you enjoy. Apart from a general feeling of awesomeness, membership in the CCC entitles you to access the Asheboro boulders. (CCC website)

> Be part of the mountain bike movement that builds and protects great mountain biking experiences. Your membership dues support trail building and the social events we throw in Boulder County, Colorado. (BMA website)

Consistent among all of the case studies is an explicit reason and purpose for forming: to promote and celebrate recreation on lands within the region in a manner that is sustainable and positive. Whether organizations emerged in response to a significant event or access threat, or whether it was a particular leader who saw an opportunity to create or improve a recreational resource, these organizations emerged with a very specific goal and agenda in mind.

> Originally established in 1991 as the Boulder Offroad Alliance (BOA), BMA was formed in response to the closure of nearly every trail in the Boulder area to mountain bikes as a representative organization of bikers who wanted the right to ride legally in Boulder again. (BMA-01)

> Step after step, it became apparent that there was an organization needed, and it wasn't just this one climbing area with this one land manager, but the whole Boulder area, which is very complex . . . that there needed to be an organization that could address all of those different relationships and interests. (BCC-01)

> I decided, rather than being upset with everybody, maybe I could turn it around to a more positive thing, and I decided to start a clean up using climbers because I knew most of them and a lot of them felt the same way. (YFL-01)

> The goal was to "create a community of hype around stewardship" and act as a "bridge between the rangers and climbers because there was such a dichotomy, or more like a schism. (YCS-01)

Such a call to action may be unique to these types of voluntary organizations. Older recreation-based civic organizations, such as regional outdoor clubs like the Colorado Mountain

Club, the American Alpine Club, or the Mountaineers formed in the late 1800s or early 1900s to celebrate and bring together a community of people with a shared passion for the outdoors. Certainly, these organizations participate in advocacy and stewardship work, yet it appears that they formed to create a civic space for a particular recreation community rather than with the clear purpose of securing access to or protecting a recreational resource. Within the affiliate community of the Outdoor Alliance, there are some examples of organizations that emerged solely for the purpose of putting on an event or simply bringing the recreational user group together in a local community. Yet, these examples appear to be the exception rather than the norm.

All of the eight case studies engage in the following activities: hands-on stewardship through volunteerism, education and communications to the recreational user group, and some form of collaboration with the land managers or owners. Several of the mountain bike organizations (THOR, CAMBr, and MAMBA) stand out as having the primary function of building and maintaining multi-use trails that are fun and accessible to mountain bikers. Organizations such as FOMV and the CCC also serve a very vital role in stewardship and land management efforts, as they are the owners of the recreational resource. However, other organizations have chosen to broaden their focus beyond stewardship to include advocacy, events/community building, community outreach, and engaging in the policy process. These different activities may be a result of the land management structure, as is the case with the BMA and the CCC, or simply a philosophical belief about what will be the most effective strategy, as expressed by the BCC. For example, BMA feels that some land managers choose not to rely on them for trail building and maintenance and would rather do it themselves. Similarly, due to the land management structure, the CCC felt that land acquisition was the only strategy that would

work. Alternatively, the Boulder Climbing Community emerged to address a pre-existing adversarial relationship between climbers and land managers. As such, they hoped to mitigate that relationship rather than perpetuate it through advocacy efforts.

> I don't think we're always relied upon for that knowledge, for a variety of reasons, but notably that land managers prefer to do that on their own, and it takes a long time to build trust with recreation groups. That's something that I wish the city and county and forest service were better at, relying on us for expertise. (BMA-03)

> [Purchasing land] almost comes out of necessity, becomes along the line that there really is nobody else who's interested in some of these properties other than climbers. So, acquiring them is the best way to secure access in the long term. (CCC-01)

> Philosophically, we do not believe in advocacy, but focus solely on stewardship instead. (BCC-01)

Interestingly, there appears to be a distinct difference between these cases in terms of the strategies and activities and the driver. Organizations that were responding to a particular policy or land management decision, such as the BMA, CCC, or CAMBr, responded by focusing on advocacy; getting a seat at the table and representing the voice of the user group in the policy process.

> In Boulder, bikes are in a very different political context than all of the other use groups. Every other user group is assumed to have access. Mountain bikes are assumed not to have access unless it's given. As a result, mountain bikers have had to be much more introspective . . . and politically engaged. (BMA-02)

> It was just a rumor, it was completely unfounded, but it kind of galvanized a bunch of people. They got together and said we need to get a group together to represent climbers to the state parks. (CCC-01)

By contrast, organizations trying to improve relationships or create a recreational resource gravitated toward stewardship work.

> This ethic we want to instill in climbers – we go out there sharing this place with other life forms, we want to go in this soft way where we're part of it, but we're not invasive – getting away from this exploitative dominant culture/mentality that historically has been around for a while . . . [For example] early on with falcon closures, climbers felt that it was land managers infringing on their freedoms. We are trying to foster this whole new

> way of looking at it – this is wonderful and we are honored to close our crags for six months to protect that magnificent creature that lives up there. The whole thing was about stewardship. (BCC-01)
>
> [The Webers] had a vision of creating a climbing area with a lot of amenities – nice trails, good signage, toilets, closely bolted routes, emergency radio system, parking. (FOMV-01)

This is not to say that these organizations have evolved to include both stewardship and advocacy within their suite of tools and activities. However, it demonstrates a potential connection between whether the organization emerged out of a response to a closure or access threat or whether the organization emerged through the efforts of a "social-ecological entrepreneur" (Krasny and Tidball, 2015).

Summary

Through both case study and survey analysis, it is clear that most of the organizations have emerged in the last twenty years as small non-profits or chapters of a larger organization, such as the Access Fund or International Mountain Biking Association. The majority works at the local or regional level on a variety of land management structures. From the case study analysis, all of these organizations emerged either in response to a threat to the recreational resource or as a result of an innovator who saw a recreational opportunity. In terms of activities and functions, both survey responses and case studies indicated that they devote a significant amount of time and resources to stewardship, access issues, volunteer engagement, and education, and outreach. Mountain biking organizations tend to devote more time and resources to stewardship efforts and volunteer engagement while rock climbing organizations devote more resources to land acquisition. Both mountain biking and rock climbing organizations devote more time and resources to advocacy than multi-trail or all biking organizations. These

differences are likely due to the goals of the respective organizations and the perceived effectiveness of various strategies, which will be discussed in the ensuing sections.

Goals and Objectives of Civic Recreation Practices

This section addresses the following research question and sub-questions, drawing first from survey data and then expanding on these findings through the comparative case study.

RQ1b. *What are the goals and objectives of civic recreation practices?*

> **RQ1b.1** *Are there particular shared ideologies or environmental values associated with these practices?*

Survey Findings

To better understand the mission and goals of civic recreation organizations, mission statements of survey respondents were coded to identify the core components of the organization's stated reason for being. Codes were developed from an initial reading of the survey respondents' mission statements and adapted throughout the coding process to better reflect the meaning embedded in the mission and goals. Table 3.7 below highlights the final categories derived from this analysis and the percentage of organizations whose mission statements include the following components. It is important to note that many of these categories overlap – for example, educating the community about responsible trail use can lead to more responsible recreation, or advocacy on behalf of the organization may lead to important policy decisions. However, the coding process focused solely on the exact wording and phrasing included in the mission statements rather than drawing these more thematic connections. In this manner, the categories are mutually exclusive, although an organization could be assigned several categories during the coding process.

Table 3.7 Elements of survey respondent's mission statements[3]

Mission/Goals	Rock Climbing (n=24)	Mountain Biking (n=79)	All Trail Users (n=21)	All Cycling (n=16)
Access to, or enhance the recreational resource	71%	60%	57%	25%
Advocate for user group	13%	23%	10%	19%
Build and maintain trails	0%	49%	52%	13%
Conserve/protect recreational resource and/or environment	38%	20%	10%	0%
Educate users and/or community	13%	16%	19%	6%
Foster community through recreation	17%	9%	5%	13%
Promote healthy lifestyles, quality of life, and community vitality	0%	9%	33%	25%
Influence public policy	0%	0%	0%	13%
Promote recreational activity	17%	20%	14%	81%
Promote responsible recreation	13%	27%	5%	6%
Build relationships and collaboration	25%	19%	5%	5%
Enhance safety	4%	3%	0%	25%
Promote stewardship of the recreational resource	67%	6%	0%	0%
Engage volunteers	4%	8%	0%	0%
Serve youth	0%	4%	0%	0%

Rock climbing organizations (n=24) tend to focus most on securing access or enhancing climbing opportunities (71%), promoting stewardship (67%), conserving and protecting the climbing resource or natural environment (35%), and fostering collaboration and relationships to promote and/or manage recreation (25%). Mountain biking organizations (n=79) focus primarily on securing access to or enhancing mountain biking opportunities (60%), building and maintaining trails (49%), promoting responsible mountain biking and trail use (27%), and advocating on behalf of mountain bikers (23%). Multi-trail user organizations (n=21) focus primarily on securing access or enhancing trail-based recreation opportunities (47%), building and maintaining trails (52%), promoting healthy lifestyles, quality of life, and community vitality through trail-based recreation opportunities (33%), and educating the community about responsible trail use and the recreation opportunities (19%). Finally, organizations that include all forms of cycling (n=16) focus first and foremost on promoting the recreational activity (81%),

[3] The shaded boxes are meant to highlight the most significant findings.

followed by enhancing safety of riding opportunities (25%), securing access to or enhancing riding opportunities (25%), promoting health, quality of life, and community vitality through riding (25%), and enhancing the safety of the riding experience (25%).

Shared among all of the user groups is the focus on securing access to and enhancing recreational opportunities. Implicit in this goal is promoting the recreational activity. This is not surprising, as these organizations form around a particular type of recreation and, as discussed above, generally emerge due to a threat of access or an opportunity to create a recreational resource. It is notable that cycling groups are not as focused on this access issue and rather tend to simply promote the activity of cycling and safe cycling opportunities. This is likely due to the fact that road riders do not need to be given access, per se, but are trying to improve road riding by making it safer.

It is interesting to note that climbing organizations express more of an environmental objective through securing access combined with conserving, protecting and stewarding the recreational resource, whereas mountain bike and trail users tend to express a clear objective to build and maintain trails. For example, below are several of the mission statements from the survey sample.

> The Western Colorado Climbers' Coalition is dedicated to preserving access to Western Colorado's climbing areas through land conservation and stewardship, education and land use advocacy.
>
> The Rumney Climbers Association (RCA) exists to maintain and conserve the wonderful rock and ice climbing resources of “Rumney Rocks” in the White Mountain National Forest . . . The RCA chiefly acts as an educational force for the climbing community to ensure the stewardship of Rumney Rocks and good fellowship among the users.
>
> To support mountain bike advocacy, education, sustainable trail development and tourism in the Chequamegon Area in partnership with the U.S. Forest Service, local governments and agencies and private landowners.

> The Disciples Of Dirt is a mountain bike club dedicated to the stewardship of sustainable multi-use trails and to preserving and enhancing access for mountain bikers through advocacy, outreach, social events and promoting responsible trail use.
>
> MAMBA is a collection of mountain bike enthusiasts who advocate responsible trail use, perform trail building/maintenance, and secure additional riding areas in the Montpelier, Vermont area.

Beyond stewardship and respect for the environment, the theme around building community, promoting healthy lifestyles and quality of life is also shared by these organizations. For rock climbing organizations, this looks more insular and focuses on building a community of rock climbers. By contrast, many of the trail and cycling groups express the important connection between outdoor recreation as a means to a healthy life, and the creation of recreational opportunities within the community as an important aspect of community vitality. The mission statements from the survey respondents below exemplify this difference.

> To foster an engaging community of climbers who support each other in active pursuits of rock climbing, alpine climbing, and mountaineering.
>
> To enhance recreational opportunities in the community to improve quality for life of residents and making Silverton a mountain bike destination.
>
> RAMBO fosters relationships with community leaders & land managers, promotes volunteerism, and outdoor recreation that is consistent with environmental protection, thereby strengthening the community and quality of life.

Certainly, the activities and efforts of climbing organizations have the potential to strengthen the community and enhance recreational amenities that improve the community. However, this connection is not articulated in the goals or mission statements of these organizations.

Case Study Findings

The goals and mission statements of the eight case studies were also analyzed using a similar process described above. However, more data was available from both interviews and documents, which provided a richer understanding of the organization's mission and goals.

Tables 3.8 and 3.9 detail the organization's mission, perception of mission success defined by the interview respondents and survey response, and stated goals derived from interviews and/or documents.

Table 3.8 Mission, goals, strategies and barriers of mountain biking cases

Characteristics	Boulder Mountain Biking Association (BMA)	Moscow Area Mountain Bikers (MAMBA)	Chicago Area Mountain Bikers (CAMBr)	Trails Have Our Respect (THOR)
Mission	"BMA seeks to improve the trail experience for everyone in Boulder County through group rides and events, advocacy, and trail building. Great communities build trails, and great trails build community."	No explicit mission statement – "Fun on the mountain" (Interview with MAMBA president in response to question: "What is your mission?")	CAMBr seeks to promote trail and freeride bicycling through stewardship, environmental and social responsibility, education, and a spirit of cooperation among all trail users, the conservation community, and governing bodies."	"THOR is dedicated to developing and maintaining sustainable off-road recreational trails in Eastern Nebraska and Western Iowa by providing expertise, manpower, and resources."
Perception of Mission Success[4]	Somewhat successful	Successful	Somewhat successful	Successful
Goals/Activities	• Create sustainable trails that are fun for mtn. bikers • Advocacy – have a seat at the table as a voice for mtn. bikers as it relates to policy issues and different interests • Promote responsible mtn. biking • Encourage proper land use through multiple-use and monitoring • Assist in construction and maintenance of multi-use trails • Self-police through a Mtn. Bike Patrol • Promote community through social rides and events • Promote volunteerism	• Fun on the mountain – keep the mountain open and accessible for multiple use trails and act as liaison between recreation community and landowners • Promote responsible recreation • Build and maintain sustainable multi-use trails • Promote volunteerism	• Educate bicyclists • Promote responsible trail use • Prevent trail closings • Build and maintain multi-use single-track trails • Promote community through social rides and events • Advocacy • Promote volunteerism	• Be viewed as regional experts in advocacy, design, construction, and maintenance of sustainable trails for non-motorized recreation • Educate trail users about responsible use and existence of multi-use trails • Initiate and nurture open and honest relations with land managers • Promote environmental responsibility and care for the land • Promote volunteerism

[4] Success was defined by interviewees and survey participants in response to the question: "In your opinion, how successful is your organization at achieving its mission?" For survey participants, choices were arranged in a 7-point likert scale with 1=Extremely unsuccessful and 7=Extremely successful. Survey responses corroborated interviewees, therefore the level of success presented above is based on survey responses using the 7 point likert scale.

Table 3.9 Mission, goals, strategies and barriers of rock climbing cases

Characteristics	Boulder Climbing Community (BCC)	Friends of Muir Valley (FOMV)	Climber Stewardship in Yosemite		Carolina Climbers Coalition (CCC)
			Face Lift	Climber Stewards Program	
Mission	The BCC connects and supports climbers, climbing organizations, land managers and businesses in the Boulder area in order to protect and care for the climbing areas we love.	FOMV is a volunteer-based organization that owns, operates, and maintains Muir Valley Nature Preserve		Volunteer-fueled climbing conservation program.	Preserving, protecting, and expanding your climbing opportunities.
Perception of Mission Success[5]	Successful	Very Successful	Successful	Somewhat successful	Extremely Successful
Goals/Activities	• Promote ethic of stewardship within the climbing community • Professional trail team – promote trail stewardship and support land managers • Bolt replacement program to address safety • Wag bag program – properly dispose of human waste • Raptor monitoring with FS • Build and connect community through events	• Provide organizational structure and capacity to manage and maintain Muir Valley • Exhibit "good community citizenship" to the climbing and general communities • Promote volunteerism t • Educate the climbing community on LNT, stewardship philosophy, resource protection, and climber safety • Foster, expand, and promote the sports of climbing, hiking, and the study of nature and conservation	• 5-day event every year to clean up trash and the environment around Yosemite • Improve relationships between land managers and climbers • Promote stewardship by the climbing community	• Inform, educate, support, protect, and celebrate climbing and climbers in Yosemite. • Build community and culture around stewardship • Improve relationships with land managers by acting as a bridge	• Protect and expand access through purchasing lands, advocacy, and partnerships • Reduce being managed • Build relationships with land managers • Promote volunteerism and trail stewardship to support land managers • Collaboration and dialogue

[5] Success was defined by interviewees and survey participants in response to the question: "In your opinion, how successful is your organization at achieving its mission?" For survey participants, choices were arranged in a 7-point likert scale with 1=Extremely unsuccessful and 7=Extremely successful. Survey responses corroborated interviewees, therefore the level of success presented above is based on survey responses using the 7 point likert scale.

It is notable that there are several objectives shared by all of the cases. These include 1) Promoting and celebrating the recreational activity; 2) Representing the recreational user group; 3) Securing access to or expanding recreational opportunities; 4) Cooperation and collaboration between the recreational user group and the land managers/owners; and 5) Instilling an ethic of stewardship in the spirit of volunteerism and responsible recreation. In addition, to various degrees of involvement and ownership, all of the organizations seek to provide support to land managers/owners to steward the recreational resource through trail building and maintenance or other volunteer stewardship activities. What is notably different between some of the organizations is whether they see advocacy as a goal. Indeed, all of the organizations advocate for responsible recreation and hope to present a positive view of the user group to land managers and other people in the community alike. However, some organizations, such as the BMA and CCC, are more focused on being involved in the policy process and having a seat at the table than other organizations such as THOR and the BCC.

Summary

Through analyzing the mission statements and goals of civic recreation organizations, it is clear that they share a similar focus of promoting a recreational activity in a responsible manner. Many of these organizations work to secure access to or expand recreational opportunities and ensure that the recreational resource is managed in such a way that does not degrade the environment. The mission statements reflect this sentiment and tend to include elements of stewardship and respect for the environment. For example, the language around building and maintaining trails uses phrases such as "sustainable trails" or "be stewards of trails." However, there is a visible difference between rock climbing and mountain biking organizations – mountain biking focus more on building and maintaining trails while rock climbing

organizations frame stewardship more broadly. Perhaps the language of the mission statements is different between user groups as it indicates to which activities the organization devotes most of its time and resources. As indicated in the section about primary activities, both mountain biking and rock climbing organizations focus on stewardship. However, stewardship looks different between these two user groups. For mountain biking and trail users, stewardship is clearly defined as building and maintaining sustainable trails. For climbing organizations, stewardship is broader, and in some cases, undefined. Yet, within both, many of these organizations express the desire to instill a stewardship ethic and use stewardship as a way to conserve and protect the recreational resource. This theme emerged from the case studies as well. For these organizations, they want to "build a culture around stewardship" and place the management of the climbing resource in the hands of user groups so as to improve relationships with land managers, minimize the need to be managed, and add capacity to manage the recreational resource. As one interviewee explained, it goes beyond access.

> We often use trail building as a means of solving environmental problems. Trails are management tools. People are already out in the woods. If you build a trail system consciously, particularly considering the environmental values at stake, you can take people where they want to go while also avoiding the sensitive resources you want to protect, and let people have that connection with nature. (BMA-03)

They work to accomplish this through stewardship, supporting land managers in trail building and maintenance, advocacy, promoting responsible recreation, and education. It is clear that the main reason for being is to serve a recreational interest rather than promote larger environmental or social objectives. In this manner, civic recreation organizations serve an explicitly instrumental function (Jacoby and Babchuck, 1963; Dennis and Zube, 1988) over expressing particular shared ideologies or values. However, these organizations view recreation as a good in

itself, a means to bring together a community, enhance the quality of life, and promote humans' connection to nature.

Strategies

Drawing from survey responses and case study comparisons, this section explores the strategies employed by civic recreation groups to accomplish their mission and goals. Specifically, this section addresses the following research question:

> ***RQ1c****. What are the most effective strategies employed by civic recreation groups to accomplish their goals and objectives?*

Survey Findings

Survey respondents were asked about the effectiveness of different strategies in helping the organization achieve its mission and goals. Stewardship, engaging volunteers, and partnerships with land managers were ranked as the most effective strategies among the entire sample. A one-way Anova revealed significant differences between user groups within stewardship, community events, partnerships with other organizations, and partnerships with land managers. Through post hoc analyses (Tukey or Games-Howell, depending on whether the assumption of equal variance had been violated), I found that rock climbing (mean difference =.57 ±.20, $p<.03$) and mountain biking (mean difference=.50 ±.19, $p<.02$) organizations ranked stewardship more effective than all biking organizations. This is not surprising, as both rock climbing and mountain biking organizations focus more of their efforts on stewardship work. Overall bicycling organizations felt that partnerships with other organizations were less effective than trail organizations (mean difference = -.66 ± .23, $p<.04$). Trail-based organizations perceived community events more effective than mountain biking organizations (mean

difference =.51 ±.18, p=.02). Finally, mountain biking perceived partnerships with land mangers to be more effective than overall bicycling organizations (mean difference=.61 ±.22, p=.03). Table 3.10 below illustrates the results of the analysis.

Table 3.10 Effectiveness of different strategies to achieve organizational mission and goals – survey responses

	All	Climbing	Mt. Biking	Trail	All Biking	F	p
Advocacy	3.92	3.96	3.96	3.7	3.92	.92	.43
Stewardship	4.42	4.57	4.5	4.29	4	3.75	.01*
Education	3.61	3.85	3.49	3.71	3.71	1.90	.13
Community Events	3.96	4.08	3.78	4.29	4.27	4.26	.01*
Engaging Volunteers	4.09	4.16	3.97	4.38	4.13	1.65	.18
Support from larger org.	3.69	4	3.53	3.76	3.87	1.81 ^	.16
Partnerships w/other orgs	3.96	3.84	3.99	4.29	3.63	3.77 ^	.02*
Partnerships w/land managers	4.38	4.38	4.54	4.10	3.93	3.75	.01*

Questions asked on a five-point likert scale (1=very ineffective, 5=very effective)
^Welch statistic used b/c assumption of equality of variances was violated

Survey respondents were then asked to expand on their selection through a text box. Some of the most illustrative explanations are presented in Table 3.11.

Table 3.11 Explanation of strategies to achieve organization's mission and goals – survey responses

Strategy	Climbing	Mountain Biking
National Organization Support	Healthy partnerships with representatives from the USFS and national agencies like the Access Fund lead to continued collaboration, professional guidance, and resources including access to educational content, access to grants and connections to other organizations. Collaborations with national organizations provide a larger mouthpiece to help spread action issues among the community, and also to help recruit more people for stewardship projects. Education is a hard thing to measure.	IMBA adds a level of support and legitimacy to projects and asks of land managers or other organizations.
Stewardship	Our most productive projects have involved interfacing with land managers and local stewardship efforts. Our membership is very excited about trail days/stewardship events and we always have good turnout.	Land managers need help with trail building and maintenance. Many see the value of well-built trail. Our trail work is probably the most effective aspect of our efforts because the agencies see the most benefit. Hands on - gets people engaged with each other and in the process – ownership.
Education	Through hands-on clinics, specific education topics get covered generally to a less experienced base of climber, which is quite effective.	We are not as successful with education/advocacy, though those are very important.
Engaging Volunteers	Getting our members out working on the lands and cliffs in our areas brings out a diverse crowd, which allows the spreading of advocacy information and best practices more easily.	
Partnerships with other organizations	Collaboration and being involved with the community and land managers are important to speak with a larger voice	Partnerships help gain and spread knowledge that might take a long time to gain. We are now in the slow process of creating trails on federal land and are ramping up our advocacy to help get our foot in the door.
Partnerships with land managers	Having a good relationship with land managers ensures future access and a situation where we can deal with any issues as they appear.	COGGS has spent years working to foster a strong relationship with our land managers. Our efforts have gained us the respect of our local government, riding community, and business partners.

Case Study Findings

Strategies and reasons for their effectiveness were ascertained through interviews with case study respondents, their specific survey response, and any pertinent documents related to

this topic. Many of the eight cases in this study use similar strategies to accomplish their goals. These most common approaches are: building relationships with land managers, supporting land manager capacity through stewardship and volunteerism, promoting dialogue and collaboration, and seeking support from a national organization. Some organizations rely more heavily on advocacy and partnerships with other organizations than others. Several climbing organizations stand out as using a unique tool – land acquisition – as a strategy. Table 3.12 illustrates the most effective strategies that each case employs to achieve their mission and goals.

Table 3.12 Most effective strategies employed by case studies

Organization	**Most Effective Strategies**
Boulder Mountain Biking Association (BMA)	• Supporting land managers through trail work • Advocacy and relationship building • IMBA
Moscow Area Mountain Bikers (MAMBA)	• Trail building and maintenance • Partnerships with landowners and co-management • Self-policing
Chicago Area Mountain Bikers (CAMBr)	• Supporting land managers through trail work
Trails Have Our Respect (THOR)	• Trail building and maintenance • Relationships with land managers • Engaging volunteers • Partnerships with other organizations
Boulder Climbing Community (BCC)	• Partnerships with land managers • Building relationship • Collaboration • Staying mission-focused • Trail stewardship
Friends of Muir Valley (FOMV)	• Volunteerism during trail days • Fundraising to purchase land
Yosemite Face Lift	• Stewardship from climbing community improves relationships • Make it fun and easy to volunteer • Collaboration and dialogue
Climber Stewards	• Partnerships with land managers • Promote dialogue and conversation • Building culture of stewardship
Carolina Climbers Coalition (CCC)	• Partnerships with land managers • Building relationships • Support from the AF • Purchasing land – "tool of last resort"

Relationships and collaboration with land managers

All of the organizations reported that building relationships and supporting land managers was a key strategy. Through building trust over time, representing a unified and positive voice for the recreational community, and offering to add capacity to land managers, organizations reported being able to slowly advance their interests within the land management structure.

> We're very accommodating to what landowners want and need . . . and cognizant of keeping our landowners satisfied and that's what we work hardest at. (MAMBA-01)

> If we can represent [the climbers] and have that relationship and say, we represent climbers, you can talk to us, you don't have to talk to all the climbers . . . We've got to have that trust and understanding, we've got to have that personal relationship so it makes it that they can call us up [when they need us]."(CCC-01)

> My sense is that land managers not only like us, but really appreciate us. (BCC-01)

Complementary to relationships and trust with land managers is supporting management of the recreational resource through stewardship. Not only do stewardship efforts support land managers' goals and lead to better relationships, they also offers a very tangible way for members and volunteers to get involved with the organization's efforts.

> We have trail leaders at each of our trails; they really have a great deal of vision when it comes to where trails should and can be, and they work directly with the land managers to express that vision. The Director of Parks and Recreation [in the city of Bellevue] will do anything he can do to help us build trails and maintain trails and develop trails because he sees the benefit we bring to the community. (THOR-01)

> Hey, you want to be involved? Come to this trail day, we're going to build stuff. They can come out and build stuff and be like, 'hey, I built those steps, those are really cool, and that's my contribution.' (CCC-01)

Another way that these organizations support land managers' capacity is through self-policing.

> We won't get our way if we go in there, bull in the china shop and say, 'you've got to talk to us, we're so powerful.' We get in by going in the back door and say, 'hey, we're helpful. We can help you manage . . . we can self-police. (CCC-01)

For example, BMA has a volunteer bike patrol that rides designated trails and provide assistance and education to riders, such as trail directions, helping with minor bike repairs, and educating about the rules of the trails. Similarly, MAMBA requires all members to adhere to a set of trail etiquette principles to ensure that landowners remain happy and willing to keep Moscow Mountain open to recreation. If somebody sees another user not uphold this etiquette, they will call each other out and remind them of the consequences that their actions may bring on the entire community of recreators. These efforts to support land managers create goodwill and trust so when it comes time to make a decision about the user group, the land manager may think favorably about the user group. In the case of MAMBA, which focuses solely on partnerships with private landowners, such self-policing is essential to the continued use of the mountain for recreation.

Many of the interviewees spoke about collaboration and dialogue as an important way to break down stereotypes, build trust, and find common goals. For example, in Yosemite National Park, the Climbing Rangers hold "Climber Coffee" every Sunday at two prominent climber campgrounds. "This is a really important time . . . to create a point of connection with climbers" (YCS-01) and support dialogue around concerns within the climbing community. Along these same lines, the founder of the Yosemite Face Lift has seen that this event nurtures conversation and mutual understanding.

> Everybody loves this one area and there are problems you both agree need to be taken care of. If you bring them together and take care of it together, it [promotes] an open dialogue. They might not see eye to eye, but they at least see enough to respect each other . . . and maybe understand some of their needs. (YFL-01)

Some interviewees believed that this dialogue was vital to building trust and enabling collaboration. If different interests could find common ground and shared goals, existing and deeply entrenched barriers could be broken down, resulting in win-win solutions.

Support from national organization

Recently, three of the four mountain bike organizations have become an official chapter of IMBA. Similarly, the BCC, FOMV, and the CCC heavily rely on the Access Fund for support. These national organizations provide important resources to their local affiliates, such as joint membership opportunities, administrative, technical, policy/advocacy, and educational resources, and enhanced branding. Additionally, they foster a network of organizations across the country that are working toward similar goals, enabling them to share ideas and lessons learned with one another.

> Our partnership with the Access Fund is probably one of the most effective tools we have. They provide knowledgeable, staffed resources and funding that we can rely on to achieve our goals. [It's nice to have] somebody to talk to and know how and who to get support from, and knowing where to plug into those networks quickly, who the right people are when we really need to act quickly. (CCC-01)

Advocacy and partnerships

While the above strategies are shared by most of the cases, advocacy and partnerships with other organizations are used and perceived differently. The BMA, CAMBr, and the CCC rely on advocacy as an important strategy such that they can get involved in policy decisions and represent the user-group's interest.

> Every time there's a management decision that comes up, whether it's to include mountain bikes at all in the trail design . . . we try to write very educated, professional, and respectful comments. (BMA-03)

Indeed this has resulted in these organizations experiencing significant wins with land managers. For example, in one area where the CCC works, it is now cemented into policy that the land manager needs to include the organization in any new planning processes. However, in the case of the BMA, certain advocacy efforts have been particularly contentious and "traumatic" and the outcome "reinforced the status quo of what seemed like prejudice," (BMA- 02) resulting in a

significant loss of trust. Other organizations have not focused their efforts on advocacy because they do not believe in it as an approach (e.g. the BCC), have not needed to use this strategy due to the land management structure (FOMV), or did not have people or leadership versed in these techniques (THOR).

Similarly, partnerships with other organizations is mixed. In most of the cases, there are limited examples of other voluntary organizations partnering to work to achieve their goals. BMA partners with Wildlands Restoration Volunteers to do trail restoration, but rarely works with other user groups on projects. The BCC sometimes partners with other climbing organizations, yet is not seeking out other user groups to partner with. Perhaps these partnerships do not form because there are pre-existing contentious relationships between user groups in these areas and the organization's view that they simply have missions and objectives that do not align.

> There's a lot of walls that have been put up along the way. (BMA-04)

> For me, the mountain bikers, we're so different from how we work. I know that they end up doing a lot of trail work and stuff, but to me, it's like, they're just doing that partly because it keeps their trails nice but there's not a real heart felt sort of environmentalism there. So, I feel like it's a pretty different culture. (BCC-01)

For those that do partner with other groups, such partnerships emerge when shared interests become visible. For example, the CCC partners when

> The opportunity comes up and it's the right fit. (CCC-01)

Recently, they have formed a consortium of recreational interests to engage in the Pitka Nantahala National Forest planning process.

> Some really interesting partners have gotten together and said, 'let's all get a common voice here and represent a bigger interest to the Forest Service. (CCC-01)

However, this partnership was threatened when one of the wilderness-based organizations would not compromise, and "it stalled the whole process" (CCC-01). THOR is perhaps the most

enthusiastic about partnerships, and has recently formed some very positive partnerships with other recreation-based organizations.

> Our trails are short and tight so it just made sense for us to welcome/accept/partner with the area trail runners. They are a very active group and have helped us with volunteer hours, money and getting the word out about trail conditions. (THOR-01)

What can be gleaned is that advocacy and partnerships are not always viewed as effective or feasible. This seems to be a result of the context in which the organization emerged and exists today and the culture of the organization itself.

Land acquisition

Something that is unique within the climbing community is a movement for climbing organizations to purchase land for the purposes of preserving the climbing resource. In this way, the organization acts as land trust, responsible for managing, maintaining, and stewarding the land. This strategy is prevalent across the United States and, in many ways, was pioneered by the Access Fund. Both the CCC and FOMV have used land acquisition as a prominent strategy. For FOMV, the only way to ensure unrestricted access to the climbing at Muir Valley was through purchasing it, as the land was held in private ownership. This was the vision from the very beginning:

> By getting it in the hands of the climbing community, we assure it will never be closed to climbing. (FOMV-01)

For the CCC, this strategy is used as

> A tool of last resort, and emerges as a strategy out of necessity. [It becomes clear that] there really is nobody else who's interested in some of these properties other than climbers. So, acquiring them is the best way to secure the access in the long term. (CCC-01)

Summary

Both the survey responses and case study findings reflect similar sentiments: stewardship, collaboration with land managers, support from national organizations, and volunteer

engagement are all strategies that help civic recreation organizations achieve their goals. Advocacy and partnerships with other organizations is used less consistently across all organizations, suggesting it is still a useful strategy, but not the primary aim of these groups. In addition to the survey responses, the case studies revealed the importance of building relationships and trust with land managers, which is a result of many different strategies (stewardship, self-policing, advocacy, and promoting responsible recreation). These relationships then help to foster partnerships that contribute to better management of the recreational resource. Land mangers begin to seek the support of these organizations to achieve their own mission as well.

Barriers

Drawing from survey responses and case study comparisons, this section explores the barriers encountered by civic recreation groups in working toward accomplishing their mission and goals. Specifically, this section addresses the following research question:

> ***RQ1d****. What are the current barriers that limit civic recreation groups from achieving their goals?*

Survey Findings

Survey respondents were asked which factors were barriers to achieving the organization's mission or goals. Analysis indicates volunteer engagement and retention, lack of funding, and land management structure ranked as the most prominent barriers. A one-way Anova revealed significant differences between user groups within volunteer engagement ($p=.01$) and volunteer retention ($p=.04$). Tukey's post-hoc showed mountain biking (mean

difference = .96 ± .29, p=.01) and all bicycling organizations (mean difference = 1.12 ± .40, p=.03) perceived volunteer engagement to be more challenging than trail-based organizations.

Table 3.13 Barriers to achieving organizational mission and goals – survey responses

	All	Climbing	Mt. Biking	Trail	All Biking	F	p
Lack of Funding	3.36	3.04	3.37	3.76	3.36	1.32	.27
Volunteer Engagement	3.73	3.62	3.91	2.95	4.07	4.2	.01*
Volunteer Retention	3.60	3.38	3.76	3.05	3.93	2.78	.04*
Lack of Expertise	2.58	2.96	2.53	2.15	2.79	2.03	.11
Lack of Paid Staff	2.27	2.08	2.11	2.55	3.14	2.40^	.08
Lack of Partnerships	2.69	2.77	2.71	2.80	2.29	.55	.65
Land Mgmt	3.24	3.33	3.23	3.5	2.79	.59^	.63

Questions asked on a five-point likert scale (1=not at all important, 5=extremely important)
^Welch statistic used b/c assumption of equality of variances was violated

Respondents were given the option to add additional barriers that they experienced that were not presented in the survey options. Most of these additions fell into the wider category of local culture and acceptance of their efforts, described as "renegade" recreationists, "NIMBYism," and "public relations to counter local minority opposition."

Respondents were also asked to provide a written explanation to the question, "What are the biggest barriers to achieving your organization's mission?" Most respondents cited lack of capacity, either through limited funding, time, and lack of staff and high quality volunteers (n=70). Second to this was dealing with land managers or the land management structure – either too much bureaucracy, not enough capacity within the land management structure, or resistant land managers who may view the recreational activity negatively (n=42). Other barriers that were mentioned were local politics and inability of the community to work together (n=17), organizational effectiveness due to its structure or leadership (n=9), uneducated or disengaged recreationists (n=7), and limited land to actually pursue the recreational activity (n=3).

Table 3.14 Most prominent barriers reported by survey respondents

Barrier	Illustrative Quote
Capacity	"Resources - we have more opportunity than we can execute on at this point from our long efforts in advocacy and building partnership. Now both we and the land managers need the resources, both staff and funds, to be able to move projects forward" (Mountain Biking organization) "Volunteers who are qualified and willing to lead a project through from start to finish" (climbing organization).
Land manager or land management structure	"Working with land managers who have the attitude, 'But its always been done this way.' Working with land mangers who believe that bicycling will interfere with wildlife" (mountain biking organization).
Local politics	"The lingering perception that mountain biking causes erosion and detracts from the enjoyment of other trail users. In reality poorly constructed trails and horses are the biggest causes of trail erosion and a few individuals in every user group give others negative perceptions about the entire user group" (mountain biking organization)
Organizational ineffectiveness	"Lack of personal initiative and commitment from those within the organization. Complacency within the organization. Ineffective project management within the organization. Recruiting viable leaders for the organization that follow through" (climbing organization).
Uneducated or disengaged recreationists	"Some climbers install bolts illegally without going through the available process" (climbing organization)
Limited land	"Lack of land to handle volume of new mountain bikers"

Case Study Findings

Among all of the cases, several key themes emerged as barriers: organizational capacity, working within some land management structures, turnover with land managers, and rogue or irresponsible recreationists. In addition, several organizations pointed to politics as an important and persistent barrier. Table 3.15 below highlights the prominent barriers that each case experienced, primarily gleaned through interview data. The most common barriers evident in the cases are then detailed sequentially below.

Table 3.15 Primary barriers for case studies

Organization	Primary Barriers
Boulder Mountain Biking Association (BMA)	• Politics (perception of mtn. biking, deeply preservationist community • Working with some land managers • Volunteer engagement • Organizational capacity and management
Moscow Area Mountain Bikers (MAMBA)	• Volunteer engagement • Meeting different user-group's and individual's preferences
Chicago Area Mountain Bikers (CAMBr)	• Politics (perception of mtn. biking within land managers and other user groups) • Building awareness about their work • Organizational capacity • Rogue recreationists
Trails Have Our Respect (THOR)	• Getting approval from some land managers to build trails
Boulder Climbing Community (BCC)	• Land management structure – particularly FS policies • Organizational capacity
Friends of Muir Valley (FOMV)	• Fundraising for operational expenses
Yosemite Face Lift	• Turnover with land managers
Climber Stewards	• Politics • Disorganization /volunteer management
Carolina Climbers Coalition (CCC)	• Turnovers with land managers • Rogue climbers • Fundraising • Organizational capacity

Organizational capacity

Most of the cases are volunteer run and managed. This inherent structure leads to limited time to accomplish goals, lack of organizational effectiveness and continuity, and challenges with accountability. Although many people are willing to volunteer, it takes significant efforts to organize these human resources in an efficient and effective manner.

> We lack middle management. We have a strong Board and lots of people turn out for the events we hold or volunteer for trail days, but we need people at a level in-between board and normal volunteers, to lead committees and do medium-sized tasks. (BMA-03)

Moreover, volunteers are interested in doing fun and engaging work, often leaving essential administrative tasks under resourced. This has the effect of both making it difficult to engage and empower volunteers and may lead to lack of professionalism within the organization.

> One of the problems with volunteering is you have to be able to manage expectations . . . Sometimes doing the mundane work is often the most helpful, it's just difficult to tell that story. (MAMBA-01)

> We had a man who moved here [a few months ago] and he said it took him five months to figure out how to get involved. That's a result of the structure of a volunteer-run organization with limited time. (BMA-03)

Fundraising is another important challenge that these organizations face. While many have been successful at raising money for a clear, tangible project, raising necessary funds to support general operations or close a project out proves difficult. Most of these organizations rely on membership dues and business sponsorships to support basic operations, yet many have plateaued at a membership level that is not representative of the number of recreationists within their community. Perhaps this is because membership does not provide direct benefits. It is easy to rally members and support when there is a crisis, yet these organizations hope to not have to always be in crisis mode to garner support.

Land managers

All cases except MAMBA and FOMV pointed to some degree of frustration in regards to land managers. This could be the land management structure that has a lot of bureaucracy embedded in its culture, as was expressed by the BCC in working with the Forest Service and THOR in working with several State Parks. Organizations could also be stymied due to land managers' perceptions and beliefs about land management and the user group.

> There's an interpretation of how the land should be used and taken care of. Unfortunately, within the city, and to a lesser degree in the County, there's people at the top of the food chain who don't like mountain biking, don't want to show any favoritism, and have refused to add trails to the system when they're repeatedly buying more and more land. (BMA-02)

> One of the heads of Boulder County Parks and Open Space believes that there shouldn't be any trails. They should just buy land and hold onto it and preserve it for future generations, despite the fact that recreation is explicitly outlined in the charter. (BMA-01)

For some organizations, they have spent years to build better relationships with these types of managers, with varying degrees of success. In the case of CAMBr, they made very little progress

until the people in charge left and were replaced by more recreation-minded individuals. Due to a change in administration within the Forest Preserve District of Cook County, land managers were more open to recreation and understand how to manage recreation, representing a more "new school" approach that didn't always "fall back on conservation;" rather, they were willing to look at balancing recreation with conservation in a more "progressive type of land management" (CAMBR-01). This new administration allowed for a much better relationship to build and increased the ability for CAMBr to build and maintain more trails.

This succession could have the opposite effect, as noted by several interview respondents. Due to the amount of time and relationship-building that goes into forming a positive collaboration with land managers, when somebody leaves, that process needs to start from the beginning. Thus, an organization can lose years of work with the succession of land managers.

> It's all about those relationships, and that's a lot of work. The Stone Mountain State Park Superintendent, I had just established a great relationship with her, and she left. So you're like, no! I like her, she's good. (CCC-01)

Rogue/Irresponsible recreationists

Indeed, not everyone who recreates in a particular area is a member or supporter of their local civic recreation organization. Sometimes, there are recreationists who choose not to obey the rules, etiquette, or ethic of a particular place. For example, in the Linville Gorge, North Carolina, a climber posted a video of himself climbing naked in an area that had been closed to climbing for falcons. The video went viral and the land managers contacted the CCC to address the issue. The organization had to immediately respond and assuage the situation. When these incidents occur, it often makes the organization lose credibility in the eyes of the community and land managers or degrade the recreational resource.

> The most frustrating part is either people that don't like us because they don't understand what we do, or don't respect the work we do and actually cause damage to the trails that take so much love. (CAMBr-01)

> The whole thing about outdoor climbing is supposed to be a commune with nature, not a trip to the gym where there's music blaring in the background. [However], climbing has become so popular that part of it, the solitude part of it is really gone, at least in the Red . . . And that has lent itself to kind of a gym mentality . . . (FOMV-01)

Politics

Local politics were brought up as a barrier by several interviewees, most notably from the BMA. In a community that does not see the recreational activity as an appropriate use of the land or has many competing interests, the political environment can make it very challenging to find common ground, collaborate, and accomplish solutions that satisfy everyone's goals. In Boulder, for example, there is a deeply ingrained preservationist community that is resistant to change and development.

> When I started getting involved because I wanted more access to the outdoors, all of a sudden I was the opposite to an environmentalist, which was shocking to me . . . The environmentalists thought I was crazy because I must hate the environment if I was mountain biking. There are some people who think that you are fundamentally not using the land in a way that it was meant to be preserved . . . Different people using different tools to enjoy the outdoors, where do you draw the line? (BMA-02)

In Yosemite Valley, there is a not only a long history of conflict between climbers and law enforcement, but there are many user groups in the area vying for the same land.

> There's already some group using that land or who feel that they have some ownership of it, so we have to work our way, we can't be offensive . . . you have to put forward a proposal that's palatable to other groups so that they're not working against you. (YFL-01)

When possible, these conflicts may be resolved through collaboration and dialogue. However, if one interest will not budge on their position, as was the case with CCC when a wilderness group was unable to compromise in a Forest Service planning process, the entire thing can be put on hold.

Summary

Findings from both the survey and the case studies corroborate each other. The most prominent barriers that civic recreation organizations encounter are limited organizational capacity due to their reliance on volunteers to accomplish their goals, difficulty in working with land managers due to the structure or land managers' perceptions, local politics and user conflicts, and recreationists within the user group who do not present a responsible and positive image.

Reported Perceived Outcomes from Civic Recreation Practices

This section provides an overview of the outcomes from civic recreation practices as reported by survey respondents and through the comparative case study analysis. Specifically, this section answers the following research question:

RQ1d. *What are the various outcomes from civic recreation practices?*

Survey Findings

When asked which outcomes had been observed as a result of the organization's efforts and activities, respondents reported that the biggest outcomes were improving the recreational resource and strengthening relationships with land mangers. A one-way Anova revealed significant differences between user groups within improving relationships with land managers ($p=.02$) and experiencing more collaboration between different recreational user groups ($p=.04$). Within the relationships outcome, a Games-Howell post-hoc test was conducted due to the fact that the assumption of equal variances was violated. This test revealed no significant differences between the groups. However, a Tukey's post hoc test resulted in a mean difference of .86 ±.3 ($p=.02$) between mountain biking organizations and all bicycling organizations. This result is not

surprising, as bicycling clubs tend to focus more on events and advocacy than working directly with land managers. Within the collaboration outcome variable, a Games-Howell post hoc test indicated that trail-based organizations experienced more collaboration with other user groups than rock climbing organizations (mean difference =1.2 ± .41, p=.02), a finding that was echoed in the case study analysis.

Table 3.16 Outcomes from organization's efforts and activities

	All	Climbing	Mt. Biking	Trail	All Biking	F	p
The recreational resource has been improved	6.39	6	6.49	6.48	6.44	2.1	.10
Relationships with land managers have been improved	6.19	5.96	6.46	5.85	5.6	3.8^	.02*
The recreational user group is more responsible where they recreate	5.74	5.5	5.87	5.75	5.43	1.2	.31
There is more collaboration between different recreational user groups	5.27	5.65	5.32	5.86	5.27	3.0^	.04*
The local community is more cohesive and able to work together	5.30	5.31	5.26	5.52	5.2	.33	.81
More land has been conserved	5.00	4.85	5.16	4.74	4.8	.71^	.55

Questions asked on a seven-point likert scale (1=strongly disagree, 7=strongly agree)
^Welch statistic used b/c assumption of equality of variances was violated

Survey respondents were also asked to list any other outcomes observed as a result of their organization's efforts and activities. Several respondents explained in more detail the category that had already been listed, and some additional outcomes were also introduced. In many ways, the recreational resource has been improved either because it was actually created (e.g. more trails were built in an area that didn't have them previously) or the condition of the area was improved through stewardship or more responsible use.

> As we learn new techniques, every section of trail we build is more sustainable than the previous section. (Mountain biker survey response)
>
> "Over 200 bolts replaced" and "Reduction of human waste is notable." (Climber survey response)

Respondents also noted that as they delivered hundreds of volunteer hours each year, it added credibility to their relationships with the community or land managers.

> Other units of the NPS have cited us as an example of how local mtn bikers can be wonderful allies in protecting the resource as well as allowing responsible use of the resource. We have an MOU with the NPS. (Mountain biker survey response)
>
> I think other group's (Audubon, Native Plant society, etc.) are finding inspiration in what we have accomplished and are raising their own expectations and accomplishing more. (All trails survey response)
>
> When new lands are being acquired for public open space we are one of the first people at the table. (All trails survey response)

Through collaboration, some respondents reported that tensions between user groups had been ameliorated.

> Through our collaborations with an equestrian trail group, we have also seen an increased understanding between trail users that were previously saw conflict on shared trails. (All trails survey response)

Additionally, the community was strengthened, as the organization becomes a hub for recreationists to gather, share interests, and work together toward a common goal.

> Community building has occurred; community members now have an organization to identify with; 5013c status. (Climber survey response)
>
> Our Facebook page is a snapshot of our community. It has become the place to find out about where to go, trail conditions, events or just to meet up for a ride or run. It's amazing! It's not a place of discontent nor negative feedback . . . (All trails survey response)

Some organizations noted that more land has been conserved or protected.

> We now have over 60 acres of land conserved. (Climber survey response)
>
> Raptors have been able to nest without interference from climbers. (Climber survey response)
>
> Many of the cliffs closest to Vermont's largest city (Burlington) were on private land prior to the formation of CRAG-VT. Since CRAG-VT was formed, nearly all of them have had permanent access easements put in place for climbing either through purchase or cooperation with land owners. (Climber survey response)
>
> We were able to mobilize the community to keep the city of Roswell GA from tearing down several acres of park land to build a new fire station. They chose to build it in a developed section of the community. (Mountain biker survey response)

Survey respondents also pointed to outcomes not listed as an option on the survey: increased number of recreationists and enhanced economic and community development. Several survey respondents noted that as participation in recreation increases, the community benefits from more tourism and economic development as well as support for continued expansion of recreational resources.

Case Study Findings

Through the activities and efforts of the cases explored in this study, several significant outcomes and successes were identified. Interview transcripts and documents were coded using a priori codes combined with new codes that emerged through the analysis. These outcomes fall into the following categories: increased sustainable recreation opportunities, improved relationships with land managers, improved environmental quality, and community and social outcomes. Table 3.17 exhibits these categories and their sub-dimensions with respect to each case.

Table 3.17 Outcomes and successes reported by case studies

Organization	Reported Outcomes and Successes
Boulder Mountain Biking Association (BMA)	• Increased sustainable recreation opportunities • Co-management • Relationships with land managers improved • Social capital (stronger mountain biking community, increased trust w/some managers)
Moscow Area Mountain Bikers (MAMBA)	• Created sustainable recreation resource for the community • Increased economic impact from recreation • Stewardship and legitimate use of the land • Wildlife/ecological benefits
Chicago Area Mountain Bikers (CAMBr)	• Increased sustainable recreation opportunities • Improved relationships with land managers • Credibility – won *Volunteer Organization of the Year* award • Social capital – stronger mtn. biking community
Trails Have Our Respect (THOR)	• Increased safety and legitimate use of parks • Creates community (lots of volunteer engagement, viewed as a community asset) • Successful partnerships
Boulder Climbing Community (BCC)	• Relationships with land managers improved • Co-management – user group taking responsibility for themselves • Increased stewardship ethic among climbers
Friends of Muir Valley (FOMV)	• Created significant recreation resource whose access is preserved – visitation up to 45,000 people a year • Volunteer engagement
Yosemite Face Lift and Climber Stewards	• Relationships with the Park have greatly improved • Environmental improvement • Credibility and recognition from Washington DC • Community empowerment and social capital • Stewardship ethic among climbers
Carolina Climbers Coalition (CCC)	• Increased access to climbing areas and expanded climbing opportunities • Better relationships with land managers • Built credibility – land managers want to work with them • Environmental protection

Increased sustainable recreation opportunities

Not surprisingly, through the efforts of these cases, they have successfully achieved the shared goal of securing access to and enhancing recreation opportunities. While organizations such as FOMV and MAMBA set out to create a recreational resource for the community from the beginning, other cases worked to gain access to a pre-existing recreation area. The CCC and FOMV have secured access in perpetuity to these recreational opportunities and ensure that they are managed in the spirit of stewardship and conservation. Through advocacy and volunteerism, CAMBr, BMA, and THOR have worked to create and expand a network of sustainable multi-use

trails in their region in which mountain biking and other trail-based activities can thrive. In the mid-90s, CAMBr would build a trail anywhere they were allowed. At present, they have created enough mileage in the Chicago area that they can be more selective in where they want to build. Likewise, BMA has worked to build numerous multi-use trails in the city and surrounding areas. In addition, they created the Valmont Bike Park, a community asset that provides a great riding opportunity for youth.

As these opportunities for recreation became more accessible, interviewees reported that the recreational activity became more popular as well. It is notable that Muir Valley went from 400 visits in its first year to 45,000 visits annually, demonstrating the demand for new climbing resources in the area.

> Many people come and say this is the only place they climb because they're so comfortable with the routes and grades and the trails and emergency system. (FOMV-01)

In one area, CAMBr conducted a survey of the main trail entrance over the weekend and found 1200 – 1300 people came to ride through that entrance.

Improved relationships with land managers

Through the efforts of collaboration, relationship building, dialogue, and providing support to land managers, many of the organizations expressed relationships with land managers had been greatly improved. Certainly, much of this depends on how contentious the relationship was in the first place. For example, THOR started out with a very positive relationship that has only strengthened that over the years. By contrast, the BMA's relationship with land managers, especially in the city, was extremely adversarial and only modest advances have been made. Unfortunately, in a recent planning process, these contentious relationships were rekindled, which undermined much of the progress and trust that had been built.

Co-management

As relationships improve and the organization gains credibility, more partnerships begin to form in which the organization helps to take part in the co-management of the recreational resource. In many ways, this is forging a new form of management whereby the user-group manages themselves and their impact.

> The USFS has hitched its wagon to BMA as a crucial partner in caring for USFS lands and trails. [They] recognize that, especially in a time of declining federal revenue and staff levels, private public partnerships are where it's at. USFS relies upon the Boulder Mountain Bike Patrol for data about the trails and trail usage, and the BMA Trail Work Team does a ton of projects with the USFS every year. (BMA-04)

> We design, build, and maintain trails for land management agencies in Boulder County. So far, we have completed more than 165 project days, which contributed more than 27,500 hours of volunteer time. This is the equivalent of providing the land management agencies of Boulder County with a full time trail worker for more than fourteen years. The value of the contributed volunteer time alone exceeds $500,000. (BMA-Activities Document)

> My belief is at the core, the mission of land managers is pretty congruent with what we would want as climbers – taking care of the places. I think there's kind of a new model, that we are pioneering . . . around this idea of a user group taking . . . full responsibility for managing that resource . . . And the land manager, essentially, in the best case could just step back and say, 'you know, we don't really have to worry about hardly anything . . . But it seems to be making sense to them, after they get over the initial shock thinking that you could hand over that much control . . . we're not demanding anything at all, except permission to take care of it. (BCC-01)

The degree of co-management is very much contingent on the type of land management structure and the willingness on the part of managers to hand over responsibilities to the user group. As is the case with MAMBA, FOMV, and the CCC, there are no government agencies to collaborate with and therefore the management can be streamlined toward the recreational purpose. This public-private partnership may be a new model for new land management across the country.

> The lack of government involvement allows for the trail creation and management process to go much more smoothly on private lands. Without bureaucratic requirements

> and timing lags, trails are built more quickly and at a cheaper price. Management can be handled by a few nimble volunteers or experts rather than a large federal bureaucracy. (PERC, 2015)

Within other land management structures, organizations may be consulted with or relied upon for support with trail days and such, yet the decisions remain within the land management agency.

> We have a ton of expertise in sustainable trail building and stewardship principles and how to build trails that last a long time and don't cause erosion . . . I don't think we're relied on for the knowledge, for a variety of reasons, but notably that land managers prefer to do that on their own, and it takes a long time to build trust with recreation groups. (BMA-03)

Improved environmental quality

Interviewees suggest their stewardship efforts and sustainable trail building techniques have contributed to better environmental quality and management. Certainly, trash clean ups in Yosemite and more responsible Leave No Trace practices by the user group help to improve degraded landscapes and prevent further degradation. Additionally, these stewardship practices instill a stewardship ethic among participants, one that is "contagious" and may transfer beyond a specific area.

> It's contagious . . . During the clean up, somebody goes, 'Oh, I'll come for an hour or two' then they come back and go, 'oh man, I just started finding stuff everywhere.' It's almost like they're panning for gold they get so excited about it . . . To me, it's hard to get somebody to change their ways by talking to them or telling them it's wrong . . . But if they see you doing something and suddenly figure it out on their own, it's kind of their own idea to help you, I think that has much broader impact. (YFL-01)

Many respondents indicated that well-built sustainable trails are an excellent management strategy to direct areas of use and limit degradation of environmentally sensitive areas. As one interviewee from the BCC explained, trail building and maintenance is such an important management tool because it keeps people from "overgrazing – if you just turn people loose everywhere, all the vegetation is gone." Trails may have additional environmental benefits which

are auxiliary to the goals of the organization yet are a positive byproduct. For example, on Moscow Mountain, trails have provided a resource for wildlife.

> As soon as you get the right away cut . . . there's animals using those trails. And then once you get the trails, I've seen bear tracks, cat tracks, moose, elk, deer, coyote, they all use those trails . . . The trails actually help disperse the animals across the land better than not having the trails in there. It gives more access to more acres, so from a grazing standpoint, it is a conservation, sustainable practice that should be done. I don't know that anyone has ever actually thought about it from that standpoint, but it is true . . . (MAMBA-01)

Conservation and land stewardship may be another auxiliary benefit from civic recreation practices, as land that could possibly be used for development is now secured for recreation.

> Mountain biking can add value to private lands, creating incentives for landowners to leave land in a more natural state better suited for biking, as opposed to developing it. Trails are built in environmentally conscious ways, with trail builders considering erosion, noise, litter, and environmental impacts throughout the construction process. (PERC, 2015)

At Rumbling Bald in North Carolina,

> There's a rare plant there that we've now protected because we bought the property. [That certainly isn't the sell when pitched to climbers], but if we can buy that crag and also protect the rare plant or animal, everybody wins. (CCC-01)

Both MAMBA and THOR provide a "legitimate use" of the land, thereby deterring other individuals from degrading the land through dumping trash, poaching, or conducting other illegal activities.

> One of the things [land managers] said to us this past summer that never occurred to me was that our legitimate presence in the park keeps down the illegitimate presence in the park. (THOR-01)

Through most of these activities, environmental quality is improved. This has yet to be quantified, pointing to a fruitful area of future research.

Community and social benefits

There are many community and social outcomes that interviewees highlighted as a result of their activities. Social capital emerged as a prominent theme throughout the interviews. Certainly, the community within the civic recreation organization is strengthened. People are excited to support the cause and work together, thereby forging stronger relationships and community. As a member from CAMBr articulated, social events are a great way to draw people into the organization and get them involved with future trail work and other volunteer opportunities.

> And they come out of the wood work . . .[they'll host a grill and social ride] and get 50-70 people who show up on a Wednesday night. And there's lots of people you've never seen before. (CAMBr-01)

One member of BMA noted how her involvement has created new friendships with people whom she normally would not interact.

> I have a ton of respect for him, but I probably never would have become friends with him had it not been for mountain biking . . . I mean that's actually one of the most rewarding things about volunteering, the relationships that I've built with people on the board, and other volunteers who we have something in common that otherwise we probably wouldn't have interacted before. (BMA-03)

Beyond the bonding social capital that is created, these organizations have the potential to create bridging social capital as a result of collaboration and working together. The Yosemite Face Lift creates community around a shared passion for taking care of Yosemite and helps other user groups put themselves in each other's shoes.

> So, we can kind of all understand what every user group gets out of the park . . . If you can find a common ground and understand each person's joy for visiting the park, we might all get along a little bit better. (YFL-01)

Clearly, this is happening as relationships with land managers grow stronger and greater confidence in land managers emerges. Other forms of bridging social capital come from working

with local businesses in the area that sponsor and support the work of the organization. Organizations that do more with other user groups may experience stronger bridging social capital, whereas organizations such as BMA still have a long way to go within the greater community, as "mountain bikers are still portrayed negatively on the trail."

Other community level outcomes that were reported include economic benefits to the community and a sense of community empowerment. Moscow Mountain is a significant community asset that not only draws tourists to the town on the weekend; it is a reason that many people come to attend the local college.

> You hear it all the time, if the mountain wasn't there, I would not come here. So it does help recruit . . . and the tax base and money flow is higher. (MAMBA-01)

By working together on a shared project and goal, the community of individuals may experience a sense of empowerment and efficacy.

> There's a definite power to having so many people working together; you can see the results right away. It's amazing how happy people are. (YFL-01)

Summary

Cleary, the efforts of civic recreation groups result in significant positive outcomes extending into the community, environmental, and management domain. Echoed throughout the data is the sentiment that collaboration builds trust and increased capacity to manage recreational resources. In addition, recreational resources are either improved or increased, and certainly are more environmentally sustainable. And finally, as a result of these enhanced resources, human-powered outdoor recreation can be an important asset for the community, as a draw for tourism, economic growth, and overall quality of life. As this study is exploratory, these outcomes are neither exhaustive nor measured in a rigorous manner. Despite this, they help illuminate important areas for future research.

Discussion and Conclusions

Consistent with Krasny and Tidball's (2015) hypothesis, all of the cases reviewed in this chapter emerged either out of a threat to access or the vision of a social-ecological innovator. However, whereas civic ecology practices arise from some form of civic decline or environmental disaster and use urban stewardship to revitalize public spaces, civic recreation truly is more narrowly focused on the recreational resource itself. This distinction is evident in the missions and goals of the organizations. Many of the organizations reviewed in this chapter are voluntary or membership-based organizations with an expressed goal to provide a recreational resource and represent a particular user-group. In this manner, they serve an instrumental purpose to their members or supporters (Salamon and Anheire, 1997). However, some organizations express certain values and beliefs about recreation, such as the importance of conservation and stewardship or the role that recreation plays in improving quality of life and community vitality. In addition, while an organization is working to provide direct benefits to its members, they may also deliver benefits to the wider community. This is especially the case with mountain biking organizations that, out of being denied access to trails, work diligently to gain access and create and maintain a system of trails that are used by runners, hikers, and equestrians alike. Thus, civic recreation practices can serve the greater public good beyond their direct membership. In this way, civic recreation can be included within the civic environmentalism movement. Krasny and Tidball (2015) explain, "At its very core, civic renewal – and civic environmentalism – is about the citizen's role in the production of public goods, including community gardens, healthy streams, urban forests," and in the case of this research, recreational resources (p.11).

Common among all rock climbing, mountain biking, and trail-based organizations is a

focus on volunteer-based stewardship and collaboration with land managers. This strategy adds capacity to land managers while also providing tangible opportunities for members to get involved. Such practices are similar to civic stewardship efforts documented by Shandas and Messer (2008), Svendson and Campbell (2008) and Romolini et al. (2012), which point to hands-on stewardship as a primary strategy of locally-based grassroots organizations. In their work on civic stewardship, Fisher et al. (2012) define environmental stewards as "civic groups that conserve, manage, monitor, advocate for, and educate about a wide range of quality of life issues in urban areas" (p. 28). Civic recreation groups, while not always situated in an urban context, appear to fit into this definition. We might reword this definition to be more specific: civic recreation groups work to conserve, manage, monitor, advocate for, and educate about recreational resources. By emphasizing stewardship, these groups are positioning themselves as a positive force in the social-ecological system, providing a "value-add . . . where the intention is putting back or maintaining ecosystem structure, function, and/or services" rather than taking from and degrading the environment (Westphal et al., 2014, p. 3).

In terms of advocacy, some organizations spend the majority of their efforts on stewardship, choosing to not get involved in the planning or decision-making process, while other organizations work to have a seat at the table during the policy process. Notably, the cases that promote collaboration and dialogue tend to be more successful as these efforts build trust and break down barriers between land managers and the user group. Still, few organizations frequently collaborate across recreational user groups. This may be a result of feeling that different user groups do not share the same goals and interests, lack of time and capacity to collaborate, or a need to focus most on the organization's members over other user groups. Certainly, the ideal of a local and vibrant civic environmentalism is to promote a cooperative

culture, yet this is not always achieved in practice (Rothschild and Stephenson, 2009). Despite this, the human-powered recreation community should work toward collaboration across user groups and other interests, as this strategy may prove more effective. As one interviewee explained,

> We're going to be much more powerful and do much more if we can figure out how to get along. I think a collective voice is much stronger than a voice from one certain activity. I think if people want to do more of this grassroots type of project or event, the more different people that get involved, the more successful you're going to be. (YFL-01)

This need is recognized by the Outdoor Alliance, whose very purpose is to present a unified voice of the human-powered outdoor recreation community to policymakers. However, most of this is happening at the national policy level and such collaboration has yet to be a pillar of local civic recreation organization's strategies.

The most cited barriers that limit civic recreation organizations from achieving their goals were lack of capacity, land management structure or succession, local politics, and rogue recreationists. As civic recreation organizations tend to be 100% volunteer driven, it is not surprising that they face numerous challenges in terms of funding, administration, and volunteer management and retention. As Fisher et al. (2012) suggest, the longer these organizations exist, the more professionalized and secure they may become, thereby overcoming some of their financial and organizational challenges as they will be better at mobilizing resources and will have gained more credibility and legitimacy.

Certainly, land managers are key to the organization achieving its goals. If the land management structure is too burdensome to get involved or make any real changes, or if the land managers are biased toward one interpretation of the land use, organizations may continually struggle to gain headway. Similarly, it became clear that so much of the process, and reason for success, is built on relationships and trust, some of which take years to develop. If one person

leaves, these relationships are not written in policy or guidelines, and therefore the organization may find they have to start from zero.

Finally, local politics, user conflicts, and rogue recreationists stymie successful collaboration. As was identified in most cases, collaboration between different user groups is rare. In some cases, this creates a very contentious and inflammatory debate about how best to use the land. Lu and Schuett (2012) explain that user groups may be "positioned differently on a conservation continuum from preservation to balancing humans with nature. [While] these voluntary associations have some shared interests, [they] also represent different focus areas in environmental management" (p.343). When these interests are not adequately resolved and negotiated in the planning process, collaborative natural resource management fails to deliver on achieving local buy-in from all stakeholders. Furthermore, individuals who recreate and do not abide by the rules and etiquette of a particular area unfortunately create a bad reputation for the recreational user group in the eyes of the managers and other users, serving to perpetuate these user conflicts. Civic recreation organizations face challenges in educating and influencing these "rogue" recreationists while also potentially losing credibility due to their actions.

A number of important outcomes were identified from the data. Increased or improved local recreation opportunities are the primary outcomes of civic recreation activities. Civic recreation organizations not only work to gain access to or create a recreational resource, they also serve as important educators and watchdogs of the recreational-user group, promoting responsible recreation. Indeed, this is the common mission shared by these organizations, so it is not surprising that we would see this goal achieved. Alongside better recreation access, communities have experienced direct economic benefits and increased participation in recreation activities. Recreational resources are a category of ecosystem services and amenities that can add

economic value to a community and improve quality of life for its residents (Assessment, M.E., 2005; Shoup and Ewing, 2010). In addition to creating recreational amenities, other positive environmental outcomes have been observed as well. From localized environmental quality improvements to protection of plant and wildlife to land conservation, civic recreation practices may play a role in environmental conservation. These findings point to a robust area for future research.

Through the process of enhancing or improving recreational resources, many organizations' reported relationships with and trust in land managers had improved. Indeed, collaborative natural resource management is framed as a means to add capacity to land managers and improve buy-in and trust in management decisions (Weber, 2000; Schuett et al., 2001). In some instances, such trust and collaboration has led to various degrees of co-management, whereby the user-group takes part in managing their own use through sustainable trail building and maintenance, self-policing, wildlife monitoring, and managing infrastructure specific to the recreational-activity (e.g. bolting for climbers). It appears that the level of co-management depends on the willingness or ability of the land manger and level of trust between the user-group and land managers to hand over responsibilities.

Social capital and community capacity were also highlighted as an important outcome. As many of the organizations provide a sense of identity and social outlet through the recreational activity, ties within the user-group community was strengthened. While this appears to represent bonding social capital, it is possible that through recreation and involvement in civic recreation organizations, individuals form connections with people whom they would not normally interact. Consistent with Wagner and Fernandez-Gimenez (2008), social capital was also created or improved between the user group and land manager more so than with other user-

groups. This is most likely a result of the fact that collaboration among user-groups is not a primary strategy of these organizations and they tend to stick to their unique user-group issues and agenda.

Limitations

There are several important limitations of this research. First and foremost, the survey data is all self-reported, which is particularly important to note for the discussion of outcomes. While perceived outcomes are an important first step in understanding the benefits of civic recreation practices, future research should focus on quantifying the outcomes identified in this study. Secondly, importantly absent from the data are the voices of land managers and other partners involved with the organization or project were not interviewed. As such, the results present a more narrow understanding of civic recreation in practice and may be biased toward the values and beliefs of the organizations. Thirdly, this research did not look at unsuccessful cases. This decision was intentional so as to provide a replication design that provides a strong foundation to understand this new area of research. Future research should examine unsuccessful cases to further ascertain which strategies are most effective. Similarly, the case study design was not as precise or systematic in comparing for important variables such as land management structure, rural or urban location, scale, etc. Future studies might look only at organizations that work at a local scope with city or county land, or focus specifically on differences between types of land management structures. Finally, as this research was exploratory, it did not focus on systematically quantifying outcomes or establishing theory for why such outcomes may emerge. Future research should investigate these findings in more depth and advance our theoretical understanding of these dynamics.

CHAPTER IV: CIVIC RECREATION VOLUNTEERS' MOTIVATIONS AND OUTCOMES

All civic recreation organizations and projects examined in Chapter 3 rely on volunteers to accomplish their goals. Many of these organizations focus their efforts on stewardship projects, suggesting that volunteers most likely engage with such stewardship efforts. Understanding why individuals volunteer for these organizations and the outcomes they experience will help with recruitment, volunteer retention, and effective volunteer management. Additionally, volunteering is an important component to a strong civil society and is deeply ingrained in American democratic history (de Tocqueville, 2002; Habermas, 1981; Van Til, 1988; Arai, 2000). However, some suggest volunteerism for civic organizations is on the decline, eroding the social networks and institutions that promote a strong democracy (Putnam, 2000). Characterizing how individuals volunteer for civic recreation organizations may help describe a new form of volunteerism in America and add insight into the dynamics of civic engagement in the 21st century.

Furthermore, recreation-based volunteerism can have significant environmental benefits and therefore could be viewed as an act of environmental citizenship or pro-environmental behavior. More specifically, volunteer-based stewardship may be an expression of, or lead to, a stewardship ethic (Cafaro, 2001) and foster a closer connection to nature (Ryan, 2005) – important factors in addressing today's environmental problems (Leigh, 2005). Understanding how and why individuals volunteer for civic recreation organizations or projects may add to our understanding of environmental citizenship and pro-environmental behaviors generally. Thus,

the objectives of this chapter are to characterize recreation-based volunteerism – describe how individuals volunteer, what their motivations are, and the outcomes they report.

Literature

Volunteer Motivations

Research on volunteer motivations contend individuals volunteer to satisfy certain functional needs; though individuals engage in the same behavior of volunteerism, underlying motivations may differ between them. This functionalist approach to volunteering is most prominently advanced by Clary et al. (1998) who identified six categories of volunteer motivations in their Volunteer Functions Inventory (VFI). These include: 1) Values - expressing and acting on one's values; 2) Understanding – seeking to learn more about the world or themselves; 3) Enhancement – seeking personal growth; 4) Career – gaining career experience or opportunities; 5) Social – strengthening social ties; and 6) Protective – using volunteering to reduce negative feelings such as guilt, or address personal problems. While this body of work stems mostly from community, social, and health services, it has offered a "springboard for many studies of environmental stewards' motivations" (Krasny et al., 2014, p. 17). However, the motivations of environmental volunteers, specifically hands on stewardship or restoration work, may differ from general volunteering as their work is more tangible and involves significant learning (Bramston et al., 2011).

While studies are limited, research on environmental volunteering suggests there is a strong altruistic desire to help the environment and express one's values toward the environment (Grese et al., 2000; Ryan et al., 2001). Beyond acting upon environmental values, environmental volunteers are motivated for other reasons that satisfy other functional needs. Other motivations may include gaining a sense of satisfaction from tangibly improving the environment, socializing

and being part of a community, learning about the natural world, and gaining time for personal reflection (Kaplan, 2000; Grese et al., 2000; Ryan et al., 2001; Gooch, 2003; Bruyere and Rappe, 2007; Bramston et al., 2011; Lu and Schuett, 2014).

Recognizing that environmental stewards may be motivated by sense of place, social-ecological memories, and biophilic affinity, Krasny et al. (2014) explored these dimensions through a study of oyster gardeners in a New York City estuary. Importantly, their findings conclude, "memories and meanings gained through personal experience and stories, which integrate social and ecological features of a place to which one becomes attached, may be important factors in decisions to direct one's volunteer efforts towards specific environmental stewardship efforts. Other factors may include witnessing the decline of places to which one is attached, as well as biophilic fascination with a particular species" (p. 24). These findings are consistent with an earlier study by Gooch (2003) who concluded volunteers were motivated by their sense of place, which was further strengthened through their volunteer activities. These conclusions urge researchers and practitioners to consider sense of place and affinity toward nature in their typology of volunteer motivations.

Individuals who engage with recreation-based volunteerism are likely participating in stewardship efforts that positively impact the environment, making them part of the growing community of environmental volunteers. However, research on the connection between outdoor recreation and pro-environmental values indicates a weak positive relationship at best (Teisl and O'Brien, 2003; Berns and Simpson, 2009). Thus, this begs the question of whether people are volunteering for similar reasons as environmental volunteers or to satisfy other functional needs?

Lu and Schuett (2014) published one of the few papers on recreation-based volunteer motivations. Their study of six outdoor recreation voluntary associations in Texas hypothesized

that enduring involvement - the extent that participating in a voluntary organizations is incorporated into an individuals' identity also plays a role in volunteer motivation and engagement. Using exploratory and confirmatory factor analysis, they identified six factors for volunteer motivation: learning, civic engagement, resource mobilization, social networking, self-enhancement, and material benefits. Their findings indicated that enduring involvement "fully mediated the relationship between membership motivation and volunteer experience. Members that are motivated to join ORVAs for social networking, civic engagement, and self-enhancement reasons had more volunteer experience through enhanced enduring involvement levels" (p. 68). This finding suggests that there may be something particular to recreation-based volunteer organizations, as recreation-based groups are often places to develop strong relationships and a robust social life.

In addition, Lu and Schuett's (2014) findings shed light on the distinction between initial volunteer involvement and the degree or duration of involvement. Ryan et al. (2001) and Asah et al. (2012) reached similar conclusions, identifying environmental reasons as a highly ranked initial motivator, but not a significant predictor of continued volunteerism; rather, personal, social, and organizational factors play an important role in predicting volunteer frequency and continued involvement. Ryan et al. (2001) conclude from these findings that an individual's motivations may change during "different stages of their participation," which should be considered when designing volunteer programs (p. 629).

In short, applying a functionalist approach to understanding recreation-based volunteerism may help explain the various reasons that individuals choose to become volunteers. However, other research on environmental volunteerism and recreation-based volunteerism urges us to consider additional factors such as sense of place, connection to nature, and enduring

involvement. Furthermore, it is important to explore whether there is a difference between volunteer motivations and actual volunteer behavior (Asah et al., 2012).

Volunteer Outcomes

While recreationists may not be motivated by the same environmental values as environmental volunteers, we might expect that spending time in nature, developing an attachment to their volunteer place, and seeing the rewards of their efforts may result in similar outcomes. As a result of volunteering, individuals have reported several important outcomes associated with their participation. By spending time in nature, individuals may experience enhanced human health and well-being (Hartig et al., 1991; Kaplan, 1995; Zelenski and Nisbet, 2014) and develop a strong connection or attachment to place (Gooch, 2003; Ryan, 2005; Krasny et al., 2014). As the result of stewardship efforts are very tangible, this may improve one's feelings of efficacy as they can see a transformation over time as a result of their actions (Ryan, 2005) and expand personal learning about the environment (Bramston et al, 2011). In addition, volunteering can build advocates for the environment and environmental citizenship by fostering environmentally sustainable attitudes (Grese et al., 2001) or environmental consciousness (Shandas and Messer, 2008), and increase political engagement (Wilson, 2000; Wheaton, 2007). Such outcomes contribute to a positive feedback cycle whereby volunteers experiencing beneficial outcomes become more motivated to continue volunteering. Beyond the individual level outcomes, the act of working together facilitates social learning (Latta, 2007) and increases trust between participants or within the community (Wagner and Fernandez-Gimenez, 2008; Mann and Leahy, 2010), which can strengthen social capital, feelings of collective efficacy (Bandura, 2000) and community capacity.

Research Questions

Literature on volunteering presents many dimensions of volunteer motivations ranging from a desire to make a difference and express one's personal values to gaining important skills or resources that will help one succeed in their personal or professional pursuits. Among environmental stewardship volunteers, expressing one's environmental values and making a difference rank highest as a motivation for volunteering. Additionally, within the environmental values dimension, there may be specific factors associated with sense of place and biophilia that have received less attention by scholars in terms of volunteer motivations, suggesting an interesting area of research. Furthermore, there appears to be a difference between an individual's initial motivation to volunteer and their continued involvement with volunteering. Thus, it is important to consider these differences in understanding volunteer motivations and behavior.

Through environmental stewardship and volunteering, individuals may experience a host of positive outcomes. These benefits range from improved health and wellness, developing a stronger connection to place and nature, and expanding one's sense of efficacy and personal knowledge. Beyond the individual level, volunteering can create social capital, social learning, and increase community capacity to address environmental issues.

Despite the rise in recreation-based voluntary associations participating in natural resource management (Weber, 2000), little research has looked at the activities of these groups, their role in natural resource management, or why individuals volunteer (Lu and Schuett, 2014). It is also unclear whether civic recreation volunteers see themselves as environmental volunteers and are therefore motivated by similar reasons as environmental volunteers or experience similar outcomes. Thus, exploring how individuals engage in recreation-based volunteerism and the factors that influence an individual’s motivation to participate can further our understanding of

the relationship between outdoor recreation and environmentalism. Through a survey of the human-powered outdoor recreation community combined with interviews with volunteer leaders of recreation-based organizations, this chapter seeks to describe the forms of volunteerism that outdoor recreationists participate in and the underlying motivations of these volunteers. This study seeks to answer the following research question:

***RQ2a**. How do individuals engage in recreation-based volunteerism?*

> ***RQ2a.1** What activities are most common and are there differences among different types of recreationists?*

***RQ2b.** What motivates individuals to volunteer with civic recreation organizations?*

> ***RQ2b.1** Do these factors differ between types of recreationists or demographic characteristics?*

***RQ2c.** Are there certain characteristics, values, or motivations that predict higher levels of volunteer engagement?*

***RQ2d.** What outcomes do individuals experience from participation in recreation-based volunteerism?*

Methods

This study employs a survey using the Tailored Design Method (Dillman et al., 2009) of outdoor recreationists affiliated with the Outdoor Alliance, a national advocacy organization representing the "human-powered" outdoor recreation community complimented with qualitative data from interviews with participants in local civic recreation organizations. Qualitative data from semi-structured interviews serve to expand upon and provide more explanation to survey responses, though they do not comprise the majority of the findings.

Semi-structured Interviews

First, to better understand why individuals volunteer for civic recreation organizations, I conducted semi-structured interviews (Rubin and Rubin, 2012) with executive or management staff of the Outdoor Alliance, Access Fund, and International Mountain Biking Organization as well as 13 key volunteers of local civic recreation organizations. Inclusion criteria for subject selection was based on adults (over the age of 18) actively engaged in recreation-based stewardship through their official professional or volunteer status and were often individuals who held a leadership position within these groups. Names were obtained from contact information on an organization's website and through a snowball sampling procedure. Specific characteristics about the interviewees were presented in Chapter 2, Table 2.2. Interview respondents were asked about their own personal reasons for volunteering and what they experienced as a result of their participation, as well as why they perceived others volunteering. The specific interview protocol can be found in Appendix A and B. Interviews were recorded and transcribed verbatim. Interviews were analyzed using the categories derived from the survey analysis, described below.

Survey of Individual Recreationists

Initial findings from the interviews, combined with the literature, served in the development of a survey implemented to individual recreationists, disseminated online in the spring of 2015. Once the survey was developed, it was piloted with twenty individuals through an online platform to ensure that participants understood the questions they were being asked and that the survey instrument flowed in a logical fashion. These twenty individuals were identified by through previous interviews and directly targeted to take the pilot survey. After the pilot survey was vetted, it was administered through the social media networks of the Outdoor

Alliance, Access Fund, and International Mountain Biking Association. Ideally, I would have liked to disseminate the survey to the membership of these organizations, ensuring a known sampling frame. However, they were wary and protective of their member lists and did not want to violate their member's email and privacy, which is common concern among membership-based organizations. As such, the survey was distributed through social media, newsletters, and other communication channels within each organization in collaboration with the Communications Director of the Outdoor Alliance. While all of these individuals were in some way connected to the Outdoor Alliance, their level of engagement and participation with civic recreation practices varied significantly, enabling an investigation into the variables and interactions that predict volunteerism and the outcomes that ensue. Thus, this survey research can provide a complimentary method to qualitative interviews in exploring these relationships and establishing more empirical and generalizable support for the findings.

Survey Instrument

The survey instrument consisted of eighty-five questions grouped in the following categories. More description of the category and its measurement will be explained below.

- *Level and type of participation in outdoor recreation activities*
- *Membership and level and type of volunteer participation with civic recreation organizations*
- *Questions about individual's motivations to volunteer*
- *Questions about what volunteers gained from their volunteer experience*
- *Questions about sense of place*
- *Questions about environmental values and behaviors*
- *General demographic information*

Measurement

Volunteer motivations. This study adapted volunteer motivations from Clary and Snyder's (1998) Volunteer Functions Inventory and Lu and Schuett's (2014) study of volunteer engagement in recreation-based voluntary associations. Clary and Snyder (1998) outlined six overarching categories of volunteer motivations, described above: 1) Values; 2) Understanding; 3) Enhancement; 4) Career; 5) Social; and 6) Protective. Lu and Schuett (2014) added to these categories, suggesting that enduring involvement – the degree to which involvement in the organization and volunteering is part of an individuals' self-identity – was also a factor in volunteer motivations. They also included resource mobilization theory (McCarthy and Zald, 1977) and material benefits in their theory of volunteer motivations. Table 4.1 illustrates the variables that were explored in the survey.

Table 4.1 Constructs for volunteer motivations

Construct	Definition	Example Survey Item
Learning Opportunity	"Opportunities that membership provides for individuals to learn new things such as outdoor skills and knowledge about plants/animals" (Lu and Schuett, 2014, p.75)	I want to learn more about the natural environment I volunteer with my organization because I can obtain new knowledge through direct, hands-on experience I volunteer with my organization because I can learn how to work effectively with others
Civic Engagement	″Focuses on the motivation to preserve and improve recreation and environmental quality through civic participation" (Lu and Schuett, 2014, p.75)	I volunteer with my organization because I feel compassion toward environmental problems. I volunteer with my organization because it improves the quality outdoor recreation resource I volunteer with my organization because I want to give back to the places where I recreate
Resource Mobilization	″Motives for helping the organization with its goals" (Lu and Schuett, 2014, p.75)	I volunteer with my organization because I can support the group's efforts to influence government action on environmental/outdoor recreation problem. I volunteer with my organization because if the group achieves its goals, my life and my children's lives will benefit
Social	"Volunteering allows an individual to strengthen his or her social relationships (Clary and Snyder, 1998, p. 157). "Social benefits of group membership" (Lu and Schuett, 2014, p. 75)	People I am close to encourage me to volunteer I volunteer with my organization to meet new people Volunteering allows me to work with good leaders
Self-enhancement	"Motives to obtain satisfaction, personal growth, and enhance self-esteem" (Lu and Schuett, 2014, p. 75).	I volunteer with my organization because it makes me feel positive to contribute to a bigger cause
Career	"The volunteer has the goal of gaining career-related experience through volunteering" (Clary and Snyder, 1998, p. 157)	Volunteering will help me to succeed in my business or career
Enduring Involvement (3 sub-dimensions: Centrality, Attraction, Self-Expression) Centrality Attraction Self-Expression	Enduring involvement describes cognitive linkage between individual and object (e.g. self-concept based on it). Leisure theorists suggest enduring involvement strongly contributes to motivating recreation behavior and possible volunteering (Havitz & Howard, 1995; Burkes & Stets, 1999). Lu and Schuett (2014) proposed enduring involvement is moderator for volunteer experience in voluntary recreation organizations. They used McIntyre's (1989) scale to measure this construct, comprised of attraction, centrality, and self-expression. Refers to the centrality of the group within the context of members' overall lifestyle (Lu and Schuett, 2014, p. 75) Consists of items related to the importance of the organization and the pleasure derived through group membership (Lu and Schuett, 2014, p. 75) Corresponds to the symbolic value that individuals wish to convey to others through their group membership (Lu and Schuett, 2014, p. 75)	I find a lot of my life is organized around volunteering for this organization. Volunteering for this organization is one of the most important things that I do Volunteering for this organization says a lot about who I am.

Volunteer outcomes. Based on the literature, outcomes from volunteering may include increased social capital, a greater feeling of self-efficacy or willingness to act, connection to nature and/or place, learning, increased political or civic participation, and greater collective efficacy. Table 4.2 outlines the constructs and associated items used to assess volunteer outcomes in this study.

Table 4.2 Constructs for volunteer outcomes

Construct	Definition	Example Item
Social Capital	Social capital encompasses "formal and informal human networks, cultural and behavioral practices, and trust in societal systems, all of which facilitate the coordination and sharing of cultural, social, and natural resources for mutual benefit" (Jordan et al., 2011, p. 308).	I feel that I trust my community more I feel more connected to people with whom I would not normally interact with In general, I have more confidence in the decisions that the local land managers make
Self-efficacy and Locus of Control	Self-efficacy is the degree to which people feel empowered to take action (Bandura, 1986). Locus of control is the degree an individual places on themselves or others to act. Kollmus and Agyeman (2002) assert, "people with a strong internal locus of control believe that their actions can bring about change. People with an external locus of control, on the other hand, feel that their actions are insignificant, and feel that change can only be brought about by powerful others . . . People with a greater sense of personal responsibility are more likely to have engaged in environmentally responsible behavior" (p.243).	I feel that I have made a positive impact on my environment I feel that I am capable of making continued positive change
Connection to nature and place	Gooch (2003) and Ryan (2005) found an increased connection to place through environmental stewardship.	I feel more connected to the natural world I feel more connected to the places that I have volunteered
Enhanced Learning	Bramston et al., (2011).	I have learned more about the natural environment I have gained more hands-on experience and skills I have learned more about working with other people
Political/Civic Engagement	Studies suggest that volunteering can lead to increased civic action (Wilson, 2000; Wheaton, 2007)	I have become more active in politics I have become involved in other volunteer-based or civic organizations
Collective Efficacy	The degree to which a community perceives their ability to affect change (Bandura, 2000).	I feel that my community is stronger I feel that my community can better address local environmental problems

Sense of place. Simply, sense of place refers to the meanings one imbues on a physical space (Tuan, 1977). However, within the literature, there are myriad sub-dimensions of sense of place that have yet to be uniformly adopted by scholars (Stedman, 2002). Within the field of social psychology, sense of place is a combination of symbolic meanings, attachment, and satisfaction of a particular space, which can be broken down into place identity, place attachment, and place dependence (Stedman, 2002; Jorgensen and Stedman, 2006). This is the definition used in the present study. Questions were adapted from Jorgensen and Stedman (2006) and Payton et al. (2005). For example, a question for place identity in the survey is: "I feel that the places I recreate the most often are a part of me." A question related to place dependence is: "The places I recreate the most often are the best places for doing my recreational activity."

However, the results of a scale reliability test of these distinct sub-constructs indicated that they did not have high internal correlation. As a result of this scale reliability analysis, I chose to use the broader sense of place construct as one scale. Following this analysis, a principal component analysis using a Direct Obliman rotation was completed to reveal the dimensionality of the construct. One item stood out as separate from all the others – "the places I recreate most often are the most convenient places to recreate." This item was included as an alternative explanation to sense of place and was not an item from the literature. This item was removed in the final sense of place scale, resulting in seven items within the final scale with a Cronbach's alpha of 0.78.

Connection to nature and nature relatedness. Much attention in the environmental psychology and the environmental education literature has been directed toward reconnecting people with their environment and the influence such a connection has on environmental values and actions (Chawla, 1998; Nisbet et al., 2009; Louv, 2008). This field of scholarship focuses on

the emotional or affective elements of environmental values and behaviors. Elements of this domain have been explored by Chawla (1998) in her work on environmental sensitivity, Kals et al. (1999) in their work on emotional affinity to nature, Nisbet et al.'s (2009) nature relatedness scale, and Louv's (2008) nature deficit disorder hypothesis. Mayer and Franz (2004), who developed the connectedness to nature scale, explain, "A general perspective of this work, then, is that if people feel connected to nature, then they will be less likely to harm it, for harming it would in essence be harming their very self" (Mayer and Franz, p.512). Nisbet et al. (2009) propose the nature relatedness construct to expand on this previous work, arguing that their scale is more inclusive than previous measures and captures multi-dimensionality of the combined emotional, cognitive, and physical aspects of humans' connection to nature. This is the scale used in the present research and items were directly adopted from an established scale in the literature (Nisbet et al., 2009). Survey questions include elements of identity - "My relationship to nature is an important part of who I am," - environmental concern - "I always think about how my actions affect the environment, - emotions - "The thought of being deep in the woods, away from civilization, is frightening, - and environmental worldview - "Conservation is unnecessary because nature is strong enough to recover from any human impact." A reliability analysis confirmed that this scale is internally consistent and therefore valid for measuring nature relatedness (alpha=.78). The scale is a composite of nine items, three of which were negatively worded and recoded in the analysis.

Level of volunteer engagement. Respondents were asked to indicate which types of volunteering efforts they had engaged in over the past year. This included volunteering on the Board of Directors, participating in stewardship work, organizing an event, engaging in advocacy work for the organization, or volunteering generally. An index was then created by

summing all of the potential forms of volunteering, with Board of Directors being given double weight due to the significant time commitment and investment from the individual.

Level of outdoor recreation. Two variables were created as a measure of outdoor recreation engagement: years spent recreating and number of activities the respondent participated in. These two variables were kept separate rather than combined into an index so as to observe whether there were differences between the two measures. It should be noted that neither of these measures capture the importance of outdoor recreation in a person's life, or the intensity or frequency with which they recreate. These could be important dimensions of outdoor recreation engagement that should be included in future studies.

About the Survey Respondents

Table 4.3 provides demographics on the survey respondents. Survey respondents were overwhelmingly white (85%) and male (65%), mostly between 26 years and 55 years old, high income, well educated, with over half holding a college degree or higher, and vote predominantly Democrat or independent. These demographics are similar to official statistics on membership provided by the Outdoor Alliance (mean age=47, mean annual income=$81,700, and predominantly progressive[6]). This suggests that, although the survey was distributed using non-probability sampling, it is still representative of the membership of the Outdoor Alliance demographically. It should be highlighted that not every respondent filled out demographic information. This is particularly prevalent for the age category, which is believed to be because of an error in survey design. Rather than including a multiple choice selection, respondents were asked to write down their age, which may have led to many respondents skipping this question.

[6] The Outdoor Alliance does not measure political affiliation as categories; rather, it is measured on a continuum from progressive to conservative.

This issue presents several challenges in the analysis below, which will be addressed in each type of analysis.

Table 4.3 Demographic characteristics of survey respondents

Variable	Categories of Response								Total
Age	18-25	26-35	36-45	46-55	56-65	66-75	Missing		
	4.9%	16.9%	22.5%	14.8%	7.3%	1.5%	32.3%		
	(23)	(81)	(108)	(71)	(35)	(7)	(155)		(325)
Gender	Male	Female	Prefer Not to Respond						
	68%	29%	2%						
	(326)	(136)	(9)						(471)
Race	A. Indian or Alaskan Native	Black or African American	Asian	Native Hawaiian or Pacific Islander	White	Other	Two or More Races	Prefer not to Respond	
	.2%	.2%	.6%	.6%	85.4%	2.3%	3.8%	4.4%	
	(1)	(1)	(3)	(3)	(410)	(11)	(18)	(21)	(468)
Level of Edu.	High School	Some college	Two-year degree	Four-year degree	Masters degree	Terminal degree			
	2.5%	11.7%	7.1%	37.7%	29.2%	10%			
	(12)	(56)	(34)	(181)	(140)	(48)			(471)
Annual Income	Less than $35,000	$35,000-$41,999	$42,000-$51,999	$52,000-$58,999	$59,000-$74,999	$75,000-$100,000	$100,000 - $150,000	Over $150,000	
	13.1%	3.8%	6.5%	3.1%	9.2%	15.8%	21.9%	14.6%	
	(63)	(18)	(31)	(15)	(44)	(76)	(105)	(70)	(422)
Work Status	Work full-time	Work part-time	Un-employd	Retired					
	73.3%	14.2%	3.5%	6%					
	(352)	(68)	(17)	(29)					(466)
Leisure Time	Less than 5 hrs/week	5-10 hrs/week	10-15 hrs/week	< 2 days/ week					
	5.6%	30%	32.1%	30.4%					
	(27)	(144)	(154)	(146)					(471)
Political Aff.	Rep.	Dem.	Libert-arian	Green Party	Indep.	Other			
	9.8%	38.5%	6.3%	4.6%	26.7%	10			
	(47)	(185)	(30)	(22)	(128)	(48)			(460)
Region	N. East	Midwest	South	West	Internat'l				
	9.9%	12.7%	19.7%	54.9%	2.8%				
	(46)	(59)	(92)	(256)	(13)				(466)

Primary type of recreational activity. Respondents were asked to identify which activities they participated in and, if they participate in more than one, which activity was most important to them. Respondents participated in up to six different activities, with most participating in between two to three. When asked to rank their most important recreational activity, most respondents did not have one activity that they ranked over another, and were

therefore labeled a multi-user (44%). Following this large category, in order of ranked importance, are mountain bikers (32%), rock climbers (8%), trail users (8%), fresh water boaters (4%), backcountry winter sports (2%), and an "other" category (1.5%) which consisted of activities ranging from equestrian, fishing/hunting, swimming, and unspecified. It is important to note that, due to the large number of respondents within the multi-user category, the analysis is more limited when attempting to understand differences between recreational activities.

Results

Drawing from survey data, this section describes how individuals engage in recreation-based volunteerism to provide an overview of the types and frequency of volunteer activities individuals participate in by user group. Specifically, this section attempts to answer RQ2a.

RQ2a. *How do individuals engage in recreation-based volunteerism?*

> ***RQ2a.1*** *What activities are most common and are there differences among different types of recreationists?*

Level and Modes of Volunteer Engagement

When asked whether participants had volunteered for an organization in the last year, 66% reported volunteering. However, reporting yes or no about volunteering does not illuminate the different levels of volunteer engagement. Figure 4.1 illustrates the level of volunteer engagement, a variable that was created by summing all of the possible ways to volunteer, weighting certain volunteer activities such as serving on the Board of Directors, more heavily.

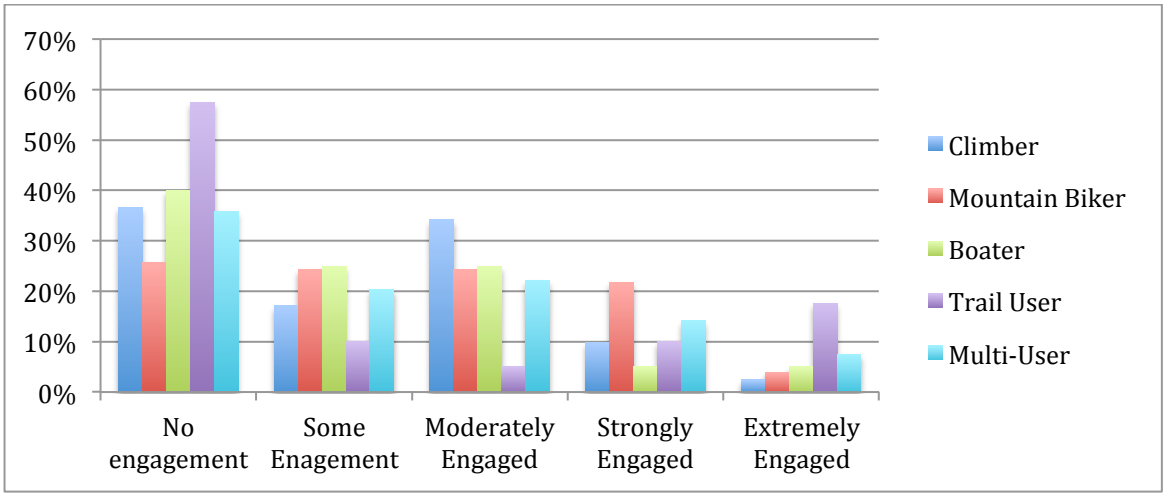


Figure 4.1 Level of volunteer engagement by user group (% sample)

Figure 4.2 below illustrates the type of volunteer activities, by user group, that respondents reported participating in. The multi-user category is not included in this analysis, as the survey was designed to ask respondents whether they had participated in any of the stated activities for the following user groups: mountain biking, boating, rock climbing, and hiking. Stewardship was highest for the mountain biking, rock climbing, and trail categories, while advocacy was highest for the backcountry winter sports groups. General forms of volunteering and advocacy were highest for the boating communities.

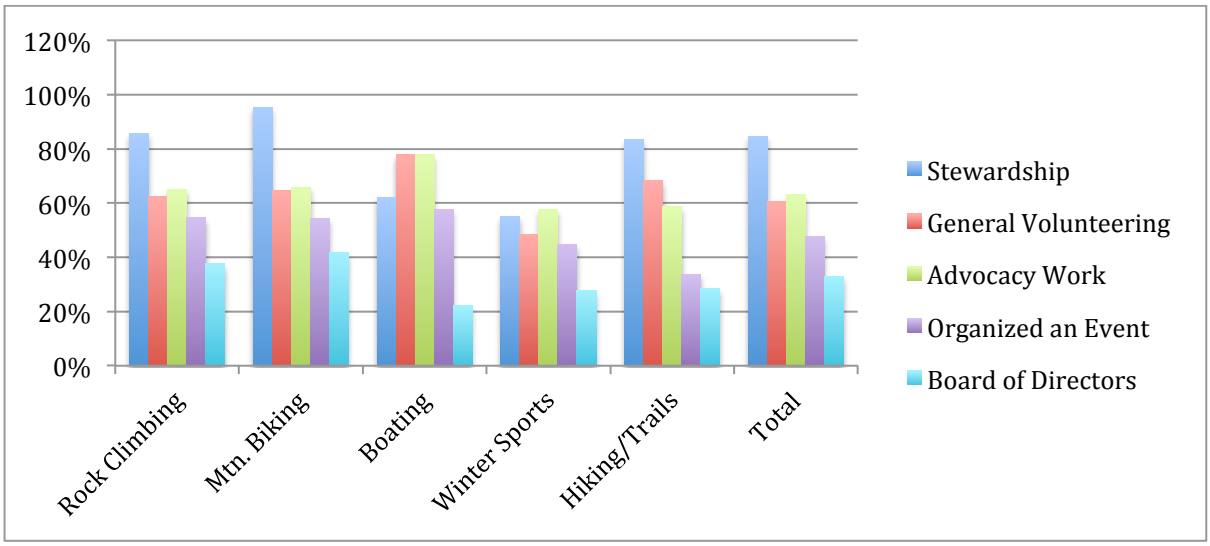


Figure 4.2 Type of volunteering reported by user group (% sample)

If the respondent indicated that they participated in stewardship work, they were asked more specifically what the nature of that work was. Figure 4.3 below displays the frequency, by user group, of different stewardship activities. Chi-squared tests of association resulted in statistically significant differences between user groups within trail building (X^2=29.2, df=5, p>.00) and managing human waste (X^2=22.75, df=5, p>.00). Trash removal was ranked very high among all user groups. Trail building was ranked very high for the rock climbing and mountain biking groups, whereas other forms of stewardship such as ecological restoration and controlling invasive species followed as the second most popular among boaters and backcountry winter sports. It is notable that 100% of mountain bikers who participate in stewardship selected trail building as the primary type of stewardship work. This is not surprising, as many of the mountain bike organizations reviewed in Chapter 3 devote the majority of their effort to trail building and maintenance.

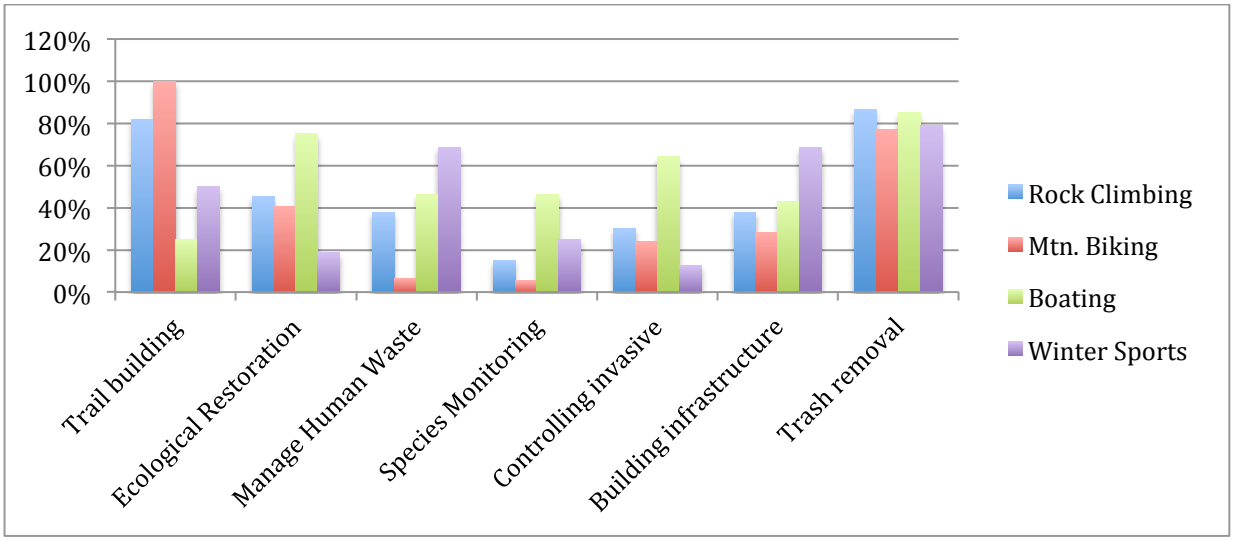


Figure 4.3 Type of stewardship work reported by user group (% sample)

Summary

Individuals who responded to the survey on average participate in two to three recreation activities. Multi-users, mountain bikers, and rock climbers represent the highest percentage of respondents in the sample, respectively. Over half (66%) of respondents reported volunteering in some capacity, with stewardship representing the most common form of volunteer engagement, especially within the mountain biking, rock climbing, and trail-based user groups. Trail building and trash removal represent the majority of the types of stewardship these individuals engage in. Given the data, it is clear that recreation-based volunteerism shares many similarities with environmental volunteerism, particularly community-based environmental stewardship. This is an important finding that will be discussed further in the chapter.

Motivations of Volunteer Participation

This section outlines individuals' motivations for volunteering, ascertained from survey and interview responses. Additionally, this section attempts to understand if there are differences between user groups or demographics. Specifically, this section answers RQ2b.

RQ2b. *What motivates individuals to volunteer with civic recreation organizations?*

> ***RQ2b.1*** *Do these factors differ between types of recreationists or demographic characteristics?*

Survey Findings

While the survey instrument outlined specific constructs that influence volunteer motivations that were informed by the literature, initial inter-item reliability tests suggested weak internal consistency with some constructs, particularly resource mobilization (a=.53) and social networking (a=.63). In addition, some constructs only had one item associated with it, making it difficult to determine whether the theoretical construct was truly being measured and to establish a reliable scale. As such, principal component analysis (PCA) was conducted to better

understand the underlying dimensions of volunteer motivations. The initial PCA identified six components with eigenvalues greater than 1, explaining 64% of the total variance. The associated scree plot verified this conclusion, although one factor stood out as explaining 36% of the variance. Following the initial PCA, a direct oblimin rotation with Kaiser normalization was applied followed by a quartimax rotation. Both yielded similar but slightly different results. Consistent across all of the analysis was that one item, "recreation-based organizations are not very effective at influencing environmental and recreation issues," was separate from all of the other components. This item, meant as a negatively worded item, was removed from the analysis. Another item, "It makes me feel positive to contribute to a bigger cause" loaded equally onto two factors, and was therefore removed from the scale.

Table 4.4 illustrates the results of the final PCA analysis using the results of the direct oblimin rotation after the above items were removed. This solution identified six factors with eigenvalues greater than 1, explaining 69% of the total variance. I applied a .30 factor loading cutoff when interpreting the results. It is clear that most items only loaded onto one factor; when this was not the case, the item was assigned to the factor that made the most conceptual sense or the item was dropped. Table 4.5 also shows the alpha scores associated with each factor. An item "I volunteer because I feel obligated as an outdoor recreator" did not load well onto any factor and was therefore removed into its own category of "obligation." This is not surprising, as this item was introduced as a suggestion of pilot respondents and did not come from the literature.

	Factor						Alpha
	1	2	3	4	5	6	
FACTOR 1: CIVIC ENGAGEMENT[7]							.83
It improves the quality of the recreational resource	.79	-	-	-	-	-	
I want to give back to the places where I recreate	.71	-	-	-	-	-	
I volunteer more frequently in the places I recreate most often	.73	-	-	-	-	-	
If the organization achieves its goals, my life and children's lives will benefit	.50	-	-	-	0.35	-	
I can support the organization's efforts to influence government action on environmental and recreation issues	.50	-	-	-	-.31	-	
FACTOR 2: LEARNING AND SELF-ENHANCEMENT							.86
I want to learn more about the natural environment	-	.73	-	-	-	-	
I can obtain new knowledge through direct, hands-on experience	-	.82	-	-	-	-	
I can learn how to work effectively with others	-	.83	-	-	-	-	
I want to meet new people	-	.74	-	-	-	-	
I want to work with good leaders	-	.80	-	-	-	-	
FACTOR 3: INDENTITY AND ENDURING INVOLVEMENT							.85
Volunteering for this organization is one of the most rewarding things I do	-	-	.81	-	-	-	
Volunteering for this organization says a lot about who I am	-	-	.79	-	-	-	
When I participate with this organization, I can really be myself	-	-	.70	-	-	-	
I find that a lot of my life is organized around volunteering for this organization	-	-	.89	-	-	-	
FACTOR 4: SOCIAL AND CAREER NETWORKING							.72
People I am close to encourage me to volunteer	-	-	-	.74	-	-	
I have made connections with people that are useful to me in my life	-	-	.36	.54	-	-	
Volunteering will help me to succeed in my business or career	-	-	-	.82	-	-	
FACTOR 5: ENVIRONMENTAL VALUES							.84
I feel compassionate about environmental problems	-	-	-	-	-.67	-	
I want to mitigate my personal impact in the places where I recreate	-	-	-	-	-.88	-	
I want to offset my personal impact on the environment generally	-	-	-	-	-.87	-	

Table 4.4 Principal component analysis factor loadings of volunteer motivations using direct oblimin rotation

Table 4.5 shows the descriptive statistics for these volunteer motivations in order of highest to lowest. Volunteers felt most motivated by a sense of civic responsibility (mean=6.36),

[7] The first factor, Civic Engagement, appeared to be pointing to two related constructs identified by the literature: connection to place and civic engagement. As such, I considered breaking this factor into two constructs. Scale reliability analysis yielded alphas of .71 and .69 respectively for the two constructs, which was lower than the .83 when all items were combined. Therefore, I determined to keep the factor intact.

followed by environmental values (mean=5.98), learning opportunity and self-enhancement (5.43), identity and enduring involvement (4.92), and obligation (mean=4.7). These results are significantly negatively skewed, possibly a result of a ceiling effect within the scales, meaning all respondents were motivated to some degree by these factors and the likert scale was unable to differentiate differences between individuals in the higher end of the construct.

Table 4.5 Descriptive statistics for volunteer motivations

Construct	Mean*	Std. Deviation
Civic Responsibility	6.36 (299)	.74
Environmental Values	5.98 (308)	1.14
Learning Opportunity and Self-Enhancement	5.43 (305)	1.08
Identity and Enduring Involvement	4.92 (307)	1.24
Obligation	4.70 (311)	1.65
Social and Career Networking	4.60 (301)	1.25

* Scale based on 1-7, 1=Strongly Disagree, 7=Strongly Agree

From this survey analysis, we can glean that civic recreation volunteers are motivated out of similar reasons than other types of volunteers explored in previous literature. Indeed, the desire to give back to the community, express values and beliefs about the environment, and improve one's skills and social networks is similar to previous findings of volunteer motivations generally. Consistent with Lu and Schuett's (2014) study on recreation-based volunteers, civic engagement was the highest-ranked motivator for all user groups. Recall that civic engagement is defined as "the motivation to preserve and improve recreation and environmental quality through civic participation" (Lu and Schuett, 2014, p.75). This result indicates individuals share similar

goals as the organizations they volunteer for to create, preserve, and enhance recreational resources, and believe that volunteering will help achieve these goals.

Additionally, environmental values were ranked as one of the highest motivators for civic recreation volunteers, consistent with much of the literature on environmental volunteers (Bruyere and Rappe, 2007; Bramston et al., 2011). This suggests civic recreation volunteers may possess strong pro-environmental values, adding an interesting dimension to the literature on outdoor recreation and environmental values generally. While it remains unclear whether these individuals developed their pro-environmental values through outdoor recreation, or another avenue in their life, there clearly is an association between outdoor recreation, environmental values, and volunteerism.

Interview Findings

Qualitative data from interviews support the categories presented in the survey analysis and deepen our understanding of the dimensions of volunteer motivations and how and why they act as motivators. However, there are several differences between the survey data and interview data. Importantly, interview respondents introduced self-interest as a motivator, a category that was not detected in the survey likely because it was not used to develop the survey questions. Additionally, the frequency with which interview respondents spoke about their motivations does not match perfectly with how they were ranked by survey respondents. This is likely due to the small sample size of interviewees and the type of volunteer work they engage in related to their specific leadership role with the organization.

Interviewees were asked why they got involved with the organization and why they thought other people got involved with the organization. Qualitative data were coded using the categories from the survey analysis and summary data are presented in Table 4.6. Through the

coding process, additional sub-codes emerged within each category. The civic responsibility dimension appeared most frequently in the interviews, consistent with it being ranked as the strongest motivator in the survey analysis. This category covers everything from wanting to work to improve the recreational resource, which includes a self-interested dimension, giving back to a community that has brought them a lot of joy and satisfaction, and ensuring the recreational resource would be available for future generations. Participants also talked at length about the rewards of building something, making a tangible impact or being interested in the work that the organization was doing, which falls into the category of learning and self-enhancement. Some participants mentioned identity and enduring involvement, referencing either their own motivations or those of the volunteers they interacted with in their organization. Several respondents referred to themselves as being a volunteer-oriented person who has always volunteered and feels compelled to be part of a volunteer organization. In addition, respondents mentioned a particular type of volunteer, "super-volunteers," who are a sub-group within the organization who want something to do, want a sense of community, and are looking for a cause bigger than themselves to care about. This group culture and identity is something that people find really valuable. Fewer respondents mentioned environmental values, a surprise given that survey respondents ranked it as the second most important motivator, and social and career networking as a motivation for volunteering.

Table 4.6 Volunteer motivations from interview respondents

Reason	Illustrative quote
Civic Responsibility – self-interest and improved recreational opportunities	"They're out there making this environment better for their own favorite thing to do, which is to come out and ride" (THOR-01) "We reopened Sauratown last year, which I climbed at a lot back when it was open, so I was like, 'hey, I can get this cliff reopened . . . I win!' " (CCC-01)
Civic Responsibility – give back to the community	[Being involved] "is just exactly the kind of cultural environment I want to be a part of all the time. So my part of it was, how can I contribute and give back?" (THOR-01) "I wanted to thank Yosemite and El Cap, and also express my love and care for the whole climbing community, because I believe that people climbing is a good in itself, an intrinsic good. " (YCS-01)
Civic Responsibility – future generations	"Make sure people in the future would have the same access to those pristine places, to have the same type of experience." (YCS-01) "Knowing the trails are going to be on the ground for decades to come and people are going to enjoy them." (BMA-04)
Learning and Self-Enhancement	"When you build a trail, it's very satisfying and tangible what you've done." (BMA-04) [I was interested in the concepts that the organization was doing]. "We're sort of buying things and protecting them, and that's really appealing to me. " (CCC-01)
Identity and Enduring Involvement	"There's a need for identification that goes beyond the individual." (BMA-02) [Drawn to Yosemite because of inspiration and community], "just this eclectic group of people trying to live by some ideal in the modern world and it's just fun being in a community and place where that's your passion too." (YCS-02) "I started out as just a kid who wanted, I was raised by left-leaning, give back to your community type parents, and I have that in me, and I did that in various ways when I was younger . . ." (BMA-02)
Environmental Values	"I've always been a social and environmental advocate and felt that I could make a difference." (BMA-02) "My passion stems from the work itself, to develop mechanisms where humans can be out in nature and restore that connection." (BCC-01)
Social and Career Networking	"It has opened up all kinds of new relationships, partly with land managers and other organizations and individual climbers." (BCC-01)
Obligation	"I'm sort of stuck because I believe in the cause and I don't want to see it stall. And there's no one else to pick up certain tasks." (BMA-02) "Because we were using [the trails], I felt obligated to help build them . . ." (MAMBA-01)

Differences in Volunteering by Demographics and Type of User - Survey Findings

Before proceeding to a more complex analysis to determine if volunteer motivations and volunteer outcomes differed by user groups, I first needed to establish if these potential differences could be attributed to demographic characteristics. A cross tabulation of demographic

characteristics by user group with chi-squared tests of association resulted in statistically significant associations between race (X^2=11.92, p= .036), gender (X^2=21.78, p= .001), amount of leisure time (X^2=28.71, p= .018), and political orientation (X^2=22.95, p= .011). This same analysis was done with the volunteer sub-group only. The results indicate that there are only significant differences between user-groups by age (X^2=39.85, p= .005) and gender (X^2=12.35, p= .03).

Table 4.7 Demographic differences between user groups (volunteers only)

	Climber	Mtn Biker	Boater	Trail User	Multi-User	Other	Chi Square	df	p
N	14	99	11	17	119	9			
Age (mean)	38.5	43.5	30	43	43.5	51	39.85	20	.01*
White (%)	95.8	89.9	100	82.4	96.6	100	9.16	5	.10
Female (%)	37.5	18.2	27.3	47.1	28.6	0	12.35	5	.03*
Income (mode)	Over $100k/yr	Over $100k/yr	Under $52k/yr	Over $100k/yr	Over $100k/yr	Over $100k/yr	23.71	15	.07
Education (mode)	Post-grad	Post-grad	Post-grad	Post grad	Post grad	Post-grad	11.52	10	.32
Leisure Time (mode)	> 2 days/wk	> 2 days/wk	> 2 days/wk	5-10 hrs/wk	> 2 days/wk	5-15 hrs/wk	16.43	15	.35
Political Orientation (mode)	Liberal	Independent/Other	Liberal	Independent/Other	Liberal	Ind./ Other	15.06	10	.13
Region (Mode)	West	West	West	West	West	West/Mid West	26.32	20	.16

Differences in Volunteer Motivations Between User Groups – Survey Findings

Next, differences in the various types of volunteer motivations based on certain types of user groups were explored. As all of the volunteer motivation scales were non-normally distributed, two different methods were employed to assess these differences. The first method used a non-parametric Kruskal-Wallis H test, a comparable test as an ANOVA. Generally, an ANOVA can be robust to non-normal dependent variables if the sample sizes are similar. However, sample sizes varied significantly between user groups, warranting the non-parametric

test. As the sample size for the backcountry winter sports and boating categories were too low to run this comparison, these two user groups were combined into the "other" category. As age was significantly different between user groups, the analysis was only conducted for respondents who reported their age as a way to control for age as a confounding factor. Table 4.9 presents the results of the Kruskal-Wallis test. The results indicated a significant difference between user groups within the Environmental Values (p=.01), Identity and Enduring Involvement (p=.01), and the Obligation (p=.03) factors.

A series of pairwise comparisons using the Mann-Whitney U post hoc tests were run on the two factors that yielded significant results. A Bonferroni correction for multiple comparisons was applied (threshold p value ≤ .005). Tables 4.8, 4.9, 4.10 illustrate the results of these post hoc tests.

Table 4.8 Results of the Kruskal-Wallis H test

Volunteer Motivation	Type of User	N	Mean Rank	Chi-squared	df	P-Value
Environmental Values	Climber	14	139.96	15.13	4	<.**00****
	Mountain Biker	67	80.5			
	Trail-User	13	98.73			
	Multi-User	84	98.93			
	Other	11	91.54			
Learning	Climber	14	106.21	3.56	4	.47
	Mountain Biker	67	91.91			
	Trail-User	13	72.62			
	Multi-User	84	99.39			
	Other	11	92.5			
Obligation	Climber	14	132.29	10.91	4	**.03***
	Mountain Biker	67	90.15			
	Trail-User	13	69.15			
	Multi-User	84	95.15			
	Other	11	106.86			
Identity and Enduring Involvement	Climber	14	133.18	12.43	4	**.01***
	Mountain Biker	67	100.54			
	Trail-User	13	64.88			
	Multi-User	84	89.63			
	Other	11	89.32			
Civic Responsibility	Climber	14	117.96	3.72	4	.45
	Mountain Biker	67	89.25			
	Trail-User	13	97.46			
	Multi-User	84	96.56			
	Other	11	85.95			
Social	Climber	14	111.86	4.84	4	.304
	Mountain Biker	67	93.56			
	Trail-User	13	74.12			
	Multi-User	84	93.92			
	Other	11	115.23			

**Significant at .01 (2-tailed); *Significant at .05 (2-tailed)

Table 4.9 Mann-Whitney post-hoc test on differences within environmental values

Group	Median	Sig.	U	Z	Mean Rank
Climbers	7	<.00**	186	-3.58	61.21
Mtn. Bikers	6				36.78
Climbers	7	.01*	323	-2.76	68.43
Multi-Users	6.33				46.35
Climbers	7	.02*	34.5	-2.47	16.04
Other	6.17				9.14
Mtn. Bikers	6	.03*	2253	-2.13	67.63
Multi-users	6.33				82.68

Table 4.10 Mann-Whitney post-hoc test on differences within identity and enduring involvement

Group	Median	Sig.	U	Z	Mean Rank
Climbers	5.75	.03*	299	-2.13	53.14
Mtn. Bikers	5.25				38.46
Climbers	5.75	<.00**	27.5	-3.1	18.54
Trail User	4.75				9.12
Climbers	5.75	.01*	320	-2.73	68.64
Multi-users	5				46.31
Mtn. Bikers	5.25	.03*	268.5	-2.18	42.99
Trail User	4.75				27.65

Table 4.11 Mann-Whitney post-hoc test on differences within obligation

Group	Median	Sig.	U	Z	Mean Rank
Climbers	5.5	.01*	255	-2.74	56.29
Mtn. Bikers	5				37.81
Climber	5.5	<.00**	32	-2.93	18.21
Trail User	4				9.46
Climbers	5.5	.02*	363.5	-2.33	65.54
Multi-users	5				46.83

This post hoc analysis revealed statistically significant differences in the Environmental Values factor between climbers (median=7) and mountain bikers (median=6) (p<.00), climbers and multi-users (median=6.33) (p<.01), and climbers and other (median=6.167) (p.02). Differences between mountain bikers (median=6) and multi-users (median=6.33) was also significant (p=.03). These results suggest that multi-users, other users and climbers are more motivated than mountain bikers to volunteer because of their environmental values. Climbers are most motivated by environmental values, followed by multi-users, other users, and then mountain bikers.

Within the Identity and Enduring Involvement dimension, post hoc analysis revealed a statistically significant difference between both climbers (median=5.75) and mountain bikers (median=5.25) (p=.03), between climbers and trail users (median=4.75) (p<.00), and between climbers and multi-users (median=5) (p=.01). There was also a significant difference between mountain bikers (median=5.25) and trail users (median=4.75) (p=.03). These results suggest that climbers are more motivated to volunteer because of identity and enduring involvement than

mountain bikers, trail users, and multi-users. This finding is not surprising, as rock climbing falls under one of the serious leisure categories and has a strong identity dimension to it (Stebbins, 2007; Rosenbaum, 2013). Similarly, mountain bikers are more motivated than trail users in this dimension as well. One potential reason for this finding, however, may be a result of the survey design and population. As the survey was distributed through the Outdoor Alliance and member organizations, it was not directed specifically at runners and hikers who volunteer. Therefore, the survey responses yielded a small sample of predominant trail users and may not be representative of this larger user group.

Finally, within the Obligation category, post hoc analysis produced significant differences between climbers (median=5.5) and mountain bikers (median=5) (p=.006), climbers and trail users (median=4) (p=.002), and climbers and multi-users (median=5) (p=.02). This result suggests climbers are more likely to volunteer out of a feeling of obligation over mountain bikers and trail users.

ANCOVA on ranks. The above tests were unable to handle the effects of demographic differences between user groups, specifically age and gender. To account for these co-variants, an ANCOVA on ranks test was used, a method that is proposed as being robust to violations of normality (Conover and Iman, 1981). The model compared each of the six volunteer motivations as the dependent variable by the type of user (fixed factor), controlling for gender and age. Consistent with the above tests, this analysis yielded significant differences between user groups within the Environmental Values dimension (p=.01), the Identity and Enduring Involvement (p=.02) and Obligation (p=.02). These findings corroborate the conclusions of the Kruskal-Wallis and Mann-Whitney tests.

Within the Environmental Values, climbers were more motivated than all other user groups, and mountain bikers were less motivated than multi-users. Within the Identity and Enduring Involvement dimension, climbers were more motivated than all other user-groups except the "other" category where no significant differences existed, and mountain bikers were more motivated than trail users. Finally, within the Obligation dimension, climbers scored higher than all other user-groups except the "other" category, where no significant differences existed. These findings are very similar to the above conclusions. The results of the ANCOVA tests can be found in Appendix F.

Summary

This section outlined motivations for volunteering, as reported by survey respondents and interviewees. Through a principal component analysis, five dimensions of volunteer motivations were identified: civic responsibility, environmental values, learning and self-enhancement, identity and enduring involvement, and social and career networking. Additionally, obligation was added as a category to capture an item that did not load theoretically onto any of the five factors. This category deserves further investigation, as only one item is used to measure it. Among the entire survey sample, civic responsibility and environmental values were the most important motivators, while obligation and social and career networking were the least important motivators. Qualitative data mostly substantiated these findings, both in terms of the categories that were mentioned by respondents and the frequency with which they were mentioned, although environmental values were mentioned less frequently than expected given their ranking in the survey analysis. Additionally, interviewees noted an element of self-interest that was embedded in their desire to give back to or improve their community through civic engagement.

When comparing motivations between user groups, rock climbers were the most motivated by environmental values, identity and enduring involvement, and obligation. Following this, trail users were more motivated by environmental values than mountain bikers, skiers and boaters, and mountain bikers were more motivated by identity and enduring involvement than trail users, skiers and boaters.

Predicting Levels of Volunteer Engagement

As the literature on volunteering suggests there are differences between an individual's initial motivations to volunteer and their actual volunteer behavior in terms of frequency and continued involvement, this section attempts to understand these differences using survey data, specifically answering RQ3c.

> ***RQ3c.*** *Are there certain characteristics, values, or motivations that predict higher levels of volunteer engagement?*

Survey Findings

While civic engagement and environmental values were the most cited motivations by respondents, there might be additional factors that predict an individual's actual volunteer behaviors. To identify the factors that influence the degree of volunteer engagement, a regression model was run using level of volunteer engagement as an outcome variable. The different dimensions of volunteer motivations established above were included as predictors of volunteer engagement, as were demographic characteristics, a sense of place scale (Jorgenson and Stedman, 2002; Payton et al., 2005) and the nature relatedness scale (Nisbet et al., 2009).

Table 4.12 Predicting level of volunteer engagement

	Level of Volunteer Engagement R^2=.26. Adj. R^2=.20				
Variable	**Regression Coefficient**	**SE**	**β**	t	P (Sig)
Volunteer Motivations					
Environmental Values	-.28	.28	-.11	-1.02	.31
Learning	-.07	.23	-.03	-.31	.75
Social	.19	.18	.08	1.00	.32
Identity	1.03	.22	.44	4.75	<.00**
Civic Engagement	.43	.42	.11	1.03	.31
Obligation	-.39	.13	-.23	-3.08	<.00**
Outdoor Recreation					
Years Recreating	.09	.21	.03	.45	.67
Number of Activities	.48	.18	.19	2.63	.01**
Type of User	.08	.18	.03	.45	.65
Environmental Values					
Nature Relatedness	.13	.32	.04	.42	.68
Sense of Place	-.35	.34	-.10	-1.04	.30
Demographics					
Gender	-.28	.46	-.04	-.61	.55
Political Orientation	.03	.26	.01	.13	.90
Income	.24	.25	.07	.97	.33
Leisure Time	.04	.22	.01	.18	.86
Age	.03	.02	.11	1.37	.17

The model, presented in Table 4.12, explained 20% of the variance. Two dimensions of volunteer motivations – Identity and Obligation- were significant predictors in the model. These results suggest the level of volunteer engagement is not a result of individuals' environmental values or sense of civic responsibility, although those were the most cited motivators. Not surprisingly, the more an individual feels a sense of belonging to the organization or social group, the higher their level of volunteer engagement. Interestingly, the more an individual feels obligated to volunteer, the less engaged they are. This result suggests that feelings of guilt are not very effective at motivating volunteers. Such a conclusion is important for volunteer recruitment strategies and how organizations craft language and materials to engage volunteers. Finally, the number of outdoor recreation activities an individual participates in, the greater their level of volunteer engagement. This result is intuitive; the more activities a person participates in, the more organizations/groups the individual is exposed to, increasing their overall opportunity to

volunteer and by effect, their level (frequency) of engagement. It is somewhat surprising that none of the demographic characteristics were significant. We might expect people who are older and have more free time are more likely to volunteer. However, this model suggests this is not the case. Finally, sense of place and nature relatedness were not significant in this model, another surprising finding that will be discussed below.

Outcomes from Volunteering

Both survey respondents and interview respondents were asked to identify perceived outcomes they had experienced or seen as a result of their volunteer engagement. This section provides an overview of these perceived outcomes, reported first by survey respondents and then explained in more detail with qualitative data. Specifically, this section answers RQ3d.

> ***RQ3d.*** *What outcomes do individuals experience from participation in recreation-based volunteerism?*

Survey Findings

Following volunteer motivations, survey respondents were asked to report outcomes that they had experienced through volunteering. These outcomes were predetermined in the survey using the literature and early case study research on local civic recreation organizations. To corroborate the predetermined outcomes, a principal component analysis was conducted using the same method described above. The data was appropriate for a PCA based on a .915 value for the Kaiser-Meyer-Olkin sampling adequacy test and a statistically significant result for Bartlett's test of sphericity. Two items related to self-efficacy loaded onto three different factors and were therefore removed from the final PCA. The final PCA identified 4 factors with an eigenvalue greater than .95, explaining 73% of the variance (Table 4.13). When analyzing the results of the PCA, I detected that several of the factors combined two or more constructs identified within the

literature. As such, I explored whether the factors identified in the literature were highly correlated and thereby essentially measuring the same thing. This analysis revealed that, in fact, these factors were highly correlated (alphas ≥.9), which led to the decision to use the results of the PCA in the final analysis.

Table 4.13 Principal component analysis factor loadings of volunteer outcomes using direct oblimin rotation

	1	2	3	4	Alpha
FACTOR 1: CONNECTION TO ENVIRONMENT AND ENHANCED SELF-EFFICACY					.909
I feel more connected to nature	.758	-	-	-	
I feel more connected to the places I have volunteered	.63	-	-	-	
I feel that I have made a positive impact on my environment	.942	-	-	-	
I feel that I am capable of making a continued positive impact on my environment	.878	-	-	-	
I have learned more about nature	.666	-	-	-	
FACTOR 2: IMPROVED MANAGEMENT AND COMMUNITY CAPACITY					.858
The recreational resource has been improved	.348	.52	-	-	
There is better management of the recreational resource	-	.822	-	-	
I have more confidence in the decisions that land managers make	-	.937	-	-	
I feel that I trust my community more	-	.782	-	-	
I feel that my community is stronger	-	.637	-	-	
FACTOR 3: PERSONAL ENHANCEMENT AND SOCIAL CONNECTION					.858
I feel more connected with people whom I would not normally interact with	-	-	.902	-	
I feel more connected with members of the organization	-	-	.818	-	
I have gained more hands-on experience and skills	-	-	.63	-	
I have learned about working with other people	-	-	.668	-	
FACTOR 4: INCREASED CIVIC ENGAGEMENT					.776
I have become more active in politics	-	-	-	.793	
I have become involved with other volunteer-based or civic organizations	-	-	-	.806	

Table 4.14 displays the descriptive results of volunteer outcomes as categorized by the PCA results presented above. It is clear that, in general, respondents experienced all of the following outcomes to a high degree. Highest ranking was a closer connection to nature and

place and an enhanced feeling of self-efficacy that their actions did and could produce positive outcomes. Next, respondents generally indicated that there was better management of the recreational resource and a strengthened community of trust and confidence in the management of the resources. Similarly, respondents agreed they had gained important skills and social connections through volunteering. Finally, the degree to which individuals engaged in more civic activities as a result of their participation was the lowest, although skewed to a positive result.

Table 4.14 Descriptive statistics for volunteer outcomes

Construct	Mean*	Std. Deviation
Connection to Environment and Enhanced Self-Efficacy	5.92 (393)	.98
Personal Enhancement and Social Connection	5.50 (300)	1.01
Improved Management and Community Capacity	5.41 (302)	.98
Increased Civic Engagement	4.66 (301)	1.45

* Scale based on 1-7, 1=Strongly Disagree, 7=Strongly Agree

Interview Findings

During interviews, respondents were asked open-ended questions about outcomes they had experienced through volunteering. Following their responses, the interviewee was asked to describe any important changes in the way they related to their environment or community as a result of volunteering. Answers were coded using the dimensions derived from the survey analysis. Within the interviews, there was no mention of increased civic engagement. This is not to say this outcome did not happen; rather, interviewees did not make this connection themselves when asked which outcomes they observed as a direct result of their engagement. These data deepen our understanding of the process by which these outcomes result, an important factor that is not captured in the survey analysis.

Connection to nature and enhanced self-efficacy. Respondents revealed the various ways in which volunteering had impacted their connection to nature and environmental values. On one hand, their participation helped to increase their awareness of environmental problems associated with outdoor recreation and land management and influenced them and others to be better caretakers and responsible users of the recreational resource.

> Once I became involved, I became a lot more knowledgeable about trail maintenance, human powered trails, sustainability, environmental impacts, all that sort of thing. (BMA-04)

Beyond the localized and management scope, respondents pointed to how volunteering could influence a broader change in how they value the environment and respond to environmental problems.

> Drawing that connection of how the on the ground work that is done by these dedicated individuals generates this sense of ownership and giving and this valuing of the environment that then translates to broader level social change . . . (BMA-02)

One respondent described how participating in stewardship contributed to a renewed understanding of the human-nature relationship:

> I think I'm undergoing an awakening . . . Part of my own evolution is this better understanding of stewardship and the bigger picture of how it fits into the future of our species . . . (BCC-01)

A volunteer for the Yosemite Climber Stewards program noted how the position enabled her to enact her personal values in a more sanctioned or formal manner, thereby affirming the importance and impact of acting on these values.

> I'm not just another climber out there and I'm choosing to adopt these active caretaking behaviors and model them and promote this culture, and I actually buy into it, and it gives me some authority, but it's actually something I'd like to do all the time. (YCS-02)

Improved management and community capacity. Many respondents noted that relationships with land managers were greatly improved. In addition to relationships with land

managers and better overall management of the recreational resources, respondents articulated how civic recreation practices both build community and make the community stronger.

> I liked just talking about this kind of stuff. And just seeing how much people do . . . there's a lot of love for that area that actually turns into actions . . . There's a definite power to having so many people working together, you can see the results right away. It's amazing how happy people are. (YFL-01)

> I love it when we get a really good turnout for our social rides and trail building days . . . because it builds this whole community of mountain bikers. (CAMBr-01)

Personal enhancement and social connection. There are several dimensions within this category. First, there is a strong learning dimension. Interviewees noted that they had learned concrete skills as a result of their participation: how to work with tools, manage and coordinate volunteers, and gained a better understanding of the policy and decision-making process. Many found this learning, especially in regards to creating a tangible impact, very rewarding.

> One of the best thing about it is that you're learning constantly . . . [It] makes me feel like I'm getting better at what I'm doing, and any time you get better at something, you feel better about it. (BMA-04)

For several respondents, the organization comprised a large part of their social life, whereas for others, the organization was one component of several social circles they belonged to. One respondent even mentioned that many of his mountain biking friends were not even members of the organization, yet they were still his closest riding companions. Regardless of how central the organization was to the individuals' social life, important connections were made as a result of volunteering, perhaps connections that would not have been made outside of the organization or the recreational activity.

> I have a ton of respect for him, but I probably never would have become friends with him had it not been for mountain biking . . . but we have a shared passion for mountain biking in common. That's one of the most rewarding things about volunteering – the relationships that I've built with people who we have something in common that otherwise we probably wouldn't have interacted before. (BMA-03)

Summary

This section aimed to understand the perceived outcomes experienced as a result of individuals participating in civic recreation practices. These outcomes can be categorized into four broad themes: 1) Increased connection to nature and self-efficacy; 2) Personal enhancement and social connection; 3) Improved management and community capacity; and 4) Increased civic engagement. Both the survey and interview respondents reported significant increases in the first three categories. By contrast, there is only weak evidence to support that civic recreation practices result in other forms of political participation or civic engagement.

Discussion and Conclusions

Civic recreation volunteers engage in many forms of volunteering, from being on the Board of Directors, organizing an event, supporting the organization's advocacy activities, and participating in hands-on stewardship. Notably, stewardship is the most frequent form of volunteering for the mountain biking, rock climbing, and trail-based user groups. This is an important finding, as recreationists may not think of themselves as environmental volunteers yet find themselves doing similar types of work. In this manner, individuals may "stumble" into conservation activities through their recreational pursuits (K. Tidball, personal communication, July 28, 2016) that generate a host of positive benefits, both for the individual and community.

Civic recreation volunteers are motivated out of similar reasons than other types of volunteers explored in previous literature. While the principal component analysis yielded slightly different categories than offered in the literature, the categories share similar themes. Indeed, the desire to give back to the community and sense of civic responsibility, express values and beliefs about the environment, and improve one's skills and social networks is similar to

previous findings of volunteer motivations generally (Clary and Snyder, 1998; Bruyere and Rappe, 2007; Bramston et al, 2011; Lu and Schuett, 2014). Consistent with Lu and Schuett's (2014) study on recreation-based volunteers, civic engagement was the highest-ranked motivator for all user groups. Recall that civic engagement is defined as "the motivation to preserve and improve recreation and environmental quality through civic participation" (Lu and Schuett, 2014, p.75). This result indicates individuals share similar goals as the organizations they volunteer for to create, preserve, and enhance recreational resources, and believe that volunteering will help achieve these goals.

Additionally, environmental values were ranked as one of the highest motivators, consistent with much of the literature on environmental volunteers (Bruyere and Rappe, 2007; Bramston et al., 2011). This suggests civic recreation volunteers may possess strong pro-environmental values, adding an interesting dimension to the literature on outdoor recreation and environmental values generally. While it remains unclear whether these individuals developed their pro-environmental values through outdoor recreation, or another avenue in their life, there clearly is an association between outdoor recreation, environmental values, and volunteerism.

However, it is interesting to note the element of self-interest expressed by interviewees. Certainly, volunteers wish to improve the recreational resource as an act of civic engagement; however, this serves to benefit them by increasing access to their own recreational opportunities. This is an important finding for civic recreation organizations, as they should continue framing their volunteer recruitment based on a self-interested element. Additionally, self-interest is not specifically addressed in the theory on volunteer motivations, especially among environmental volunteers; altruism, self-expression, and self-enhancement appear to be the main reasons for volunteering. This presents an interesting area of future research – is there something specific

about recreation-based volunteering that is more driven by self-interest over other forms of volunteering?

When comparing volunteer motivations across user groups, rock climbers were more motivated than any other user group by environmental values, identity and enduring involvement, and a feeling of obligation. Mountain bikers were least motivated, although still highly motivated, by environmental values. Mountain bikers were also more motivated out of identity and enduring involvement over other user groups. Certainly, this conclusion must be drawn tentatively, as the user group category is imprecise given the large "multi-user" category that emerged. There are many individuals in the sample who participate in these activities that were not assigned to the user group - only those that selected climbing or mountain biking as the most important activity were labeled a "climber" or "mountain biker." However, there is something unique about individuals who strongly identify with climbing or mountain biking in terms of why they volunteer. Future research should look more rigorously at these differences between user groups, adding to the literature on volunteering and theories about the connection between different types of outdoor recreation activities and environmental values (Van Liere and Noe, 1981; Schuett and Ostergren, 2003).

Another important finding is identity and enduring involvement are motivations for volunteering, verifying the conclusions of Lu and Schuett (2014) and adding an important dimension to future research. Recreation-based organizations have a strong social and self-identification element. Though recreation and lifestyle sports could be viewed as an expression of consumerism and is therefore often critiqued as an individualistic, “consumer-driven, narcissistic,” and ultimately hedonistic pursuit (Wheaton, 2007, p.280), Wheaton (2007) asserts these activities can create “cultural spaces in which the potential for more transformatory

relationships and identities exist" (p.281). As leisure scholars explain, "'[When] individuals invest themselves in the consumption of leisure and lifestyle and interact with others who share their interests, they generate lifestyle enclaves' (Bellah et al., 1985) or 'neo-tribes' (Bauman, 1992; Maffesoli, 1996)" (Rosenbaum, 2013, p. 642). Thus, these spaces can mobilize people toward political action and be an important force as they "inspire commitment, collective identity, and collective action" (Rosenbaum, 2013, p. 643; Wheaton, 2007). However, it remains unclear whether these examples are motivated by concern for the environment and broader social change, or are more narrowly defined as identity politics focused on simply protecting a local resource for one's own enjoyment (Wheaton, 2007; Rosenbaum, 2013).

While civic engagement and environmental values were the highest-ranked motivations, they did not predict the level of volunteer engagement. Clearly these factors are important underlying motivations, yet the data suggests they do not influence the degree to which an individual becomes involved. The results of the regression indicated there are other mechanisms that motivate greater engagement with volunteering, specifically the degree to which an individual associates their identity with volunteering. This finding is consistent with Lu and Schuett's (2014) conclusion that enduring involvement, a measure of how much an individual's self-concept is attached to the organization, moderated respondents' volunteer experience.

> When members' important motivations are paired with functions of the organization, they will be more satisfied and more likely to continue volunteering in the future. If the organizational functions do not offer ways to satisfy their needs, then behavior will ultimately drop off. Thus, it can be argued that the relationship between motivation and volunteer experience will be stronger for members who have high levels of enduring involvement as compared to those who do not. (p.73)

Surprisingly, feelings of obligation were negative predictors of level of volunteer engagement. We might conclude from this that feelings of guilt and compulsion create a negative experience for volunteers, thereby dissuading them from increasing their involvement. Such

conclusions support Ryan et al. (2001), who found social and organizational factors influenced the degree and duration of volunteer involvement. While this study did not measure long-term volunteers' experience and motivations, we might conclude from the findings that identity, enduring involvement, and organizational factors play an important role in volunteer frequency and retention.

Finally, the data verified proposed environmental outcomes. Most prominently, individuals experienced enhanced connection to nature and the places where they volunteer, and a feeling of self-efficacy through volunteering. These findings are consistent with other research on outcomes reported by stewardship volunteers (Gooch, 2003; Ryan, 2005). Moreover, interview respondents noted the virtuous cycle that this creates; volunteering helped individuals become more aware of environmental problems, feel that they had made a difference through tangible actions, and even begin to develop a stronger stewardship ethic and renewed conception of their relationship with nature. In this manner, civic recreation can help to build advocates for the environment (Shandas and Messer, 2008).

Not surprisingly, respondents felt their community was stronger, the recreational resource was managed better, and they had increased trust in land managers. These findings are consistent with the results of the case study analysis in Chapter 3, and previous research on community-based environmental management (Weber, 2000; Schuett et al., 2001). However, it is unclear which community they are referring to – the user-group community, larger recreation community, or entire community. Future research should focus on clarifying where civic recreation practices enhance community capacity and at what scope. Surprisingly, respondents were least likely to report they had become involved in other political or civic activities. This may be a result of limited time, feeling that they had "done their part," or may support critiques

offered by leisure theorists - that individuals only engage when it serves their self-interest (Rosenbaum, 2013). This is an interesting avenue for future research as it is important to understand whether civic recreation practices can be a gateway to other forms of environmentalism, or if it is isolated to specific places and issues that threaten an individual's self-interest.

CHAPTER 5: EXAMINING THE CONNECTION BETWEEN OUTDOOR RECREATION AND ENVIRONMENTAL VALUES

Outdoor recreation is one means by which individuals connect to their environment. Naturally, we might expect outdoor recreation to foster pro-environmental values as a result. However, since scholars first started exploring this question, only a weak and tenuous positive relationship has been observed (Berns and Simpson, 2009). Yet, a latent potential exists to leverage outdoor recreation as a means toward cultivating civic participation in creating and stewarding recreational resources, as we have seen in the previous chapters. Additionally, through these efforts, individuals' may develop stronger environmental values as well. While Chapters 3 and 4 explored civic recreation organizations and the motivations for individuals to engage with them, this chapter seeks to look more broadly at the connection between outdoor recreation and environmental values and actions.

Literature on Outdoor Recreation and Environmental Values

Intuitively, it would make sense that people who choose to spend time outdoors recreating would be motivated to do so because of pro-environmental values and/or develop pro-environmental values as a result. However, in their review of the literature, Berns and Simpson (2009) conclude "although there seems to be an association between outdoor recreation and environmentalism, the aspects of the recreation experience that are specifically linked to environmental concern remain unclear" (p.88). This relationship has been of interest to researchers for almost thirty years; however most is from the mid 1970s and early 1980s. Little research has been done since then, most likely because findings suggested only a weak

association between outdoor recreation and environmental concern and behavior (Teisl and O'Brien, 2003). However, Cooper et al. (2015) recently explored wildlife recreationists and pro-environmental behavior. They found both hunters and birdwatchers "were 4–5 times more likely than non-recreationists to engage in conservation behaviors, which included a suite of activities such as donating to support local conservation efforts, enhancing wildlife habitat on public lands, advocating for wildlife recreation, and participating in local environmental groups" (p. 446). Such conclusions add support to the claim that recreationists may be an important constituency for the environmental movement, probing us to continue unpacking the dynamics between outdoor recreation and environmentalism.

Dunlap and Heffernan (1975) conducted one of the first studies on the impact of outdoor recreation and environmental concern. Their research found a weak positive relationship between outdoor recreation and environmental concern in general, with a stronger association for appreciative recreation activities, such as hiking and camping, over consumptive activities, such as hunting. In addition, individual environmental concern was stronger toward issues that affected the specific recreational resource. They hypothesized that this relationship exists because outdoor recreation creates an awareness of environmental issues, creates a commitment to protect a valued recreational resource, cultivates an aesthetic appreciation for a natural environment and a distaste of its degradation, and exposes participants to environmental education.

Subsequent research testing the Dunlap and Heffernan hypothesis found either weak support or no result. Geisler, Martinson, and Wilkening (1977) and Pinhey and Grimes (1979) found no association between outdoor recreation and environmental concern. Both of these studies, however, did not look at specific recreational activities or clearly examine appreciative

or consumptive activities as separate, which may have complicated their results (Schuett and Ostergren, 2003). Van Liere and Noe (1981) used data from visitors to a national seashore and residents of the surrounding area to test the Dunlap and Heffernan hypothesis. They found only weak support for the hypothesis, concluding that "the association between outdoor recreation and environmental attitudes is too complex to be understood by a simple one-to-one relationship" and fails "to take into account important social factors that influence both the choice of activity and the interpretation given to the recreational experience" (p.511).

More recently, Schuett and Ostergren (2003) investigated environmental concern and involvement in voluntary associations between members of the International Mountain Biking Association (IMBA) and the National Off-Highway Vehicle Conservation Council, Inc. (NOHVCC). IMBA members scored higher on their measure of environmental concern and demonstrated more involvement with other environmental organizations. The authors suggest their results indicate environmental concern may be different based on type of activity (in this case, motorized and non-motorized), and for those who are members of a voluntary association. In many ways, their research begs the question: "Could there be fundamental differences in the personal values and environmental worldview of those who become involved with motorized and non-motorized recreation associations?" (p. 35). Kil et al. (2014) and Cooper et al. (2015) add an important insight to this dynamic. In their study of Florida Natural Scenic trail hikers, Kil et al. (2014) find environmental attitudes and values are predictive of certain types of recreation activities; those with pro-environmental attitudes were more likely to engage in nature-based, or appreciative activities, which in turn predicted higher levels of environmentally responsible behaviors. Cooper et al. (2015) reached similar conclusions: wildlife recreationists (hunters or birdwatchers) were 4-5 times more likely to engage in conservation behaviors than non-

recreationists and if they were both hunters *and* birdwatchers, the likelihood increased 8 times. These conclusions urge researchers to consider larger macro and antecedent variables that may influence the choice of recreational activity and environmental values generally.

Such antecedent factors could include childhood experiences in the outdoors. Chawla (1998) found that significant life experiences, including positive experiences in the outdoors, contributed to environmental action. Wells and Lekies (2006) confirm this finding in their study of early childhood experiences in nature as a determinant of adult environmentalism. Kals et al. (1999) found that emotional affinity to nature, cultivated by past and present experiences spent in nature, was a powerful predictor of environmentalism. Wolsko and Lindberg (2013) report people with greater participation in appreciative outdoor activities were associated with higher scores on their connectedness to nature scale. These findings indicate through positive experiences in the outdoors, people form a connection to the natural world, which may lead to pro-environmental values and behaviors.

Sense of place is another dimension related to connection to nature that may result from outdoor recreation and foster stronger environmental values. Sense of place refers to the rich and varied meanings of places and the strong emotional bonds and attachments that people form to places, both physically and culturally. Scholars are beginning to recognize the important role that place attachment plays in contributing to environmental concern and people's motivations to act (Vorkinn and Riese, 2001; Stedman, 2002; Gooch, 2003; Scannell and Gifford, 2010). In the context of outdoor recreation, Walker and Chapman (2003) developed a framework for investigating the relationship among sense of place, perspective taking, empathy, and pro-environmental intention among visitors of a Canadian national park. Their findings suggest that (a) sense of place affects empathy and perspective-taking and perspective-taking affects

empathy; (b) sense of place affects pro-environmental intentions; and (c) empathy affects pro-environmental intentions. Kyle et al. (2004) researched sense of place among hikers of the Appalachian Trail, finding that hikers who express having a stronger sense of place considered environmental concerns on the trail more pressing. Payton et al. (2005) explored place attachment and trust on the level of civic action in Shelburne National Wildlife Refuge. Their conclusions urge managers to recognize how both place attachment and trust mediate an individual's level of civic engagement. Finally, Halpenny (2010) observed the link between place attachment and local environmental concern and action as well as environmental concern in general among visitors to Point Pelee National Park. He found place attachment predicted pro-environmental intentions while place identity mediated place dependence and pro-environmental intentions. Moreover, the results indicate that localized place attachment might translate into the more abstract concept of the environment and influence environmentally responsible behaviors in general.

Research Questions

From the review of the literature, it is clear that a potential relationship exists between outdoor recreation and environmental values generally; however this relationship is quite complex and the dynamics remain under-explained. Studies that explore more specific forms of environmental values and types of environmentally responsible behavior (e.g. place attachment, recreational activism, support for conservation) arrive at more discernable conclusions, indicating that outdoor recreation can be a motivator for some types of environmentalism but not all. Moreover, the conclusions from the literature suggest there are differences between the type of recreational activity, both in terms of the underlying motivations to seek out that specific activity and how the activity may be related to environmental values. This dynamic is clearly not

a linear process and may be more of a positive feedback cycle – pro-environmental values influence an individuals' participation in outdoor recreation, which fosters a connection to nature and place, which may influence further environmental values and behaviors. This chapter is an attempt to begin unpacking this complex dynamic by answering the following research question:

> ***RQ3.*** *What is the relationship between human-powered outdoor recreation, connection to nature, sense of place, and pro-environmental behaviors?*

To help explore this research question, the following hypotheses are proposed based on the conclusions from the literature review:

> *H_1: Outdoor recreation can lead to a connection with nature*
>
> *H_2: Outdoor recreation can lead to a sense of place*
>
> *H_3: Through increasing one's sense of place and connection to nature, outdoor recreation may indirectly lead to pro-environmental behaviors.*

Methods

This chapter draws from a mixed-method design comprised of an online survey of outdoor recreationists affiliated with the Outdoor Alliance complimented by semi-structured interviews with key volunteers for civic recreation organizations. The survey was disseminated in the spring of 2015 through various social media channels to affiliates of the Outdoor Alliance, a national advocacy organization representing the human-powered outdoor recreation community using the Tailored Design Method (Dillman et al., 2009). A total of 480 respondents completed the survey. Specific to the research objective in this chapter, the survey asked questions related to an individual's participation in outdoor recreation (type(s) and engagement in the activity), level of volunteer participation, sense of place, environmental attitude, concern, and

worldview captured by the nature relatedness scale (Nisbet et al., 2009), and questions about pro-environmental behaviors enacted in their daily life. More specifics on these categories are explained below.

Additionally, qualitative data from semi-structured interviews with 18 individuals who held leadership or key volunteer roles with local rock climbing and mountain biking civic recreation organizations will be presented. This qualitative data helps add depth and explanation to the survey results, highlighting important mechanisms behind these complex relationships and offering hypotheses that should be tested in future studies. Interview subjects were identified through primary organization contacts and a snowball sampling method during the comparative case study of civic recreation organizations, reported in Chapter 2 and 3. Specific to the research question in this chapter, interviewees were asked about their own environmental values and sense of place, and their opinions on their relationship between outdoor recreation, volunteering, and environmentalism generally. Interviews were recorded and transcribed verbatim. Based on the literature review and the research questions, a priori codes were developed to help lump the data into categories and intellectual "bins" (Miles and Huberman, 1994, p.18). However, new codes were added throughout the analysis, as coding is itself an iterative and analytical process (Saldana, 2012). Table 5.1 displays the codes used during this analysis. The complete codebook can be viewed in Appendix C.

Table 5.1 Codes used for qualitative data analysis

Code	Description
WHYREC	Reasons that the individual expresses for doing their recreational activity
Excercise	Mentions exercise as a reason
EvConnect	Mentions connection to the environment and nature as a reason
SopConnect	Mentions connection to place as a reason
Social	Mentions building relationships, connecting to people or the community as a reason
Challenge	Mentions challenge as a reason
Adventure	Mentions adventure and exploration as a reason
EVDYNAMIC	Discusses the relationship between civic recreation and environmental values and behaviors
Sop	Discusses sense of place, connection to place
Nr	Discusses connection to nature and the environment
Peb	Discusses pro-environmental behaviors, specifically private-sphere environmental behaviors
Envmtlsm	Mentions environmentalism generally
Stwrdshp	Mentions the connection between volunteerism and environmental values
Lnt	Discusses leave no trace
Resrect	Discusses responsible recreation

Survey Measures

Sense of Place

Simply, sense of place refers to the meanings one imbues on a physical space (Tuan, 1977). However, within the literature, there are myriad sub-dimensions of sense of place that have yet to be uniformly adopted by scholars (Stedman, 2002). Within the field of social psychology, sense of place is a combination of symbolic meanings, attachment, and satisfaction of a particular space, which can be broken down into place identity, place attachment, and place dependence (Stedman, 2002; Jorgensen and Stedman, 2006). This is the definition used in the present study. Questions were adapted from Jorgensen and Stedman (2006) and Payton et al. (2005) and include statements such as, "Through recreation, I form important connections to the places I recreate," "I feel the places I recreate most often are a part of me," and "The places I recreate most often are the best places for doing my recreational activity." However, the results of a scale reliability test of these distinct sub-constructs indicated that they did not have high

internal correlation. As a result of this scale reliability analysis, I chose to use the broader sense of place construct as one scale. Following this analysis, a principal component analysis using a Direct Obliman rotation was completed to reveal the dimensionality of the construct. One item stood out as separate from all the others – "the places I recreate most often are the most convenient places to recreate." This item was included as an alternative explanation to sense of place and was not an item from the literature. This item was removed in the final sense of place scale, resulting in seven items within the final scale with a Cronbach's alpha of 0.78.

Connection to Nature and Nature Relatedness

Much attention in the environmental psychology and the environmental education literature has been directed toward reconnecting people with their environment and the influence such a connection has on environmental values and actions (Chawla, 1998; Nisbet et al., 2009; Louv, 2008). This field of scholarship focuses on the emotional or affective elements of environmental values and behaviors. Elements of this domain have been explored by Chawla (1998) in her work on environmental sensitivity, Kals et al. (1999) and their work on emotional affinity to nature, Nisbet et al.'s (2009) nature relatedness scale, and Louv's (2008) nature deficit disorder hypothesis. Mayer and Franz (2004), who developed the connectedness to nature scale, explain, "A general perspective of this work, then, is that if people feel connected to nature, then they will be less likely to harm it, for harming it would in essence be harming their very self" (Mayer and Franz, p.512). Nisbet et al. (2009) propose the nature relatedness construct to expand on this previous work, arguing that their scale is more inclusive than previous measures by capturing the multi-dimensionality of the combined emotional, cognitive, and physical aspects of humans' connection to nature. This is the scale used in the present research and items were directly adopted from an established scale in the literature (Nisbet et al., 2009) and include

questions such as, "My relationship to nature is an important part of who I am," "I always think about how my actions affect the environment," "The thought of being deep in the woods, away from civilization, is frightening," and "Conservation is unnecessary because nature is strong enough to recover from any human impact." A reliability analysis confirmed that this scale is internally consistent and therefore valid for measuring nature relatedness (alpha=.78). The scale is a composite of nine items, three of which were negatively worded and recoded in the analysis.

Pro-Environmental Lifestyle Behaviors

Presently, there are no single or uniform measures of pro-environmental behavior in the literature (Markle, 2013). Drawing from Stern's (2000) theory of private-sphere environmentalism, or consumer-based environmental behaviors, I chose to look specifically at pro-environmental behaviors enacted in everyday life as a separate measure from other more political or "public sphere" dimensions of environmentalism. Respondents were asked a series of questions regarding their behaviors and actions in daily life toward the environment, such as "In general, in a typical week, I do the following activities: recycle, carpool, compost, purchase local food, etc.," and "Please indicate whether you have done any of the following activities in the last year: chosen not to fly, read an environmental magazine, etc." From these behaviors, an environmentally lifestyle behavior index was created using the following weighting factors:

- Low effort (weighted x1): recycle, turn off lights, purchase local food, compost, carpool, public transport, not use dryer, shorter showers, bike/walk to work
- High effort (weighted x2): chosen not fly

Level of Volunteer Engagement

Volunteer engagement with a civic recreation organization could be considered a specific type of pro-environmental behavior and is therefore included in this analysis. Respondents were asked to indicate which types of volunteering efforts they had engaged in over the past year. This

included volunteering on the Board of Directors, participating in stewardship work, organizing an event, engaging in advocacy work for the organization, or volunteering generally. An index was then created by summing all of the potential forms of volunteering, with Board of Directors given double weight due to the significant time commitment and investment from the individual.

Level of Outdoor Recreation

Two variables were created as a measure of outdoor recreation engagement: years spent recreating and number of activities the respondent participated in. These two variables were kept separate rather than combined into an index so as to observe whether there were differences between the two measures. It should be noted that neither of these measures capture the importance of outdoor recreation in a person's life, or the intensity or frequency with which they recreate. These could be important dimensions of outdoor recreation engagement that should be included in future studies.

Results

This section begins to unpack the nexus between outdoor recreation, volunteering, and various dimensions of environmental values and actions through a series of analyses using survey data. These results are organized to explore each of the following hypotheses in order:

H_1: Outdoor recreation can lead to a connection with nature

H_2: Outdoor recreation can lead to a sense of place

H_3: Through increasing one's sense of place and connection to nature, outdoor recreation may indirectly lead to pro-environmental behaviors.

Following the survey findings, interview data will be presented to add depth of understanding to the survey results and help identify the processes of how outdoor recreation and volunteerism may lead to environmental values and actions.

Survey Findings

Bivariate Correlations of Survey Data

First, to begin exploring the relationship between the above variables, a series of bivariate correlations were conducted using Spearman's rank-order correlation. Many of the variables did not have a linear relationship, thus motivating the decision to use this method. Only continuous or nominal variables were included in this analysis, as Spearman's rank-order correlation does not account for categorical variables. Due to this limitation, type of user was not included, which may limit the reliability of the findings. All variables did have a monotonic relationship, making them appropriate for the analysis. Table 5.2 below illustrates the results of the bivariate correlations.

Table 5.2 Bivariate correlations

		1	2	3	4	5	6	7	8	9	10
1	Sense of Place	-									
2	Nature Relatedness	.40**	-								
3	PEB	.14**	.37**	-							
4	Volunteer Engagement	.03	.09	.13*	-						
5	Years recreating	.09	.14*	.18**	.19**	-					
6	# Activities	.13*	.15**	.25**	.12*	.15**	-				
7	Age	-.09	-.02	-.06	.15**	.39**	-.11*	-			
8	Education	-.02	.08	-.05	.02	-.04	.06	-.02	-		
9	Income	-.01	-.13*	.04	.06	.16**	-.09	.34**	.05	-	
10	Leisure time	.03	.03	.07	.06	.09	.14*	.08	-.01	-.03	-

**Correlations significant at .01 (2-tailed); *Correlation significant at .05 (2-tailed)

Not surprisingly, three measures of environmental values all correlated with each other: sense of place, nature relatedness, and pro-environmental lifestyle behaviors (PEB). The fourth measure, level of volunteer engagement, only correlated with pro-environmental lifestyle behaviors, suggesting that it may not be linked to sense of place or nature relatedness. Nature

relatedness, pro-environmental lifestyle behaviors, and level of volunteer engagement all positively correlated with both measures of outdoor recreation engagement. By contrast, sense of place only positively correlated with number of recreational activities, but did not correlate with years spent recreating. Demographic characteristics are also interesting to explore in their relation to these measures. Not surprisingly, years spent recreating positively correlated with number of recreational activities, age, and income. In addition, number of recreational activities negatively correlated with age, and positively correlated with amount of leisure time. And finally, age positively correlated with income, a result that makes intuitive sense.

The fact that most measures of environmental values and behavior correlate to one another is not surprising. What is interesting is their relationship to years recreating, number of activities, and level of volunteer engagement. Most surprising was that both sense of place and nature relatedness did not correlate with level of volunteer engagement. Based on the literature, we might expect that an individual with a stronger connection to the place where they recreate, or more connection to nature in general, would be more likely to volunteer to manage and steward that place (Vorkinn and Riese, 2001; Stedman, 2002; Kyle et al., 2004; Halpenny, 2010). The results of the bivariate correlations, however, do not support this connection. By contrast, pro-environmental lifestyle behaviors did correlate with level of volunteer engagement, suggesting that there is some link between general private sphere pro-environmental behaviors and level of volunteer engagement.

Connection Between Outdoor Recreation, Sense of Place, and Connection to Nature

Though the link between outdoor recreation and environmentalism generally is weak, research that explores more specific dimensions of environmental values and types of activities tend to yield stronger results. For example, scholars propose that outdoor recreation may lead to

a connection with nature (Wolsko and Lindberg, 2013) and a deepened sense of place in the areas one recreates (Kyle et al., 2004; Payton et al., 2005; Halpenny, 2010), conclusions that will be explored through the following hypotheses:

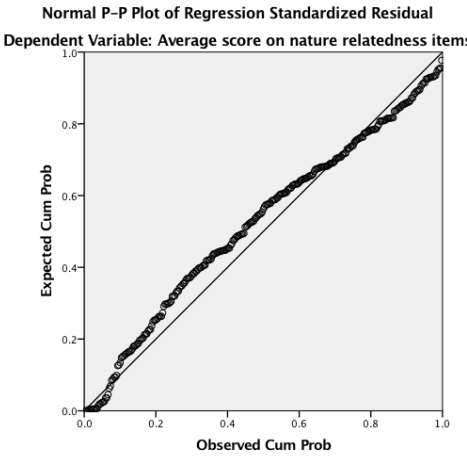
H_1: Outdoor recreation can lead to a connection with nature

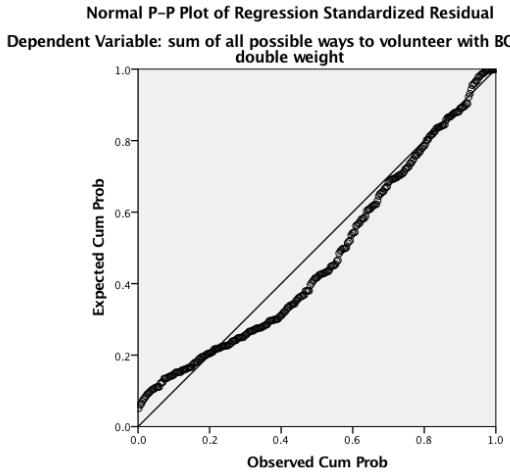
H_2: Outdoor recreation can lead to a sense of place

First, to test these hypotheses, a multiple regression analysis was run on sense of place and nature relatedness to identify whether the two propositions would hold. As age was included as a predictor variable, all cases in which age had not been reported were removed from this analysis (final n=325). The first model predicting sense of place explained very little of the variance (adjusted R^2=.02) and yielded no significant predictors, suggesting that perhaps, outdoor recreation does not lead to a sense of place. The second model predicting nature relatedness was very low as well (adjusted R^2=.1) and neither measures of outdoor recreation were significant. These results indicate that outdoor recreation is not a statistically significant predictor of these variables, providing no support for the propositions put forth.

Table 5.3 Predicting sense of place and nature relatedness

Variable	Sense of Place R^2=.04. Adj. R^2=.02					Nature Relatedness R^2=.12. Adj. R^2=.10				
	Regression Coefficient	**SE**	**β**	t	P (Sig)	**Regression Coefficient**	**SE**	**β**	t	P(Sig)
# Activities	.08	.04	.12	1.79	.08	.06	.04	.08	1.37	.17
Years Recreating	.05	.05	.07	1.06	.29	.09	.05	.12	1.78	.08
Type of User	.00	.04	.01	.08	.93	.03	.04	.05	.82	.41
Gender	.07	.10	.04	.69	.49	.39	.10	.22	3.85	<.00**
Political Orientation	.07	.06	.07	1.18	.24	.17	.06	.15	2.70	.01*
Income	.04	.05	.05	.03	.41	-.09	.05	-.10	-1.74	.08
Age	-.01	.01	-.12	-1.9	.06	.00	.01	.03	.56	.58





Qualitative data from the survey, however, contradict these quantitative results. In response to the question, "Are there some places where you recreate that you feel more connected to than others?" 66% of survey respondents answered yes. Respondents were invited to further explain their answer, and 272 chose to elaborate. Through an inductive coding process, qualitative analysis revealed five different categories for why individuals connect to place through recreation and volunteering: 1) Significant personal history; 2) Quality of the recreational resource; 3) Proximity; 4) What the place offers; and 5) Stewardship and volunteering. Within these broader themes, sub-themes emerged to better explain the mechanism for why and how people connect to place. Table 5.4 below presents these themes.

Table 5.4 Connection between outdoor recreation and sense of place – open-ended survey responses

Reason	Times Mentioned	Illustrative Quote
Significant Personal History	30	"Often, the places I feel more connected to have been the locations where significant events have occurred. I've cleared certain obstacles on my bike, had meaningful, important conversations with my friends, engaged in self-reflection, or put in the time to maintain."
Memories	22	"Certain memories attached to places, like the river I met my significant other on while kayaking, the trails we hiked on our second date, etc."
Nostalgia	5	"There is usually a nostalgia attached to this connectedness. Places I started climbing, places that have had positive impacts in my life or relationships, and places that have had the most impact in making me the person I am today."
Childhood experiences	8	"I grew up on the Yampa; I've been swimming in it since I was a little girl. It is and will be my favorite river until the day I die; it's a part of me."
Time, frequency of visits, familiarity	53	"Familiarity - chance to get to know a place over many seasons."
Quality of Recreational Resource	6	
Type of environment	22	"I've always been drawn to the Colorado Plateau region of southern Utah and western Colorado. I love being there in general and the type of riding there is my favorite."
Pristine, natural, wild	40	"When I recreate in pristine wilderness areas, I feel an intense connection to the world around me, more so than in areas significantly altered by development."
Natural Beauty	21	"Some places hold more natural beauty and are more remote and stunning."
Less crowds	9	"Where there are less people, or at least not much evidence of other people, other than the trails themselves, it makes the places seem more special to me. Like it is my own secret spot or a trail built just for me."
Historical significance	4	"For rock climbing, some places are filled with so much history, inspiration, and natural beauty that experiences there can be overwhelming and life-altering. Tuolumne Meadows is one such place."
Proximity		
Close to home	22	"I feel most connected when recreating close to home."
Far away from home/remote	18	"The more remote and beautiful locations where I don't get to go often."
What the Place Offers	1	
Freedom	4	"There are a few mountain bike trails that just make me feel free."
Escape	1	"Santa Cruz county is too populated to ever really get away from people. The mtb trails are often backed up with traffic. Northern Vermont however, is great for escaping."
Solitude, Peace	21	"Places I have sought out for solitude and peace (not the places I most often go, which are closer to the city)."
Adventure	2	"Sometimes it's about the adventure and connection."
Challenge	5	"High degree of difficulty in area."
Fun	2	"They are the most fun places to be."
Awe and Inspiration	10	"Of the areas that I have recreated in significantly, I'm very connected to the Eastern Sierra of CA, Grand Staircase-Escalante in UT, and the Wrangell Mountains of AK, because of a combination of inspiring landscapes and a feeling of freedom and discovery (magnificent, striking beauty & grandeur, with lots of terrain to explore, and the freedom to explore it - feels a little like the Wild West)."
Spiritual connection	8	"Rivers are spiritual places to me; the Colorado River in the Grand Canyon is the epicenter of my spiritual life."

Connection to nature	3	I feel most connected to the places where I feel like I have gotten closest to nature. For example, my local paved running path is somewhere I run weekly, but do not feel very connected to.
Best for doing recreational activity	12	"Some rivers have better quality whitewater."
Stewardship and Volunteering	30	"Because I have put so much of myself and my resources in making this a place available to the public."

Within the significant personal history category, respondents spoke of their memories and nostalgia, childhood experiences, or just familiarity due to frequent visits. Krasny et al. (2014) studied volunteer motivations and sense of place among oyster gardeners in New York City, finding "memories of and meanings related to oysters and the NYC estuary were tightly intertwined with their sense of place . . . " (p. 27). In the above data, we might draw similar conclusions: memories created through outdoor recreation significantly create and enhance one's sense of place.

Many respondents spoke of connecting with certain types of environments, such as pristine, natural, wild, or beautiful areas with less crowds, or specifically mountain, desert, or ocean landscapes. Surprisingly, respondents were mixed in terms of proximity; half spoke of connecting to places close to home while the other half indicated they found connection in more remote, unfamiliar, and less crowded areas. A number of respondents highlighted that they connect to places that offer solitude, freedom, adventure, connection to nature, and inspiration. Within this category, several respondents noted that they connect to places that are best for doing their preferred recreational activity. Finally, a number of respondents spoke about connecting more deeply because of their volunteer and stewardship activities.

Summary and discussion

While outdoor recreation was not predictive of sense of place, survey participants indicate that outdoor recreation can lead to a deeper connection to place through their open-

ended responses. The responses highlight the importance of both place meaning – symbolic meanings ascribed to places, and place attachment – the bond between people and places (Stedman, 2002; Kudryavtsev et al., 2012). The mechanism for this connection is a result of myriad factors, some of which may be interacting. For example, an individual may seek out a particular place because it offers a great recreational experience. As they spend more time there and gain memories and significant experiences, their connection to place may deepen. Similarly, an individual may seek out a more remote place to visit, and because it offers solitude, adventure, or inspiration, they may feel more connected.

It is interesting that this relationship is not detected in the regression analysis. Perhaps this is primarily due to an error in measurement. Illustrated in analysis of the open-ended survey responses, there are many dimensions of sense of place that are difficult to distill into one single scale. As noted in the methods section, the sense of place scale is a combination of two sub-constructs: place identity and place dependence (Stedman, 2002) and did not account for place meaning. Numerous scholars have recognized the multi-dimensionality of sense of place (Jorgensen and Stedman, 2006; Ardoin, 2006; Cheng et al., 2003) and warned against its lack of a commonly agreed upon definition (Payton, et al., 2005). It is very possible that the measurement for sense of place used in this survey does not adequately represent the way in which outdoor recreationists form a sense of place. Both place dependence and place identity refer to the degree of personal bond that an individual has made with a place; the degree to which an individual feels that their identity is embedded in place and their activity is reliant on a particular place. Neither of these constructs captures the meanings associated with place, as clearly expressed and dominated in the qualitative data. Respondents spoke of the beauty,

freedom, adventure, and wildness that these places offered, all qualities that are culturally imbued. Such meaning may not be captured in the sense of place scale used in the survey.

Connection Between Outdoor Recreation and Pro-environmental Behaviors

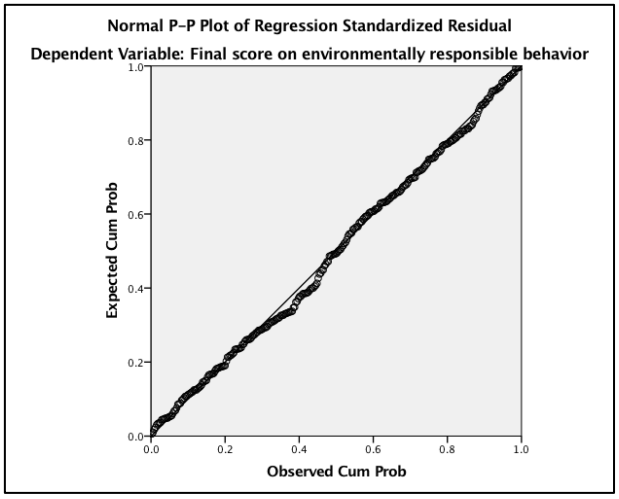
Several studies reviewed in the literature found that outdoor recreation was related to pro-environmental behaviors (Kil et al, 2014; Cooper et al., 2015). Yet the mechanism for this relationship is still unclear. The following hypothesis is presented to explore this dynamic:

> *H_3: Through increasing one's sense of place and connection to nature, outdoor recreation may lead to pro-environmental behaviors.*

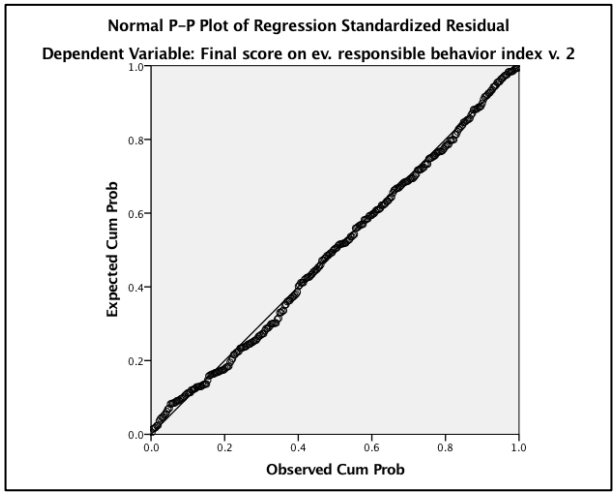
Regression analysis. To investigate the third hypothesis, two linear regression models were run with environmental lifestyle behaviors as an outcome variable. The first model did not include sense of place and nature relatedness as predictor variables whereas the second model did include these variables. The first model explained 12% of the variance. Years recreating, number of activities, and gender were all significant predictors. This result is surprising as it indicates outdoor recreation predicts pro environmental lifestyle behaviors, a finding that contradicts some research on the issue in the past (e.g. Van Liere and Noe, 1981). By adding sense of place and nature relatedness, the predictive value of the model increased (adjusted R^2=.19). However, only nature relatedness was an additional significant predictor in this model, whereas sense of place was not.

Table 5.5 Predictors of pro-environmental lifestyle behaviors

Variable	PEB Model 1 R^2=.15. Adj. R^2=.12					PEB Model 2 R^2=.22. Adj. R^2=.19				
	Regression Coefficient	**SE**	**β**	t	P (Sig)	**Regression Coefficient**	**SE**	**β**	t	P (Sig)
# Activities	.37	.10	.22	3.84	<.00**	.30	.09	.18	3.25	<.00**
Years Recreating	.34	.10	.19	3.23	<.00**	.26	.11	.14	2.42	.02*
Type of User	-.10	.09	-.06	-1.02	.31	-.12	.09	-.07	-1.3	.20
Demographics										
Gender	.88	.23	.21	3.85	<.00**	.55	.26	.14	2.46	.02*
Political Views	.15	.14	.06	1.10	.27	.06	.14	.02	.42	.68
Income	.13	.12	.07	1.13	.26	.15	.12	.07	1.30	.20
Age	-.02	.01	-.09	-1.57	.12	-.02	.01	-.11	-1.9	.06
Race	.18	.34	.03	.52	.60	.24	.34	.04	.72	.48
Education	-.23	.14	-.09	-1.64	.10	-.18	.13	-.08	-1.4	.17
EV Values										
Nature Relatedness						.73	.14	.32	5.41	<.00**
Sense of Place						-.09	.14	-.04	-.66	.51



Model 1



Model 2

Mediation analysis. To further explore the mechanism of this relationship, a mediation analysis was conducted using the method proposed by Hayes (2013). Mediation analysis is a type of regression that hypothesizes relationships whereby one variable affects a second variable, which in turn affects the third variable. Hayes' (2013) model is a non-parametric test that allows for both categorical and continuous variables to be included, which was appropriate for this data. A simple mediation model was used (PROCESS, model 4) with bias correcting bootstrapping at the 95% confidence interval based on 10,000 bootstrapped samples. Years recreating and number of activities were included as independent continuous variables, sense of place and nature relatedness were included as mediation variables, and pro environmental lifestyle behaviors as the dependent variable.

The model explained 19% of the variance, (based on the Nagelkerke R^2). The total indirect effects estimate yielded no significant mediation effect between sense of place and pro-environmental lifestyle behaviors for either of the independent variables (Years recreating: -.00 (.01), 95% CI = -.03 to .02; Number of activities: .00 (.01), 95% CI=-.01 to.04). However, nature relatedness partially mediated the relationship between years recreating and environmental lifestyle behaviors (.05 (.04), 95% CI = .00 to .14), but did not mediate the relationship between number of activities and pro-environmental lifestyle behaviors (.01 (.02), 95% CI=-.02 to .06). Figure 5.1 illustrates these results.

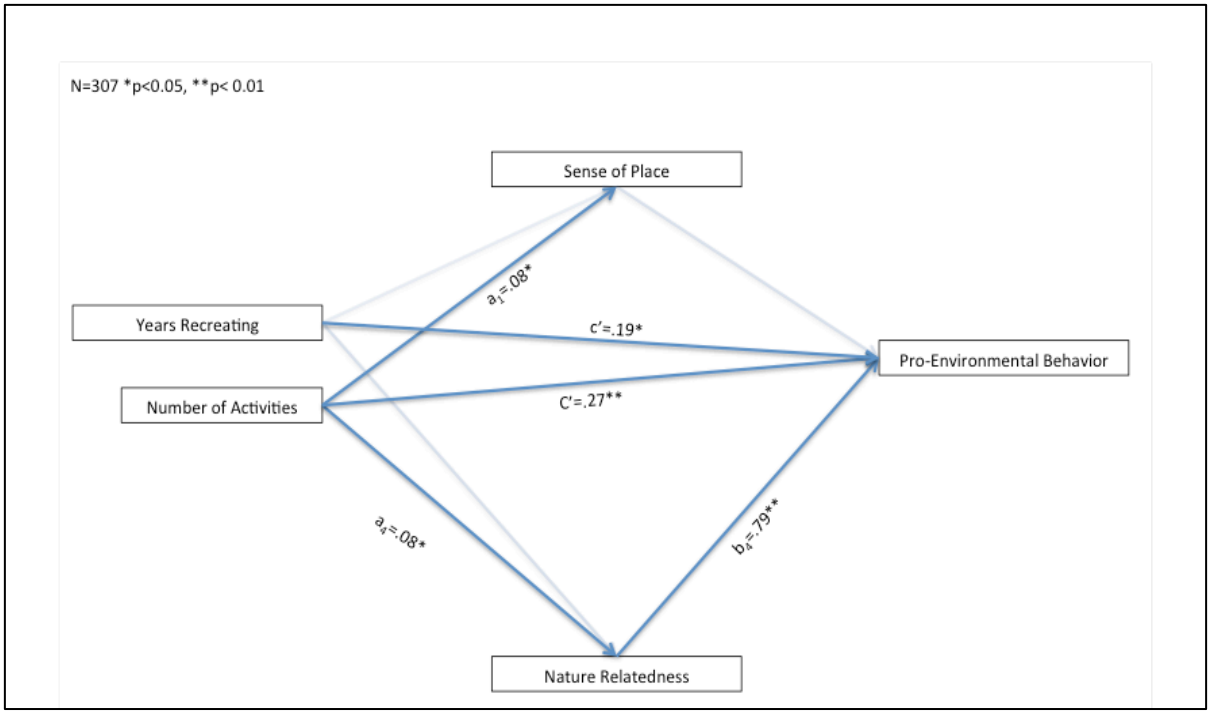


Figure 5.1 Mediation analysis of outdoor recreation, sense of place, nature relatedness, and PEB

These findings suggest that sense of place does not mediate a relationship between outdoor recreation and pro-environmental lifestyle behaviors. Interestingly, one dimension of outdoor recreation – number of activities – did positively affect sense of place with statistical significance, a different result from the regression in the previous section. However, the coefficient is quite low (.08) suggesting a weak relationship at best. By contrast, nature relatedness is both a result of one measure of outdoor recreation (number of activities), and does act as a mediator to pro-environmental lifestyle behaviors, as the coefficient increased from .27 to .79 by way of this mediation. In other words, outdoor recreation positively relates to pro-environmental lifestyle behaviors directly (a=.27), yet this effect is amplified if an individual possesses a deeper connection to nature (a=.79). This finding supports the hypothesis that through outdoor recreation, individuals form a connection to nature, which in turn can lead to more environmentally responsible behavior.

Summary and discussion

Through these analyses, we find partial support for the hypothesis that outdoor recreation can lead to both a sense of place and connection to nature, which in turn influences pro-environmental lifestyle behaviors. Importantly, in the mediation analysis above, level of outdoor recreation directly predicts pro-environmental lifestyle behaviors. These findings are consistent with both Kil et al. (2014) and Cooper et al. (2015) in that outdoor recreation, particularly appreciative activities, lead to higher levels of pro-environmental or conservation behaviors. Added to this, as an individual may develop a stronger connection to nature through their recreational activity, this positive relationship is strengthened. This is not the case with sense of place, which may be the result of a measurement error described above, or it may suggest sense of place is not related to other forms of pro-environmental behaviors.

Interview Findings

In these survey data, we can find some support for a relationship between outdoor recreation, environmental values, and pro-environmental lifestyle behaviors. Most notably, outdoor recreation can lead to a sense of place and connection to nature, as supported primarily through open-ended survey responses. Further quantitative analysis revealed a statistically significant relationship between outdoor recreation and pro-environmental lifestyle behaviors. By adding connection to nature as a mediator, this relationship was strengthened. Insight from interviews may help to add further explanation to this complex dynamic.

Many interview subjects, agreed there was a general weak positive relationship between outdoor recreation and environmental values, consistent with much of the literature examining this relationship. For many, this connection emerges as an individual spends more time in an area, learns about the local environmental problems, and becomes a more responsible recreator

who is then motivated to minimize their impact and potentially volunteer to help steward the recreational resource, consistent with the Dunlap-Heffernan hypothesis (1975).

> I think the more people stick with something like mountain biking that's putting them in the environment, the more that they begin to understand what the impacts are . . . Over time, they get a little more educated about . . . the impacts of what they're doing (BMA-04)

> I think people who recreate outside have a greater respect for the outdoors . . . and have a greater sensibility for the resource and want to protect it. (CAMBr-01)

This weak relationship may be strengthened through and individuals involvement with stewardship; through their engagement, they begin to develop a new environmental ethic and view recreation not out of purely self-interested reasons.

> . . . You see this new generation of trail stewards who don't just see a trail for a trail but see it for sustainability . . . [which creates] just this group of people who care about the resource as much as they care about the recreation opportunity. (BMA-03)

> So our stewardship – we look at a park and the environment we're in, and we become co-users along with the wildlife or flora and the fauna. With the people who own the property around the park, and the land managers themselves, and our intent is to make all of that better for everyone. (THOR-01)

This stewardship ethic is distinctly different from the earlier preservationist ethic that dominated American environmentalism. It is rooted in engaging and connecting with nature in an authentic way that recognizes our independence and embeddedness in nature.

> I think climbing fosters, really outdoor climbing, does nurture and foster a sense of connection with the environment. I guess that's ultimately how I view environmentalism, to come back to being enmeshed with nature, entangled with nature, as opposed to being manipulators of nature . . . My vision for humanity is that we are these benign caretakers of Earth, that's our new role. We've realized we have this incredible power to do things, you know, whether it's building shopping malls or nuclear weapons . . . and I think we are going to make this transition where we finally say, 'we've got to repair all this damage and make this place safe for all of life forms and ourselves . . . I think that people have a need to reconnect in these fundamental ways and see themselves as caretakers . . . (BCC-01)

> To make sure that we can stay connected to the land even when we sit in cubicles and office buildings all day long . . . That's our life, and then we go out into the woods to

> rejuvenate and to stay sane . . . Leopold was not just about the preservation of nature . . . it's not enough to just love nature, you have to live in it and enjoy it. (BMA-02)

In these sentiments, we start to see how civic recreation practices cultivate an environmental virtue ethic (Cafaro, 2001) and ecological stewardship ethic (Barry, 2002), and bring individuals closer to nature. Wilson (1984) hypothesized there is an innate bond between human beings and other living systems. As this link has been severed through modernization and development, humans are finding ways to rekindle this bond as a means to live a more enriched and fulfilling life. “The biophilia notion, therefore, powerfully asserts that much of the human search for a coherent and fulfilling existence is intimately dependent upon our relationship to nature” (Kellert, 1993, p. 43). With a focus on leading a life of flourishing, we are reminded that this cannot exist outside of our connection to nature. As Barry (1999) explains, "the argument is that one's 'sense of self' is in part tied up with one's sense of place. In this way, human personal identity and psychological well-being have an ecological basis. Thus . . . the natural environment becomes an essential part of a naturalistic understanding of human wellbeing and a condition for human flourishing" (p.284).

Certainly, there are many antecedent factors that make the connection between outdoor recreation and environmental values much more complex than "a simple one-to-one relationship" (Van Liere and Noe, 1981, p.511). For example, individuals who are already more likely to care about the environment may choose to recreate outdoors. As one interviewee noted,

> It's a leap to say outdoor recreation automatically results in caring – that comes from your upbringing and deeper values. But, most people who really spend time pushing themselves in the natural world that I've come in contact with care to some level about the environment. (YCS-02)

Additionally, there may be a relationship between the choice of activity and motivation for recreating. Many interview respondents noted a difference between those who recreate out of

ego or purely exercise and those who recreate because they are seeking adventure and a connection to nature.

> I don't think [the connection exists] so much with mountain biking. I think it's more with some of the people who are running and walking. A lot of the mountain bikers are pretty much, 'build me a trail, if you've got to cut the tree down, cut it down.' That's not true with all, but for a good part. I don't think any of them would slash and burn, but I think there's less concern than with some runners, walkers, and hikers. (MAMBA-01)

> It depends on how people are getting introduced to the sport and their reasons for climbing. If people are plastic climbers, getting introduced to climbing through gyms, they are not necessarily aware of or concerned about the environment. If they are just doing it for exercise, it lacks a deeper meaning associated with connecting with one's environment. (CCC-01)

Indeed, there may be a strong correlation between one's reason for recreating and their associated environmental values and actions (Schuett and Ostergren, 2003). Many interviewees, who represent a group of people who exhibit a high level of volunteering, spoke about their motivation for climbing or mountain biking because of the adventure and connection to nature it offers.

> I'm not just a nature lover, but an addict. There's a sense of adventure and exploration, of being lost in the woods, of challenging your physical limits, of discovering new terrain . . . connecting with nature in a way that you hadn't before . . . (BMA-02)

> You know, we're drawn to it, those of us that climb, in ways that are so deep that it's hard to explain, to ourselves or to others . . . But, I would characterize climbing more than anything else for me, it's been a spiritual practice . . . just the experience of connecting with nature and being in beautiful places, the experience of beauty. . . and it's about the states that we get into, the internal states when things are going well, those moments, those peak moments, it's what we call synchronicity. (BCC-01)

> I started climbing 18 years ago, and it's been sort of the common thread in my life since then, it's been like the most persistent source of meaning and value in my life, and it's opened the door for me to interact with landscapes in a really intimate way. (YCS-01)

Summary and discussion

From these interviews, it is clear that outdoor recreation is a profound source of meaning for some individuals and intertwined with how one interacts with the natural world. Whether

they developed environmental values and an ethic of volunteering as a result of outdoor recreation, or whether they chose to recreate outdoors and volunteer because they already had these values remains unclear. Indeed, most interview subjects acknowledged a positive relationship between outdoor recreation and environmental values and actions. Among all recreationists the respondent interacts with or observes, however, this relationship is weak and not consistent. Such discrepancy may be a result of why an individual is drawn to the recreational activity to begin with; are they "plastic climbers," as one interviewee noted, who seek a climbing gym experience outdoors, or are they already drawn to nature and choose to recreate to deepen this connection? Such conclusions confirm that these relationships are certainly not linear or one-to-one; rather, they are influenced by many other factors outside of outdoor recreation and environmental values. These observations impel researchers to explore the antecedent and correlating variables that lead to an individual's choice of recreational activity when disentangling the outdoor recreation – environmentalism nexus (Schuett and Ostegren, 2003).

What seems to be most interesting from these interviews is the proposition that as an individual becomes involved in civic recreation practice through volunteering, their connection to nature, sense of place, and general environmental concern/values deepens. Many interview respondents were not originally motivated to volunteer out of environmental values, but expressed a transformation through their volunteer efforts – they became more aware of environmental problems, more appreciative of the natural environment and developed a strong stewardship ethic to actively protect it. We find similar support for this claim in outcomes expressed by volunteers in Chapter 5, and the open-ended survey responses presented above, where many respondents noted a stronger connection to place in the locations they volunteered

the most. These conclusions add an important dimension to understanding outdoor recreation, volunteerism, and environmental values and hint at the power of civic recreation practice to foster environmental advocates and citizens. Future studies should test this hypothesis in a more generalizable manner.

Limitations

The results of this study shed some light onto the relationship between outdoor recreation and environmentalism, yet leave room for further clarification and exploration of this dynamic. Survey analysis yielded only a weak positive relationship between outdoor recreation, sense of place, and connection to nature. Open-ended survey responses, as well as interview responses, clearly contradict these findings and provided both support and explanation for this relationship. This inconsistency may be explained by the survey design and implementation and choice of interview participants.

First, imprecise measurement and lack of construct validity may exist for the following variables: outdoor recreation engagement and sense of place. Specifically, outdoor recreation engagement was measured by number of activities and time participating, which could not capture the level of importance or meaning imbued by the individual on these activities. Items to measure sense of place directly referred to places the individual recreates the most often. However, it is clear that this is not always the case and individuals can develop a significant sense of place in areas they may not frequent often. These items were adapted from a scale that measured residents' sense of place to a particular location; research into outdoor recreation and sense of place should consider how to measure sense of place in various locations that an individual recreates more precisely. Finally, measuring pro-environmental behavior is still an

area of important research and scholars have yet to agree on a uniform measurement (Markle, 2013). This study sought to understand private-sphere behaviors, which are both self-reported and not inclusive of all forms of pro-environmental behavior (e.g. supporting environmental organizations) and may be constrained by other socio-economic factors that obscure an individuals' true environmental values. Additionally, many survey respondents did not enter their age. As age was considered an important demographic variable, respondents with missing values were removed from the analysis. As such, the number of respondents was significantly reduced (n=480 to n=325). Future research should test these relationships with more quantitative rigor, as both theory and qualitative data point to an important dynamic.

It is also important to note that interview respondents represent a very small sub-set of outdoor recreationists – people highly engaged in civic recreation volunteerism. In this way, they differ significantly from the survey sample. Future research should use qualitative methods among a more diverse sample of outdoor recreationists to better understand the dynamics noted in the interview findings. Additionally, such research should include a larger sample size in order to lead to more generalizable results.

Another important limitation, and perhaps one of the most important limitations is the issue of circular causality and correlations. First, it is difficult to ascertain the direction of causality within these variables, especially within a cross-sectional dataset. For example, does connection to nature and pro-environmental behavior lead to outdoor recreation or vice versa? Does volunteering also increase sense of place and nature relatedness? Qualitative data might lead us to make this conclusion. However, respondents were only asked about their volunteering behavior and pro-environmental behaviors within the past year. Consequently, this complex dynamic was impossible to model in the survey analysis and thus, is not truly accounted for in

the results. Future studies may tackle this issue through a longitudinal research design, observational studies, or more robust instruments and measures.

CHAPTER VI: CONCLUSION

Over the years that I have been working on this dissertation, I have often asked myself why I chose this topic. Outdoor recreation, specifically adventure sports such as rock climbing and mountain biking, is a privilege of a particular socio-economic status and is certainly not going to solve the world's problems. The sustainability imperative of the 21st century demands more than conserving land for the purpose of recreation. Yet, outdoor adventure is fundamental in my journey as an environmentalist and I was compelled to ask if its power extended beyond my own personal experience. In many ways, this project seeks to understand if outdoor recreation *can* motivate environmentalists of the 21st century. In seeking to answer this question, we must first ask ourselves what an environmentalism of the 21st century requires. In the introduction to this dissertation, I argued for environmental citizenship in the spirit of civic environmentalism that also reconceives humans' relationship to the natural world. I believe civic recreation has the potential to do both of these things. But the question remains, whether it delivers on this promise. That is the focus of this dissertation.

Summary and Conclusions of Dissertation Chapters

In Chapter 3, my aim was to describe civic recreation organizations in practice in an effort to document a burgeoning area of research and ascertain where these organizations fit into the environmental movement. Through a comparative case study coupled with an organizational survey, we saw that civic recreation organizations operate in many ways like other examples of civic environmental initiatives. Civic recreation originates from the grassroots and primarily

focuses on strategies that include stewardship and collaboration with land managers. Certainly, this model offers promise for an era of collaborative natural resource management, which adds capacity to land managers while creating buy-in and trust among user groups and the community more broadly. Moreover, in the absence of public land, civic recreation organizations are forging creative private-public partnerships (MAMBA) or acting as land trusts for the purposes of preserving or creating recreational resources (CCC). In this way, civic recreation can bring communities together and foster a sense of ownership in the creation and stewardship of natural resources. Furthermore, these practices may lead to increased social capital and community capacity, valuable resources in addressing complex environmental problems at the local level. However, civic recreation organizations still remain stymied by conflicts with other user groups or prejudices within the community. These issues may lead to contentious relationships and user-specific advocacy, thereby undermining the trust, goodwill, and spirit of collaboration that civic recreation practices have the potential to cultivate.

Despite these shortcomings, civic recreation offers a tangible way for individuals to participate in improving their communities and engaging in the civic sphere. To me, this is one of the most important aspects of environmental citizenship. Efforts that reinvigorate the civic commons through practices such as civic environmentalism or civic ecology, which are locally grounded examples of citizens working to restore both the local environment and the civic fabric of their communities, holds great promise in the present sustainability project.

In Chapter 4, I sought to understand how and why individuals volunteer for civic recreation organizations and the outcomes they experience. Results indicate that civic recreation volunteers share many similarities to environmental volunteers, most notably environmental stewards. These individuals are primarily volunteering for hands-on stewardship efforts that

include activities such as trash pick-up, trail building and maintenance, ecological restoration, and species monitoring. In addition, these volunteers are most motivated by similar reasons as other environmental volunteers - wanting to make a difference and express their environmental values. Volunteers stay engaged as they begin to develop an identity and community through their affiliation, adding an important distinction between initial volunteer motivations and their enduring involvement.

Similar to environmental stewards, civic recreation volunteers report positive outcomes such as enhanced self-efficacy and learning, a deepened connection to nature and place, and a strengthened community of collaboration and shared responsibility for its natural resources. Thus, civic recreation practices can create a virtuous cycle for individuals and communities, strengthening the benefits of the practices as the work continues to build. These findings are significant, as civic recreation volunteers may not see themselves as advancing an environmental or conservation agenda – this certainly is not the message to volunteers of many civic recreation organizations. Rather, they wish to improve their own lives and their communities through improving and enhancing local recreational resources. However, individuals may "stumble" into conservation activities simply because of their recreational pursuits (K. Tidball, personal communication, July 28, 2016), thereby cultivating advocates for the environment and causes that reach outside of the recreation domain.

Such promise is further explored in Chapter 5, where I attempted to unpack the nexus between outdoor recreation, volunteering, and various measures of environmentalism. Indeed, this chapter is the most equivocal in its findings, mostly because these relationships are impossible to fully model. In trying to explore these relationships, I hypothesized that outdoor recreation creates a closer connection to nature and sense of place, which thereby leads to more

pro-environmental behaviors. Analysis of survey data did not fully support these hypotheses. While these variables were all correlated, outdoor recreation did not predict connection to nature or sense of place. By contrast, through qualitative survey responses, it was very clear that outdoor recreation created a sense of place for many respondents, particularly within the place-meaning dimension. This leads us to conclude that sense of place as it relates to outdoor recreation needs better measurement in future research. Surprisingly, outdoor recreation did predict pro-environmental lifestyle behaviors. This relationship was strengthened as outdoor recreation cultivated nature relatedness, which then in turn prompted more pro-environmental lifestyle behaviors. Such a mechanism was echoed in the qualitative interview data, which suggested that through outdoor recreation, one could develop environmental values, which would then translate into actions.

What is important about this chapter and the greatest contributions to the literature is that findings support previous arguments that an important element of the outdoor recreation-environmentalism nexus is the choice of activity. Factors that influence an individual to choose one recreational activity over another may be the very same factors that inform one's environmental values and behaviors. Furthermore, analysis of interview data led to the proposition that engagement in civic recreation volunteerism fosters stronger environmental values. If this is indeed the case, we might conclude that outdoor recreation alone does not result in environmentalism; however, if individuals become involved in civic recreation practices through other motivations – self-interest, a desire to give back to their community – they may find themselves developing stronger environmental attitudes and values that ultimately lead to more pro-environmental behaviors. This is a significant finding that I wish to explore in future research.

Final Conclusions

Back to the question of whether civic recreation can create environmentalists of the 21st century. Certainly, civic recreation invites local participants to engage in the management and stewardship of natural resources. As argued earlier, this model of civic environmentalism holds promise in creating sustainable communities and strengthening essential elements of the democratic project. Indeed, pre-requisites to these outcomes (increased social capital, empowerment and self-efficacy, and collaboration) were perceived through my analysis. Whether civic recreation can translate into other areas of environmental concern remains to be seen. I am skeptical that civic recreation practices can create the necessary structures to confront other problems that are more complex, contentious, or large-scale; similar critiques offered of other civic environmental initiatives (Weber, 2000; Morris, 2008). In this way, civic recreation's promise lies mostly in the natural resource management domain.

What I do believe is that civic recreation has the power to transform our relationship to the natural world, inspiring a stewardship ethic where we see ourselves as part of nature and are motivated to protect and steward our environment out of enlightened self-interest. Van den Born et al. (under review) argue the traditional justifications for environmental protection that are either made on the basis of instrumental use or intrinsic value - e.g. save nature because it has value *for humans* versus save nature because it has *values inherent to itself* – are too binary and have failed to garner the support necessary to make significant headway toward the environmental agenda. Indeed, the conservation versus preservation argument that dominated early American environmentalism created a dualistic view of nature, one in which humans' very presence degraded pristine nature. While I do not wish to debate the ethics of wilderness or their value and importance in the environmental achievements of the 20th century, this philosophical

battle established an antagonistic relationship between humans and nature. As Cronon (1996) powerfully articulated,

> This, then, is the central paradox: wilderness embodies a dualistic vision in which the human is entirely outside of the natural. If we allow ourselves to believe that nature, to be true, must also be wild, then our very presence in nature represents its fall . . . To the extent that we celebrate wilderness as the measure with which we judge civilization, we reproduce the dualism that sets humanity and nature at opposite poles. We thereby leave ourselves little hope of discovering what an ethical, sustainable, honorable human place in nature might actually look like. (p. 17)

Thus, Cronon (1996) argues we need to find a view of nature where human systems and natural systems can live symbiotically – "we need an environmental ethic that will tell us as much about *using* nature as about *not* using it" (p.21), where we can find "the wildness in our own backyards, or the nature that is all around us if only we have the eyes to see" (p.22).

To see ourselves outside of nature may be no longer possible in the 21st Century. Social-ecological systems research highlights the inherently coupled nature of human and natural systems (Liu et al., 2007). Some argue we have entered a new era of the Anthropocene, where human systems are now a global geophysical force (Crutzen, 2006). If humans are a dominant force at a global and geological scale, we need a renewed conception of our place in nature where we do not "represent its fall" but can be powerful forces in rejuvenating, revitalizing, and restoring natural systems.

Civic recreation is one way in which humans can play a positive role in creating and improving recreational resources that are embedded in local communities. While civic recreation organizations do not always express an environmentally focused agenda, I believe their activities are fostering advocates for open spaces and livable communities that provide quality of life enhancing recreational amenities. As one interviewee aptly articulated,

> I believe in wild places that are accessible by humans that are close to home . . . It's not

> enough to just love nature, you have to live in it and enjoy it. Aldo Leopold was a hunter, and a recreator – he went out in the woods and kayaked, and he did those things. And that's the kind of environmentalist that I think BMA members are. We would fight to the death to prevent development on our open space, in part because we enjoy using those open spaces to rejuvenate from our daily lives . . . (BMA-02)

Secondly, a reconceived relationship with nature sees connection to nature as an essential element of human flourishing. Environmental virtue theorists tell us that the definition of the good life is to lead a life of flourishing, or Eudemonia in Greek philosophy. "In classic Greek thought . . . eudemonic happiness . . . stresses the idea of a truly meaningful and well-lived life" (van den Born et al., under review, p.4). Eudemonia is achieved through relationships - "connectedness with other people, with society, with nature and the world" (van den Born et al., under review). If humans have severed their relationship to the natural world, there is little chance to truly live a life of flourishing. Barry (1999) explains,

> At the same time, humans also need to relate to their environment culturally and symbolically as a condition for human flourishing . . . Unlike other species, humans do not simply need an 'ecological niche' or 'habitat', but over and above that humans require a sense of place as a condition for their flourishing . . . part of this distinction between 'survival' and 'flourishing' . . . rests on the ways in which our species relates to the natural environment in cognitive or symbolic-culture ways. (p. 283- 284)

Outdoor recreation and environmental stewardship is one way for people to reconnect with nature, find a sense of place, and relate to their environment in symbolic-cultural ways. Indeed, Chapter 4 and 5 highlight the ways in which volunteerism and outdoor recreation not only foster a connection to nature and sense of place, but also create communities that individuals' strongly identify with and feel inspired to pursue shared goals.

Personal growth, or self-improvement, and living a life of meaning are also pillars of eudemonia (Ryff and Singer, 2008). Here, I argue outdoor recreation, and adventure in particular, are avenues toward those ends. Throughout history, many different cultures have looked “to the mountains as sources of meaning, renewal, wisdom, creativity, and vision”

(Bernbaum, 2002, p.134). From Moses's ascent of Mount Sinai, ancient Chinese and Japanese philosophers reverence for the mountains, Native American Plains Indian's vision quests to the summit, to early European mountaineers, the spirit and mythology of the mountains has played a vital role. This suggests that there is something instinctual in outdoor adventure, shared across time and place, in which mountains become "places of inner experience that have the power to transform our views of ourselves and the world around us" (Bernbaum, 2002, p. 134).

Thus, outdoor recreation can teach us lessons of humility and respect for the inherent risks in nature, urging us to acknowledge and reconcile our dependence on nature and the embeddedness we have with the natural world. These pursuits help us gain the virtues necessary to flourish, achieve self-realization, and find a more meaningful relationship with our environment. As Terry Tempest Williams (2002) eloquently articulates,

> Mountains inspire our highest selves . . . When we encounter mountains in wild places we experience the peak of our own humility. Whether we are standing at the summit or are paying respect from below, we are flushed with awe . . . We are in transition from a non-sustainable world to a sustainable one. We are hungry for new stories that can offer us a way to live more fully in place like a tight, strong rope that will hold our weight while we figure out our next move. We are searching for new terrain, not necessarily on mountain tops, but within our own souls that will allow us to find a generosity of spirit, a wildness of the heart that is brave and bold. [This] is a testament to the morality of the wild and the altruism it fosters in the name of survival. (p. xvii-xxi)

Certainly, not all people who recreate outdoors find such transcendence in their experience. Today's adventurers, motivated by achievement and physical pursuit, may not be seeking a spiritual, transformative experience. As noted by several interviewees, it really depends on how you are brought into the activity. With climbing in particular, many people are learning to climb indoors and only seek outdoor climbing as an extension of their physical pursuits at the gym. However, simply recreating outside allows us to connect to a landscape and a place, leaving an imprint on our minds and spirit whether we welcome it or not. I cannot help but think that these

experiences make us a little more appreciative of our environment, and a little more in touch with our inner selves.

I hesitate to conclude that outdoor adventure recreation is an essential component of 21st century environmentalism. In many ways, I believe environmentalism has split into two, if not more strands. On the one hand, we have the legacy of preservation embodied by the conservation movement, that has extended its reach internationally in pursuit of biodiversity and wildland conservation. On the other hand, we have a new era of sustainability advocates, who emphasize low-carbon economies, sustainable lifestyles, resilience and adaptation, to name a few. While these movements share many similarities, I do not necessarily see them united. Evidently, this is playing out in my own hometown of Boulder, where environmentalists advancing a 'smart growth' and 'urban density' vision are bumping up against the environmentalists of the 60s and 70s, who were prescient enough to create a huge swath of open space but want to maintain their suburban lifestyles. As one interviewee noted,

> The old environmental perspective is development equals bad. The new environmental perspective is about creating sustainable, livable cities . . . The suburban lifestyle has to die for the planet to live. (BMA-02)

Whether civic recreationists fall into either camp of environmentalism is still unclear. What I can conclude is civic recreation creates advocates and stewards for recreational resources in local areas that help strengthen communities and bring people in closer connection to nature and place.

I am not the only one to reach these conclusions. Recently, I came across a High Country News issue devoted to the *New Advocates of the West* (June, 2016). The opening paragraph reads, "The West has long been a mecca for hikers, kayakers and campers. Getting recreationists to help preserve the landscapes they love isn't always easy, though. Now, some Western activists

are using outdoor sports as a stepping-stone toward conservation." Not surprisingly, this headline caught my attention. More and more, I see signs that the outdoor recreation community is being touted as a player in the environmental/conservation movement.

What really piqued my interest, however, were the sub-captions that highlighted various examples of "Western activists," spanning Veteran, Native American, and Latino organizations. In creative ways, these organizations are connecting people with their environments through outdoor adventure that is also accessible to marginalized populations, especially in regards to outdoor recreation. Perhaps the single most important limitation to my work is the lack of diversity included in the samples. Early on in planning my dissertation, Dr. Krasny urged me to include minority groups in my research. I reached out to Outdoor Afro, a nation-wide organization that connects African Americans to the outdoors. Denied access to their membership, I continued down the path of my research design, which bounded my sample by the Outdoor Alliance. However, if civic recreation truly is to bring environmentalists into the 21st century, it will fail if not accessible and meaningful to the diversity that comprises the United States. If left to upper middle class white men, civic recreation is no better than the elitist environmentalism of the early 20th century. Here is a rich area of future research. Are minority groups getting involved in outdoor recreation or recreation-based volunteerism, and if so, how? What are the barriers that inhibit these populations from participating and how might we overcome them? In my work as an outdoor educator, this area of research is very important, as outdoor, and environmental education to a lesser degree, are comprised of a primarily white population of students. When thinking about creating advocates for the environment, I am always reminded of the next generation. Who is going to carry the torch? To me, getting kids of all races and backgrounds excited about nature is one step toward winning the environmental

issue of our time.

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Appendix A: Interview Questions with Expert Staff from Access Fund and IMBA

1. Why did your organization emerge?
2. Why do people join your organization?
3. What are the most important issues nationally, regionally, and locally that you see facing rock climbers/mountain bikers?
    - What are the biggest challenges that have confronted the mountain biking/rock climbing communities?
    - What are the biggest accomplishments that you have observed in the mountain biking/rock climbing communities?
4. Which strategies are used to address these issues? Which strategies seem to be the most successful and why?
5. How do local groups organize to protect, create, steward, or conserve their recreational resources?
6. How does your organization work with these local initiatives?
7. How does your organization define success and what are some of the best examples of this?
8. What are any barriers/challenges toward success?
9. What is your perception of membership involvement? How many members actually volunteer on the ground? What other types of activities do they participate in related to their affiliation with your organization?
10. What is your perception of the connection between outdoor recreation and environmental values?
11. What are the environmental, individual, and community-level outcomes of these projects/practices that have been observed?
12. Does your organization try to measure, assess, or evaluate these outcomes? If so, how?
13. Why do you choose to do the work that you do? What got you started in this line of work?
14. Are you yourself a rock climber/mountain biker? If so, what motivates you to pursue this activity?
15. How do you define recreation-based stewardship and conservation?
16. Are there any other people in your organization with whom you think it would be useful for me to speak with? If so, may I use your name when contacting them?
17. Are there any other people outside of your organization with whom you think it would be useful for me to speak with? If so, may I use your name when contacting them?

Appendix B: Interview Questions with Key Informants in Local Cases

1. Can you provide background information about this project/your organization?
    a. Why did your organization emerge? Or How did this project emerge?
    b. Who was involved?
    c. What were the issues that needed to be addressed?
    d. What were the activities that went on? Which ones did you yourself participate in?
    e. What barriers/challenges were confronted along the way? Were these challenges addressed/resolved? If so, how?
2. What tools and strategies were employed?
    a. How have they changed over time?
    b. Which seemed to be the most effective and why?
3. What resources were needed to make your organization/this project successful?
    a. Did you have access to these resources and how did you get access?
    b. Which seemed to be the most important?
    c. Which seemed to be the most difficult to obtain?
4. Do you think that this project/your organization is successful and why?
    a. How do you define success?
    b. Do you feel that this project created trust among various participants? If so, how?
    c. Do you feel this project empowered participants? If so, how?
5. Can you describe the management structure that exists now in regards to the recreational resource?
    a. Has this changed as a result of the project/your organization's involvement?
    b. What are the current benefits and challenges of this structure?
6. Why did you become involved with this organization/project?
    a. What do you find most rewarding about your involvement?
    b. What do you find most frustrating about your involvement?
    c. Could you describe the outcomes that you yourself experienced?
    d. What have you learned through your participation in this project/organization?
    e. Are there any important changes in how you relate to your environment as a result of your involvement?
    f. Are there any important changes in how you relate to your community as a result of your involvement?
    g. Are there people that you interact with during this project that you normally would not? Do you still interact with these people? If so, how?
7. What motivates you to participate in outdoor recreation?
8. Why do you think other individuals become involved with your organization/project?
    a. What motivates these other individuals?
    b. What are the barriers/challenges to getting individuals involved/engaged?
9. What do you think is the connection between outdoor recreation and environmental values?
10. How do you define stewardship and conservation? How do you define recreation-based stewardship and conservation?

11. Are there any other people within your organization or involved with your organization/this project with whom you think it would be useful for me to speak with? If so, may I use your name when contacting them?

APPENDIX C: Codebook for Qualitative Data

Coding Instructions:

- Read through the full transcript prior to beginning coding
- Review codebook before coding
- When coding:
    - Code entire sentences, including any necessary contextual information around that sentence (when appropriate or necessary)
    - If coding for a single word using a 'find' search, read the entire question response by the subject in order to capture any context surrounding the word in question
    - Code for a single category of code at a time (i.e. code an entire document for all codes under super-code 'Orghsty' and then return to the beginning of the transcript to code for all codes under super-code 'Mission')

CODES:

- ORGHSTY – Anything that has to do with organizational history, specific description of events (these will be used to help draft the case description and further analyzed after that).
- DRIVER – Reasons for the organization or project to emerge
    - EV DEGRADATION– Mentions environmental degradation or desire to improve environmental quality
    - ACCESS THREAT– Mentions access threat, recreational area being closed to access
    - ACCESS IMPROVE – Mentions desire to gain access or improve access to the recreational resource
    - INNOVATOR – Mentions an individual or group of individuals who saw an opportunity to create/improve on the recreational resource
- MISSION – Describes the goals and objectives of the civic recreation organization/group (note: this is different from strategies the organization employs. Here it is an end, whereas strategies are a means).
    - ACCESS – secure access to the recreational resource
    - ADVOCACY – build support for and promote policies and action
    - TRAILS – build and maintain trails
    - CONSERVE – conserve the recreational resource
    - EDUCATE – educate the user group
    - COMMUNITY – build community
    - LIFE – promote healthy lifestyles and quality of life
    - POLICY – change or influence policy
    - REC – promote the recreational activity
    - RESP-REC – promote responsible recreation

    - SAFE – promote safety
    - STEWARD – work to steward the recreational resource
    - VOL – promote volunteerism
    - YOUTH – engage and/or educate youth
- ACTIVITIES – Describes civic recreation practices and activities of the project or group.
    - TRAIL – Mentions stewardship activities that pertain to trail building or trail restoration
    - TRASH – Stewardship activities that pertain to trash removal or cleanup
    - RESTOR – Stewardship activities that pertain to restoring the environment
    - ADVOCACY – Mentions organizing
    - ACQ – Purchase and acquisition of land
    - ED – Mentions activities aimed at educating the user group
    - ED-COM – Mentions activities aimed at educating others about the recreational activity or user group
    - EVENTS – Mentions organizing events to engage the community
    - ACCESS – Mentions activities oriented to address access issues
    - PUBPOL – Mentions activities aimed at influencing, engaging in, or changing policy
    - VOL – mentions activities oriented around engaging volunteers
- EFFECTIVE – Feelings and assessment of how effective or successful the organization has been at achieving its mission, goals, and objectives
    - DEF – Mentions the definition of success
    - UNSUCCESS – Mentions being unsuccessful at achieving mission, goals, objectives
    - SUCCESS – Mentions being successful at achieving mission, goals, and objectives
- LIMITS – Types of limits or barriers that prevent the organization from achieving its mission, goals, or objectives.
    - CAPACACITY– Mentions lack of financial, staff, time, volunteers, or other capacity that limits the organization from achieving its goals
    - POLITICS – Mentions local politics as a barrier
    - LANDMGT – Mentions land management structure or land manager as an impediment
    - ORGEFFECT – Mentions lack of organizational effectiveness (e.g. poor management, apathetic volunteers, lack of vision, etc.)
    - POLICY – Mentions policies that limit the organization
    - RECREATIONISTS – Mentions uneducated or rogue recreationists that impede the organization's efforts
- STRATEGY – Types of strategies that the organization employs to achieve its mission, goals, and objectives.

    - ADVOCACY
    - STEWARD - Stewardship activities that do not involved trail building and maintenance
    - TRAIL – Building and maintaining trails
    - EDUCATION – Educating the user group about responsible recreation
    - EVENTS – Organizing events to build community cohesion or engagement
    - VOLUNTEER – Promoting volunteer engagement
    - NATSUPPORT – Gaining support from national organizations like the Access Fund, IMBA, or Outdoor Alliance
    - ORGPARTNER – Forming partnerships with other organizations
    - MGRPARTNER – Forming partnerships with land managers
    - RELATIONSHIPS – Mentions how building relationships has promoted success
- OUTCOMES – Different outcomes that have been observed as a result of civic recreation practices
    - EVIMPROVE – Mentions that the environment has been improved, preserved, or conserved
    - RECIMPROVE – Mentions that the quality of the recreational resource has been improved, preserved, conserved
    - ACCESS – Mentions that access to the recreational resource has been improved
    - RELATIONSHIPSMGRS – Mentions that relationships with land managers has been improved
    - PARTNERSHIPS – Mentions that there are better relationships and collaboration with other organizations or partners
    - RESREC – Mentions that the user group is now more responsible
    - COMM – Mentions that the local community is now more cohesive and willing to work together
    - VOLENGAGE – Mentions that volunteer engagement is higher or better as an outcome
    - DEVLPMT – Mentions the economic and/or community development as a result of activity
    - CREDIBILITY – Mentions that the organization is now more credible
- VOLMOTIVES – Reasons that volunteers get engaged with the civic recreation organization or activity (these codes created through PCA survey analysis)
    - EVVALUES
    - CIVIC
    - IDENTITY
    - SOCIAL
    - LEARNING
    - OBLIGATION

- VOLOUTCOMES – Types of outcomes that either the individuals experienced themselves or observed from other volunteers
    - EVCONNECT – Mentions feeling more connected to the environment or place
    - MGMT – Mentions better management, collaboration, trust
    - PERSONAL – Mentions learning or feelings of personal enhancement
    - SOCIAL – Mentions feeling more connected to people or the community
- ACTORS – Describes qualities, characteristics, and values of the individual actors
    - VALUES – Mentions personal values
    - EDUC – Mentions education
    - CAREER – Mentions individual's career
- WHYREC – Reasons that the individual expresses for doing their recreational activity
    - EXERCISE – Mentions exercise as a reason
    - EVCONNECT – Mentions connection to the environment and nature as a reason
    - SOPCONNECT – Mentions connection to place as a reason
    - SOCIAL– Mentions building relationships, connecting to people or the community as a reason
    - CHALLENGE – Mentions challenge as a reason
    - ADVENTURE – Mentions adventure and exploration as a reason
- EVDYNAMIC – Discusses the relationship between civic recreation and environmental values and behaviors
    - SOP – Sense of place, connection to place
    - NR – Connection to nature and the environment
    - PEB – Pro-environmental behaviors, specifically private-sphere environmental behaviors
    - EVMNTLSM – Mentions environmentalism generally
    - VLTRSM – Mentions the connection between volunteerism and environmental values
    - STWRDSHP - Stewardship
    - LNT – Leave No Trace

APPENDIX D: Recreation-Based Stewardship Survey - Individuals

Q1 Thank you for your participation! This survey is part of a larger research project that attempts to understand the connection between human-powered outdoor recreation and environmental stewardship. A few important points: It is entirely your choice whether or not to participate in this survey. This online survey will take approximately 10-15 minutes to complete.

Please do not complete this survey if you are under 18 years of age. There are no direct benefits from participating in this study. Risks associated with this study are minimal and include the possibility that you may choose to divulge personal information regarding your demographics or opinions. However, as a participant, you will never be asked to provide identifying information. You have the right to skip most questions in the survey, if you choose. There are only a few questions that are required as part of this survey, and they are indicated clearly. If you choose not to answer these questions you can stop the survey at any time. If you should have questions or concerns before, during, or after your participation, please contact Rebecca Schild at rebecca.schild@colorado.edu. If you have questions regarding your rights as a participant, any concerns regarding this project or any dissatisfaction with any aspect of this study, you may report them -- confidentially, if you wish -- to the Institutional Review Board, 3100 Marine Street, Rm A15, 563 UCB, (303) 735-3702.

Q2 Do you agree to participate in this survey (Required)?

- ❍ Yes (1)
- ❍ No (2)

If No Is Selected, Then Skip To End of Survey

Q3 Do you participate in any of the following recreational activities (check all that apply)? (Required).

- ❑ Rock climbing (1)
- ❑ Mountain biking (2)
- ❑ Fresh water boating (kayaking, canoeing, rafting) (3)
- ❑ Backcountry winter sports (5)
- ❑ Other (6) _____

Q4 If you participate in any of the above activities, please rank how important each activity is to your life. If the activity is not applicable, you can leave it blank.

	Not at all Important (1)	A little Important (2)	Somewhat Important (3)	Very Important (4)	Extremely Important (5)
Rock Climbing (1)	❍	❍	❍	❍	❍
Mountain Biking (2)	❍	❍	❍	❍	❍
Boating (3)	❍	❍	❍	❍	❍
Backcountry Winter Sports (4)	❍	❍	❍	❍	❍
Hiking (5)	❍	❍	❍	❍	❍
Other (6)	❍	❍	❍	❍	❍

Q5 Of the activities you checked above, how long have you participated in each of them? If the activity is not applicable, you can leave it blank.

	0-2 years (1)	2-5 years (2)	5-10 years (3)	10-15 years (4)	15-20 years (5)	over 20 years (6)
Rock Climbing (1)	❍	❍	❍	❍	❍	❍
Mountain Biking (2)	❍	❍	❍	❍	❍	❍
Boating (3)	❍	❍	❍	❍	❍	❍
Backcountry Winter Sports (4)	❍	❍	❍	❍	❍	❍
Hiking (5)	❍	❍	❍	❍	❍	❍
Other (6)	❍	❍	❍	❍	❍	❍

Q6 Are you an active member of any organizations involving the following recreation activities?

	Yes (1)
Rock Climbing (1)	❑
Mountain Biking (2)	❑
Boating (3)	❑
Backcountry Winter Sports (4)	❑
Hiking (5)	❑
Other (6)	❑

Q7 Have you volunteered in the last year for any organizations involving the following recreation activities?

	Yes (1)
Rock Climbing (1)	❑
Mountain Biking (2)	❑
Boating (3)	❑
Backcountry Winter Sports (4)	❑
Hiking (5)	❑
Other (6)	❑

If Yes Is Equal to 0, Then Skip To This question refers to your personal...If Yes Is Equal to 2-5, Then Skip To If you volunteer for more than one or...

Q8 If you volunteer for more than one organization, which one is the most important to you?

- ❍ Rock Climbing (1)
- ❍ Mountain Biking (2)
- ❍ Boating (3)
- ❍ Backcountry Winter Sports (4)
- ❍ They are all equally important (5)

Q9 Over the past year, please indicate the following activities you have done for each type of recreation-based organization.

	Rock Climbing (1)	Mountain Biking (2)	Boating (3)	Backcountry Winter Sports (4)	Hiking (5)
Participated in hands-on stewardship work (e.g. trail building, habitat restoration, trash clean-up, etc.) (1)	❑	❑	❑	❑	❑
Volunteered on the Board of Directors or committee (2)	❑	❑	❑	❑	❑
Volunteered to organize an event (3)	❑	❑	❑	❑	❑
Volunteered generally (activity not listed above) (4)	❑	❑	❑	❑	❑
Attended an event organized by the organization (5)	❑	❑	❑	❑	❑
Donated money to the organization (6)	❑	❑	❑	❑	❑
Attended a public meeting about an issue related to the organization (7)	❑	❑	❑	❑	❑
Participated in advocacy work on behalf of the organization (8)	❑	❑	❑	❑	❑

Other (9)	❑	❑	❑	❑	❑

If Participated in hands-on st... Is Selected, Then Skip To Please indicate which stewardship act...If Participated in hands-on st... Is Selected, Then Skip To Please indicate which stewardship act...If Participated in hands-on st... Is Selected, Then Skip To Please indicate which stewardship act...If Participated in hands-on st... Is Selected, Then Skip To Please indicate which stewardship act...If Participated in hands-on st... Is Selected, Then Skip To Please indicate which stewardship act...

Q10 Given that you participated in stewardship activities, please be more specific about the type of stewardship activity (check all that apply).

	Rock Climbing (1)	Mountain Biking (2)	Boating (3)	Backcountry Winter Sports (4)
Trail building (1)	❑	❑	❑	❑
Ecological restoration (2)	❑	❑	❑	❑
Managing human waste (3)	❑	❑	❑	❑
Species monitoring (4)	❑	❑	❑	❑
Controlling invasive species (5)	❑	❑	❑	❑
Building infrastructure (bathrooms, signs, campgrounds, etc.) (6)	❑	❑	❑	❑
Removing trash (7)	❑	❑	❑	❑
Other (8)	❑	❑	❑	❑

Q11 Thinking about the organization(s) that you volunteer for most frequently, please agree or disagree with the following statements that follow the phrase "I volunteer because . . ."

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
I want to learn more about the natural environment. (1)	❍	❍	❍	❍	❍	❍	❍
I can obtain new knowledge through direct, hands-on experience. (2)	❍	❍	❍	❍	❍	❍	❍
I can learn how to work effectively with others. (3)	❍	❍	❍	❍	❍	❍	❍
I want to meet new people. (13)	❍	❍	❍	❍	❍	❍	❍
I want to work with good leaders. (14)	❍	❍	❍	❍	❍	❍	❍
I feel compassionate about environmental problems. (4)	❍	❍	❍	❍	❍	❍	❍
It improves the quality of the recreational resource. (5)	❍	❍	❍	❍	❍	❍	❍
I want to give back to the places where I recreate. (6)	❍	❍	❍	❍	❍	❍	❍
I can support the organization's efforts to	❍	❍	❍	❍	❍	❍	❍

influence government action on environmental and outdoor recreation issues. (7)							
I want to mitigate my personal impact in the places where I recreate. (8)	❍	❍	❍	❍	❍	❍	❍
I want to offset my personal impact on the environment generally. (11)	❍	❍	❍	❍	❍	❍	❍
If the organization achieves its goals, my life and my children's lives will benefit. (12)	❍	❍	❍	❍	❍	❍	❍
It makes me feel positive to contribute to a bigger cause. (16)	❍	❍	❍	❍	❍	❍	❍

Q11 Thinking about the organization(s) that you volunteer for most frequently, please agree or disagree with the following statements about why you volunteer with a recreation-based organization.

	Strongly Disagree (43)	Disagree (44)	Somewhat Disagree (45)	Neither Agree nor Disagree (46)	Somewhat Agree (47)	Agree (48)	Strongly Agree (49)
People I am close to encourage me to volunteer. (14)	❍	❍	❍	❍	❍	❍	❍
Volunteering will help me to succeed in my business or career. (15)	❍	❍	❍	❍	❍	❍	❍
I volunteer more frequently in the places where I recreate most often. (17)	❍	❍	❍	❍	❍	❍	❍
Volunteering for this organization is one of the most rewarding things I do. (19)	❍	❍	❍	❍	❍	❍	❍
Volunteering for this organization says a lot about who I am. (21)	❍	❍	❍	❍	❍	❍	❍
I find that a lot of my life is organized around volunteering for this organization. (22)	❍	❍	❍	❍	❍	❍	❍
Recreation-based organizations	❍	❍	❍	❍	❍	❍	❍

are not very effective in influencing environmental and recreation issues. (24)							
I volunteer for this organization because I feel obligated as an outdoor recreator. (25)	❍	❍	❍	❍	❍	❍	❍
When I participate with this organization, I can really be myself. (26)	❍	❍	❍	❍	❍	❍	❍

Q12 Thinking about the organization(s) that you volunteer for most frequently, please agree or disagree with the following statements that complete the sentence: "As a result of my volunteering . . ."

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
The recreational resource has been improved. (1)	❍	❍	❍	❍	❍	❍	❍
There is better management of the recreational resource. (2)	❍	❍	❍	❍	❍	❍	❍
I have more confidence in the decisions that the local land managers make. (4)	❍	❍	❍	❍	❍	❍	❍
I feel that I trust my community more. (5)	❍	❍	❍	❍	❍	❍	❍
I feel that my community is stronger. (10)	❍	❍	❍	❍	❍	❍	❍
I feel that I have made a positive impact on my community. (11)	❍	❍	❍	❍	❍	❍	❍
I feel capable of making a continued positive impact on my community. (14)	❍	❍	❍	❍	❍	❍	❍
I feel more connected to people with whom I	❍	❍	❍	❍	❍	❍	❍

would not normally interact with. (6)							
I feel more connected to members of the organization. (7)	❍	❍	❍	❍	❍	❍	❍
I have made connections with people that are useful to me in my life. (9)	❍	❍	❍	❍	❍	❍	❍
I feel more connected to nature. (3)	❍	❍	❍	❍	❍	❍	❍
I feel that I have made a positive impact on the environment. (12)	❍	❍	❍	❍	❍	❍	❍
I feel capable of making a continued positive impact on my environment. (13)	❍	❍	❍	❍	❍	❍	❍
I feel more connected to the places where I have volunteered. (15)	❍	❍	❍	❍	❍	❍	❍
I have learned more about nature. (16)	❍	❍	❍	❍	❍	❍	❍
I have gained more hands-on experience and skills. (17)	❍	❍	❍	❍	❍	❍	❍

I have learned more about working with other people. (18)	❍	❍	❍	❍	❍	❍	❍
I have become more active in politics. (19)	❍	❍	❍	❍	❍	❍	❍
I have become involved in other volunteer-based or civic organizations. (20)	❍	❍	❍	❍	❍	❍	❍

Q13 Is there anything else you would like to add about why you volunteer or the outcomes that you have experienced through volunteering?

Q14 This question refers to your personal recreation. Please agree or disagree with the following statements.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
Through recreation, I form important connections to the places where I recreate. (1)	❍	❍	❍	❍	❍	❍	❍
Where I tend to recreate most often are my favorite places to be. (2)	❍	❍	❍	❍	❍	❍	❍
Where I tend to recreate most often are the most convenient places for me to recreate. (3)	❍	❍	❍	❍	❍	❍	❍
I feel that the places I recreate the most often are a part of me. (5)	❍	❍	❍	❍	❍	❍	❍
The places I recreate the most often are the best places for doing my recreational activity. (6)	❍	❍	❍	❍	❍	❍	❍
The places I recreate most often say very little about who I am. (7)	❍	❍	❍	❍	❍	❍	❍

I feel happiest when I'm recreating in my favorite places. (8)	❍	❍	❍	❍	❍	❍	❍
The places I recreate most often are pristine natural environments. (9)	❍	❍	❍	❍	❍	❍	❍

Q15 Are there some places where you recreate that you feel more connected to than others? If so, why?

❍ Yes (9) _____

❍ No (10) _____

Q16 Please agree or disagree with the following statements.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
My relationship to nature is an important part of who I am. (1)	❍	❍	❍	❍	❍	❍	❍
I am not separate from nature, but a part of nature. (2)	❍	❍	❍	❍	❍	❍	❍
I always think about how my actions affect the environment. (3)	❍	❍	❍	❍	❍	❍	❍
Humans have the right to use natural resources any way they want. (4)	❍	❍	❍	❍	❍	❍	❍
Conservation is unnecessary because nature is strong enough to recover from any human impact. (5)	❍	❍	❍	❍	❍	❍	❍
Animals, birds and plants should have fewer rights than humans. (6)	❍	❍	❍	❍	❍	❍	❍
Nothing I can do will change problems in	❍	❍	❍	❍	❍	❍	❍

other places on the planet. (7)							
The thought of being deep in the wilderness, away from civilization, is frightening. (8)	❍	❍	❍	❍	❍	❍	❍
I care deeply about many environmental issues. (9)	❍	❍	❍	❍	❍	❍	❍

Q13 Please indicate whether you have done any of the following activities:

- ❑ Donated money to an environmental organization in the last year. (1)
- ❑ Written a letter to a politician about an environmental issue in the last year. (2)
- ❑ Chosen not to fly because of the environmental impact in the last year. (3)
- ❑ Read an environmental magazine in the last 3 months. (4)
- ❑ Attended a protest about an environmental issue in the last year. (5)
- ❑ Attended an event about an environmental issue in the last year. (6)

Q14 In general, in a typical week, I do the following activities (choose all that apply):

- ❑ Recycle as much as I can. (1)
- ❑ Purchase local food. (2)
- ❑ Compost. (3)
- ❑ Carpool. (4)
- ❑ Bike or walk to work. (9)
- ❑ Take public transportation. (5)
- ❑ Regularly turn off the lights when not in the room. (6)
- ❑ Regularly take showers under 5 minutes long. (7)
- ❑ Put my clothes out to dry rather than use a dryer. (8)

Q17 How old are you?

Q18 What gender do you identify with?
- Male (1)
- Female (2)
- Other (3)
- Prefer not to respond (4)

Q19 What is your race?
- American Indian or Alaskan native (1)
- Black or African American (2)
- Asian (3)
- Native Hawaiian and other Pacific Islander (4)
- White (5)
- Other (6)
- Two or more races (7)
- Prefer not to respond (8)

Q20 What is your highest completed level of education?
- High School/GED (1)
- Some college (2)
- Two-year college degree (3)
- Four-year college degree (4)
- Masters degree (5)
- Doctoral or terminal degree (6)

Q21 What is your annual household income?
- Less than $35,000/year (1)
- $35,000-$41,999/year (2)
- $42,000-$51,999/year (3)
- $52,000-$58,999/year (4)
- $59,000-$74,999/year (5)
- $75,000 - $100,000/year (6)
- $100,000 - $150,000 (7)
- Over $150,000/year (8)
- Prefer not to respond (9)

Q22 Do you work full- or part-time?
- Full-time (1)
- Part-time (2)
- Unemployed (3)
- Retired (4)

Q23 Are you a student?
- Yes (1)
- No (2)

Q24 How much leisure or free time do you feel you have in average week?
- Less than 5 hours a week (1)
- 5-10 hours a week (2)
- 10 - 15 hours a week (3)
- More than 2 days a week (5)

Q25 What best describes your political affiliation?
- Republican (1)
- Democrat (2)
- Libertarian (3)
- Green Party (4)
- Independent (5)
- Other (6)

Q26 What state is your primary residence?

Q27 Is there anything else that you would like to add about this topic that we did not ask you in the survey?

Appendix E: Recreation-based Stewardship Survey - Organizations

Q1 Thank you for your participation! This survey is part of a larger dissertation project that attempts to understand the connection between outdoor recreation and environmental stewardship. A few important points: It is entirely your choice whether or not to participate in this survey. This online survey will take approximately 10-15 minutes to complete. Please only complete one survey per organization/group. There are no direct benefits from participating in this study Risks associated with this study are minimal and include the possibility that you may choose to divulge personal information regarding your demographics or opinions. However, as a participant, you will never be asked to provide identifying information. You have the right to skip most questions in the survey, if you choose. There are only a few questions that are required as part of this survey, and they are indicated clearly. If you choose not to answer these questions you can stop the survey at any time. Please do not complete this survey if you are under 18 years of age. If you should have questions or concerns before, during, or after your participation, please contact Rebecca Schild at rebecca.schild@colorado.edu. If you have questions regarding your rights as a participant, any concerns regarding this project or any dissatisfaction with any aspect of this study, you may report them -- confidentially, if you wish -- to the Institutional Review Board, 3100 Marine Street, Rm A15, 563 UCB, (303) 735-3702.

Q2 Do you agree to participate in this survey (Required)?

- ❍ Yes (1)
- ❍ No (2)

If No Is Selected, Then Skip To End of Survey

Q3 What is the name of your organization?

Q4 What is your organization's mission statement or goals?

Q5 How does your organization work to achieve its mission and goals?

Q6 What is the main user group that your organization serves?

Rock Climbing (1)

Mountain Biking (2)

Other (3) _____

Q7 What are the primary programmatic functions that your organization provides? Please indicate the percentage of time/resources your organization devotes to each function.

_____ Advocacy (1)
_____ Hands-on stewardship (3)
_____ Land acquisition (15)
_____ Education-general (4)
_____ Environmental education (5)
_____ Public policy (11)
_____ Community building and/or outreach (7)
_____ Events (8)
_____ Volunteer programs (9)
_____ Working to preserve recreational access (12)
_____ Electoral policy (14)
_____ Other (10)

Q8 In your opinion, how successful is your organization at achieving its mission?

- Extremely unsuccessful (10)
- Very unsuccessful (4)
- Somewhat unsuccessful (5)
- Neither unsuccessful or successful (6)
- Somewhat successful (7)
- Very successful (8)
- Extremely successful (9)

Q9 In your opinion, what is the biggest accomplishment(s) your organization has acheived?

Q10 In your opinion, how effective are the following tactics or strategies for achieving your organization's mission?

	Very Ineffective (37)	Ineffective (38)	Neither Effective nor Ineffective (39)	Effective (40)	Very Effective (41)
Partnerships with other recreation-based organizations. (1)					
Partnerships with land managers. (9)					
Advocacy (2)					
Hands-on stewardship (3)					
Education (4)					
Community events (5)					
Engaging volunteers (6)					
Support from a regional or national organization (7)					
Other (8)					

Q11 Please elaborate on why the above are effective or ineffective.

Q12 In your opinion, how important are the following as barriers to achieving your organization's mission?

	Not at all Important (24)	A Little Important (25)	Somewhat Important (27)	Very Important (28)	Extremely Important (29)
Lack of funding (1)					
Resistant land managers (2)					
Volunteer engagement (3)					
Volunteer retention (7)					
Lack of expertise (4)					
Lack of paid staff (5)					
Lack of partnerships (8)					
Land management structure (9)					
Other (6)					

Q13 What are the biggest barriers to achieving your organization's mission?

Q14 Please indicate the following outcomes that have been observed as a result of your organization's efforts.

	Strongly Disagree (37)	Disagree (38)	Somewhat Disagree (39)	Neither Agree nor Disagree (40)	Somewhat Agree (41)	Agree (42)	Strongly Agree (43)
The recreational resource has been improved. (1)							
Relationships with land managers have been improved. (2)							
The recreational user group is more responsible where they recreate. (3)							
There is more collaboration between different recreational user groups. (4)							
The local community is more cohesive and able to work together. (5)							
More land has been conserved. (6)							
Other (7)							

Q15 Please list any other outcomes that have been observed as a result of your organization's efforts not listed above or elaborate on the above (i.e. # of volunteer hours, acres of land conserved, # of partnerships, etc.).

Q16 What is the primary geographic scope that your organization serves? Please indicate the state or region your organization serves in the text box.
Local (1-2 counties) (1) _____
State-wide (2) _____
Multiple states (3) _____

Q17 Please indicate what type of land your organization works on. Check all that apply
Private (1)
City - public (2)
County - public (3)
State - public (4)
National Forest (5)
National Park Service (6)
Bureau of Land Management (7)
National Wildlife Refuge (8)
Wilderness (9)
Land trust/conservation easements (10)

Q18 How old is your organization?
- 0-2 years (1)
- 2-5 years (2)
- 5-10 years (3)
- 10-15 years (4)
- 15-20 years (5)
- 20-25 years (6)
- 25-30 years (7)
- Older than 30 years (8)

Q19 What is your management type?
Independent non-profit (1)
Chapter or affiliate of a larger non-profit (3)
Community group or voluntary association (5)
For profit organization (6)
Government organization (7)
Individual (9)
Other (8) _____

Q20 How many of the following does your group have? Please estimate and fill in the blanks.
Full time paid staff (1) _____
Part time paid staff (2) _____
Full-time volunteer staff (4) _____
Part-time volunteer staff (5) _____
Community/project-based volunteers (6) _____
Consultants (7) _____
Student interns (8) _____
Contractors (9) _____

Q21 What is your organization's annual budget?
- ❍ $0-$1,000 (1)
- ❍ $1,000 - $10,000 (2)
- ❍ $10,000 - $50,000 (3)
- ❍ $50,000 - $100,000 (4)
- ❍ $100,000 - $20,000 (5)
- ❍ $200,000 - $500,000 (6)
- ❍ $500,000 - $1 million (7)
- ❍ $1 - $2 million (8)
- ❍ $2-$5 million (9)
- ❍ Greater than $5 million (10)

Q22 Is there anything else that you would like us to know about your organization that was not asked?

Q23 Would you be willing to participate in a follow up interview about your organization? If yes, please provide the best contact to reach you.
- ❍ Yes (9) _____
- ❍ No (10)