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Exploring youth engagement in environmental volunteering: Findings from a cross-case analysis

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Exploring youth engagement in environmental volunteering: Findings from a cross-case analysis

by

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A THESIS

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Abstract

Despite interest in youth-environment interactions, the convergence of “youth” and “environmental volunteering” has received little attention. I conducted a qualitative, cross-case study to explore how and why youth, aged 18 and younger, participate in environmental volunteering. Transcripts from interviews with volunteer coordinators and youth volunteers were coded to understand the similarities and differences in the structure, motives, challenges, and benefits of youth engagement. Although often overlooked as environmental volunteers, my findings suggest that children and teenagers can and are making contributions as volunteers. Experiences of youth volunteers differ in important ways from adults; however, a number of parallels can be drawn. A unique set of functions specific to the experiences of environmental volunteers emerged, suggesting the need for researchers and practitioners to take into account the meaningful ways that environmental volunteer motives differ from other contexts. A rich opportunity exists to connect youth with the environment through volunteering.

Preface

Play with Purpose: Personal Reflections on Environmental Volunteering

While there are many scholarly reasons for undertaking a study on environmental volunteerism, this research also emerges from a personal space. In the past, I have donated my time, energy, and financial resources to environmental volunteering. The data I collected alongside many other volunteers as a wildlife monitor helped inform management decisions about wildlife species that I care deeply about. Although I gave much to the environmental organizations I volunteered for, I left my experiences feeling that volunteering had provided me with as many gifts as I gave.

Wildlife monitoring offered some of the most exciting, fascinating, and rewarding moments I have spent interacting with the natural environment. The things I learned as a volunteer and the memories I made have continued to serve me long after the experiences ended. Volunteering brought me to new places, provided me with an opportunity to meet new people, and offered a chance to have close encounters with other living things. I rediscovered the fun that can come from searching wetlands for frogs, combing grasslands for butterflies, and wading through ponds and streams looking for fish. Wildlife monitoring pulled me back outside and provided me with a new opportunity to explore the world around me, and the structure of the volunteer experience allowed me to ‘play with purpose’.

Participating in wildlife monitoring motivated me to learn more about environmental volunteerism and the impacts it can have on people, and other living things. Although I did not originally intend to focus my research on youth, children and teens became the centre of my study. I did not experience wildlife monitoring until I was a young adult, but I have wondered how the trajectory of my life might have been shaped

had I experienced environmental volunteering when I was younger. When I read a number of studies that suggested young people's opportunities to interact with the natural environment in their day-to-day lives had become limited (Charles & Wheeler, 2012; Clements, 2004; Louv, 2005; Miller, 2005; Muñoz, 2009; Pyle, 2003), I felt concerned for youth and for the health and well-being of the environment. These studies led me to consider what possibilities existed to connect youth with the environment through volunteering. Although research indicates that teenagers in Canada volunteer in large numbers, they rarely seem to access environmental organizations or causes as volunteers (see Hall et.al. 2007). Is environmental volunteering something that youth are, or can be, interested in participating in? How would they benefit from their experiences? It is these initial questions, combined with personal experiences of volunteering which led me to explore youth engagement in environmental volunteering.

In the following chapter, I continue to build the context for my study and situate this inquiry within past research on the benefits of youth-nature and youth-volunteer interactions. I address gaps that exist in previous studies and outline the questions that guided my study of youth engagement in environmental volunteering. In Chapter Two, I present a theoretical framework for understanding and assessing volunteer motivation and review past research that provides insight into how age and context might influence people's motivations for volunteering. I provide a rationale for the method and research tools I selected to answer my research questions in Chapter Three. Chapters Four through Six present my findings from a cross-case analysis on youth engagement in environmental volunteering. In Chapter Seven, I discuss key findings from my study in

relation to past research, and I make recommendations for practice and future research based on these findings in Chapter Eight.

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This project was supported by many people. I am deeply grateful to the young volunteers, who never failed to impress me with their enthusiasm to participate in my project, and for the exuberance and passion they demonstrated toward volunteering for environmental organizations and causes. I am similarly grateful to the volunteer coordinators who took time out of their busy schedules to meet with me and who invited me into their place of work, or opened up their home to me. Without the interest, time, insight, and commitment from the participants in my study, this work would not have been possible.

As I navigated my way through my first major research project, I found myself on more than one occasion lost in my data. I am grateful for the encouragement, advice, and patience that I received from my supervisors, Dr. Dianne Draper and Dr. Kathleen Rettie. Thank you for giving me the space and freedom to explore this topic as I chose, and helping to direct my research meanderings into the study at hand. I am thankful for the many wonderful conversations shared with fellow students and professors at the University of Calgary. Our discussions inspired me, supported my work, and added richness to my graduate school experience. I am grateful to Dr. Myrka Hall-Beyer and Dr. Mary-ellen Tyler. Thank you for reviewing my work and for the thought provoking questions and insightful comments you offered during my thesis defense. The financial support I received from the Government of Alberta Graduate Student Scholarship and the Queen Elizabeth II Graduate Scholarship facilitated my ability to attend university and is greatly appreciated. I am grateful for the talent and assistance of Robin Poitras in creating maps for my project.

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This work is dedicated to my Grandmother, Grace Puckett, and my Mother, Maureen Puckett. You accompanied me on many adventures along the sea shore, encouraged me to explore the nooks and crannies of the outdoor world during my childhood, drew my attention towards the joys and wonders of nature, and instilled in me a love and concern for other living things that persists today.

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List of Abbreviations

Abbreviations	Definition
FOFC	Friends of Fish Creek
SODC	Shaw Ocean Discovery Centre
KNP	Kejimikujik National Park

Chapter One: **An Introduction to Youth Engagement in Environmental Volunteering**

In this chapter I provide a rationale for pursuing a study on youth involvement in environmental volunteering. I clarify key terms, describe past studies, address gaps in previous research, and outline the questions that guided my study.

1.1 Clarifying Key Terms

Terms such as “youth”, “environment”, “environmental volunteering”, and “environmental stewardship” are concepts of central importance to understanding my study. In the following section I clarify my intended meaning for each, before reviewing past research that suggests the need for a study on youth engagement in environmental volunteering.

1.1.1 Defining youth

For the purpose of this study, youth describes an individual, or group of individuals, aged 18 and younger. “Young people” and “young volunteers” are used as alternate descriptors for youth throughout my work. I have used the terms “adolescents and teenagers” to describe participants aged thirteen and older, and the terms “younger youth”, “child”, and “children” are used to describe participants twelve years of age or younger.

I recognize that youth and related terms are socially constructed concepts¹, and that the meaning of youth and related terminology (e.g., child, children, childhood, and teenager etc...) will be constructed differently by different authors. Currently youth, aged 18 and younger, are largely absent from discussions of environmental volunteering. Authors of peer reviewed academic studies, government and non-government

¹ See Holloway and Valentine 2000 for a discussion of the social construction of childhood

publications on volunteerism and the websites of organizations engaging volunteers each use the word “youth” to describe a wide range of ages². For the purpose of clarity and building an understanding of youth engagement in environmental volunteering, I have made an effort to identify other authors’ definitions of youth and related terminology when reviewing the work of others. I isolate youth as the subject of my study, not to suggest that they are less than adult, but as a way to make space in the environmental volunteer literature for their voices.

1.1.2 Defining nature, natural environment, and environment

Similar to the concept of youth, the terms nature and natural environment are socially constructed, and definitions of each are both “complex and contested” (Clayton & Opatow, 2003, p. 6). The intended meaning of the word environment, in environmental volunteering, is influenced by the context in which it is used by volunteers and the organizations engaging them. While some environmental volunteers may be enlisted to help monitor a particular species, a turtle for example, other volunteers may help organizations educate the public about an entire ecosystem, such as a park, or an ocean. In ‘Free-Choice Learning and the Environment’, Falk et al. (2009) frame their discussion of environmental learning with this definition of environment:

In environmental education, the term “environment” generally refers to the biophysical, natural, and built physical environments. Environmental education also incorporates the social environment in terms of using the cultures, people, and institutions of people as a filter to better understand human impacts on and as a way to address the physical world (p.6).

² For example, youth has been used by researchers to describe individuals 15 to 34 years olds (Locke & Rowe, 2006), individuals between the ages of 12 and 17 (Tessier et al., 2006), as well as individuals between the ages of 13 and 20 (Zorzi, R. & Gagne, 2012).

I situate my study within Falk et al.'s (2009) broad understanding of the environment, which views humans, culture, and the biophysical environment as interrelated. However, in my study the words nature, natural environment, and environment are often meant to describe something more tangible than captured in the definition of environment provided by Falk et al. (2009), reflecting a meaning similar to the one proposed by Clayton and Opatow (2003) in "Identity and the Natural Environment". The authors describe the terms nature and the natural environment in "the average person's sense" (p.6), to refer to living components of the environment (such as trees and animals), and to non-animate natural environmental features, such as the ocean shore, and the authors emphasize that "the experience of nature can take place in urban settings as well as in remote wilderness areas" (Clayton & Opatow, 2003, p. 7).

1.1.3 Defining volunteer, environmental volunteering, and environmental stewardship

For the purpose of my study I define volunteerism as "an un-coerced and non-remunerated helping activity" (Halpenny & Cassie, 2003a, p. 39). I selected this definition because it does not presuppose a person's motivation for volunteering. While the activity of volunteering is a "helping activity", one that is assumed to bring benefit to someone or something else, the definition does not make assumptions as to why someone is engaged in such a helping activity. In this way, I have left space for a variety of 'getting or giving' (i.e., private or community-oriented, self or other-oriented) motives to be explored in my study as the source of volunteering behaviour.

In Lindsay's (2006) study of family engagement in environmental volunteer activities, environmental stewardship is defined "as the care and enhancement of the land for the benefit of the environment and future generations" (p.3). Environmental stewardship organizations in Canada rely heavily on volunteer participation to carry out a

wide range of activities restoring natural habitats, re-vegetating school grounds, and managing invasive plant species (Lindsay, 2006). Environmental stewardship organizations may include government and nongovernment organizations such as park agencies, aquariums, zoological societies, nature education centres, and organizations that fall under the “Friends of” banner, which often engage the public in a wide array of volunteering activities.

In their study of environmental volunteers and volunteering in Australia, Measham and Barnett (2008) propose that there are five principal modes of environmental volunteer activity: activism (e.g., politically motivated environmental campaigning), education (e.g., sharing information about particular species or environments, raising awareness for environmental issues), monitoring (e.g., recording observations about plant or animal species and communities), restoration (e.g., rehabilitating degraded habitats) and promoting sustainable living (e.g., promoting reducing, re-using, and recycling). The authors emphasize that any single program or group may engage volunteers in more than one mode of activity in any given context (Measham & Barnett, 2008).

1.2 Why Study Youth Engagement in Environmental Volunteering?

Research on the benefits of engaging youth in volunteering together with research on the benefits of spending time interacting with the environment provide insight into the many possibilities that may come from involving youth in environmental volunteering.

1.2.1 The benefits of connecting youth with volunteering, and connecting youth with the environment

A growing body of work explores the benefits that volunteering can provide for youth in non-environmental contexts (Locke & Rowe, 2006; Moore, 1996; Pancer &

Pratt, 1999; Shannon, 2009; Tessier et.al., 2006). In their summary of previous literature on youth volunteerism, Marta and Pozzi (2008) highlight an extensive list of positive outcomes that have been associated with youth engagement in volunteering activities. Past research indicates that volunteering can: a) provide youth with a sense of social belonging and/or an opportunity for political participation, b) promote civic engagement, c) protect against psychosocial risks such as behavioural problems and school neglect, d) reduce involvement in criminal activities and undesirable behaviour, e) improve academic functioning, f) facilitate building connections between generations, g) increase self-esteem, self-acceptance, and self-efficacy, h) sustain cognitive development, and i) support moral development (Marta & Pozzi, 2008).

In their study of young Canadian volunteers between the ages of fifteen and nineteen, Pancer and Pratt (1999) observed that many youth began volunteering at the age of twelve or thirteen. The authors note that participants had undergone profound changes as a result of their experiences of volunteering, stating that:

[Youth] reported developing a greater understanding of those they had helped and an appreciation for their own good fortune; they described changes in their personalities, such as becoming more patient and caring; they recounted the many skills they had developed and things they had learned as volunteers; and many stated that their volunteer work had had a significant influence on their choice of career (Pancer & Pratt, 1999, p. 51).

Others have explored the physical, emotional, and cognitive health benefits that interacting with the natural environment can provide for young people (Charles & Wheeler, 2012; Kuo & Taylor, 2004; Taylor et.al., 2002; Wells & Lekies, 2006). While interacting with nature has been demonstrated to be an important part of the health and wellbeing for people of all ages (Bowler et.al., 2010; Dean et.al., 2011; Fuller et.al., 2007; Largo-Wight, 2011; Ulrich et al., 1991), some research indicates that middle

childhood and adolescence are key periods in life when personal and social identities begin to take form (Marta & Pozzi, 2008) and values for nature begin to be cultivated (Kellert, 1985, 1993, 2002). As youth move through middle childhood and into adolescence, the natural environment and wildlife are more likely to be viewed in terms of their ‘otherness’, and as having “feelings and interests apart from the child’s personal needs and concerns” (Kellert, 2002, p. 133). Kellert (2002) writes:

(Youth) also emerge more cognizant of other life and begin to develop feelings of responsibility for care and considerate treatment of nature. . . . Most important this is a time of greatly expanded interest, curiosity, and capacity for assimilating knowledge and understanding of the natural world (p.133).

Although few studies have explored the intersection of “youth”, “environment”, and “volunteering”, one might expect that participating in environmental volunteering, an activity that helps other people and other living things, would help strengthen the formation of a helping identity in young people, and cultivate values for other living things.

Time spent interacting with nature during childhood and adolescence has been shown to improve concentration and cognitive functioning, reduce symptoms of attention deficit disorder, buffer life stressors and enhance psychological resilience (Wells & Lekies, 2012), increase knowledge of local ecosystems and understandings about biodiversity (Lindemann-Matthies, 2002), and foster an ethic of care and concern for the environment (Chawla, 2009). The importance of engaging youth with the natural environment is supported by the apparent connection between early life experiences with nature and care and concern for the natural environment in adulthood (Chawla, 1999, 2006; Guiney & Oberhauser, 2009; Sebba, 1991; Sward, 1999; Tanner, 1980; Thompson et.al., 2007; Wells & Lekies, 2006). Similar research findings led Wells and Lekies

(2012) to speculate on the rich possibilities that could come from engaging youth in environmental volunteering:

Involving children in activities such as recording cricket calls, counting bird eggs, or monitoring monarch larvae may yield multiple benefits. In addition to assisting scientists in the collection of data to document the status or movement of species and bolstering children's health-related outcomes by increasing time spent outdoors, such programs may enhance children's environmental attitudes and behaviors, lead to participants' lifelong dedication to environmental stewardship, and thereby ultimately contribute to global welfare over the long term (p.2).

Research also suggests a link between early life experiences of volunteering and volunteer behaviour as a young adult and later as an adult. A Canadian survey examining volunteer behaviour found that people who participated in some form of volunteering as a youth were more likely to volunteer as an adult compared to those who did not volunteer during childhood (Hall et al., 2007). Other researchers have observed that volunteering as a youth in the twelfth grade was a statistically significant way to predict the participation of individuals volunteering eight years later at the age of twenty-six (Hart & Donnelly, 2007). Past research highlights that volunteer engagement by college-aged students is generally low and that university may be a period in people's lives when they take a "time-out" from volunteering (Gage & Thapa, 2011). However, in their study of college volunteers Gage and Thapa (2011, p.424) note that, "the most important factor influencing volunteerism in college is whether the student volunteered in high school". One of the benefits of involving children and adolescents in environmental volunteering is that their early participation may cultivate life-long commitment to volunteering for environmental causes and organizations, and life-long relationships with nature.

1.2.2 Concern for the environment and young people's relationships with it

Research on the state of the natural environment is accumulating a taxonomy of environmental problems, and such findings suggest that youth today will grow and

transition into adulthood during a time of massive environmental change and degradation (McKinney, 2002; Miller, 2005; Rosenzweig, 2003). Some have argued that because youth are growing up during a period of history where public consciousness of environmental issues is increasing, youth are more inclined to be aware of their place within the ecological landscape. McDougle et al. (2011, p.325) write:

Today's generation of young adults are likely to be more aware of their place within the ecological landscape, having grown up with Earth Day celebrations all of their lives. Indeed, it was this generation that witnessed the worst oil spill in human history and also lived through the ecological devastations caused by natural disasters, such as hurricane Katrina, the Haitian earthquake, and the Indonesian and (the more recent) Japanese tsunamis. Given their exposure to these events some believe that this generation will be pivotal in leading the environmental movement forward.

Optimism for a "green generation" is countered with concerns for youth's relationships with the environment elsewhere. Changes in the social structure of our lives (Karsten, 2005) and current lifestyle trends, such as increased urbanity and daily-use of technology, have influenced the way people of all ages interact with the environment (Kahn, 1999, 2011). Kellert (2002, p.147) suggests that "various trends in modern society –unsustainable consumption, urban sprawl, biodiversity loss, chemical contamination – have resulted in pronounced and significant declines in the quality and quantity of children's direct experience of the natural world".

Although the many and diverse benefits of interacting with nature are becoming increasingly evident (see for example Berman et.al.,2008; Bowler et al., 2010; Kellert, 2002), the frequency and quality of people's interactions with nature seem to be decreasing, leading some to speculate on the effects that an "extinction of experience" (Pyle, 2003, p. 206) will have on the future of stewardship behaviour. Pyle (2003, p.206) argues that "many individuals and societies are no longer connected to the more-than-

human world in such a way as to ensure a sustainable future”. Limited contact with nature may be influencing young people’s understandings of the natural environment (Balmford et.al., 2002; Lindemann-Matthies & Bose, 2008; Louv, 2005; Miller, 2005), and impacting young people’s understanding of their place within it (Loughland et.al., 2002; 2003). Research suggests that the physical and psychological distance between “youth” and “nature” has been detrimental to young people’s environmental attitudes, beliefs, and behaviour (Pyle, 2003; Wray-Lake et.al., 2010). Given that 58 percent of Canadian adolescent youth volunteer in some form (Hall et al., 2007), an opportunity exists to connect youth with the environment through volunteering. Volunteering may offer young people a chance to interact physically, emotionally, and intellectually with the environment, and provide them with an opportunity to be part of the solution to the environmental issues that surround them.

1.2.3 The status of youth engagement in environmental volunteering

Marta and Pozzi (2008, p.36) argue that one limitation of the literature on volunteerism “is the scarcity of research on adolescents and young adult volunteers”. Despite the limited attention youth volunteerism receives, research suggests that the number of youth aged fifteen to nineteen involved in volunteering has been increasing. Findings from the 2007 and 2010 Canadian Surveys of Giving, Volunteering and Participating (CSGVP) provide evidence that youth between the ages of fifteen and nineteen not only participate in volunteering, but comprise the largest group of Canadian volunteers (Hall et al., 2007; Volunteer Canada, 2010b). Findings from the 2010 Volunteer Canada Survey “dispel the myth of disengaged youth. Canadians aged 15-24 volunteer more than any other age group at a rate of 58 per cent versus the overall rate of 47 per cent” (Volunteer Canada, 2010b). Similarly, Jones (2000) observed that while

historically there has been little change in volunteer rates in other segments of the population, the number of young people volunteering, aged fifteen to twenty-four, has almost doubled in the last ten years.

Although evidence indicates that older youth volunteer, the presence of younger youth in past studies is rare. Large scale national surveys have yet to recognize and represent younger youth as volunteers. The youngest category of volunteers included in Volunteer Canada's Survey of Giving, Volunteering and Participating (GSVP) (2007; 2010) is the fifteen to nineteen age category of youth volunteers. Shannon (2009), Haskileventhal et al. (2008), Tessier et al. (2006) and a study by the social action youth group "Do Something" include youth under the age of fifteen in their studies; however, these studies are the exceptions.

Are youth interested in volunteering for environmental stewardship organizations? Findings from Hall et al. (2007) indicate that young Canadians, aged fifteen to nineteen, are much more likely to volunteer for institutions or causes that have education, medicine, or sports and recreation links, than they are for organizations promoting or protecting the environment. Similarly, in Tessier et al.'s (2006) study, youth were least likely to report that they had been involved in volunteering for environmental causes or organizations; although youth reported they were interested in ecology and the environment, as volunteers they were rarely engaged in this interest.

Despite limited empirical evidence that youth are engaged in environmental volunteering, a perception that youth are both interested in and engaged in environmental volunteering exists. For example, Volunteer Canada suggests that "anecdotal evidence points to a high interest in the environmental sphere, but the statistical support for this is

difficult to ascertain, [and] volunteering for the environment was only identified by two per cent of all respondents” (Volunteer Canada 2001, p.8). Hientz et al.’s (2010, p.11) research on Canadian youth volunteers between the ages of fifteen and twenty-four suggest that youth are interested in the environment and are most interested in volunteering “for organizations that support environmental issues”. One large scale study of youth volunteer engagement found that the most commonly subscribed volunteer activity by young males between the ages of thirteen and twenty-two involved work that allowed them to be physically active like environmental clean-ups and sports and recreation volunteer activities (Do Something, 2012). The same study found that youth between the ages of thirteen and twenty-two listed the environment as one of the top five issues that they were most interested in volunteering for, with animal welfare ranked number one.

Although Lindsay (2006) does not directly examine youth volunteering, her study on family volunteering in environmental stewardship initiatives offers some insight into the status of youth volunteer engagement in environmental organizations in Canada. The author suggests that family volunteering is common among stewardship organizations, highlighting that “Nearly two thirds (64%) of all respondent organizations reported that they had at least some family volunteers” (Lindsay, 2006, p. 12). However, the majority of organizations surveyed reported that family volunteers made up less than 10 percent of their volunteer base. While many organizations reported the presence of family volunteers, few organizations (4%) had a volunteer base with a significant proportion of family volunteers. Despite some direct and anecdotal evidence that families and youth

may be interested in environmental volunteering, it appears environmental stewardship organizations are not well subscribed by family or youth volunteers.

According to Hall et al. (2007, p.51) “Young Canadians aged 15 to 24 were more likely to volunteer (58% volunteered) than Canadians in any other age group . . . [and] those aged 15 to 19 were much more likely to volunteer than were 20 to 24 year olds (65% vs. 47%).” Although youth aged fifteen to nineteen represent a large proportion of Canadian volunteers and have expressed an interest in volunteering for environmental causes and organizations (Hientz et al., 2010), relatively few Canadian youth seemed to be engaged in volunteering by environmental stewardship organizations. Environmental stewardship organizations may be interested in understanding how to incorporate youth as volunteers given that currently the majority of volunteer service hours are contributed by a small sub-set of volunteers, and research indicates that these highly dedicated volunteers are aging. One report on Canadian volunteer engagement suggests that reliance on this small group of “uber” volunteers is a vulnerability of the Canadian volunteer system (Hientz et al., 2010). The authors suggest that it is critical for organizations engaging volunteers to be strategic and to develop a plan on how to engage volunteers of other ages in order to mitigate shortages of volunteer contribution (Hientz et al., 2010).

Although there are many reasons to engage youth in volunteering for the environmental volunteer sector, research suggests that organizations may lack the internal support to do so and that negative perceptions of young people’s capabilities as volunteers pose a significant challenge to facilitating youth engagement (Moffatt, 2011; Shannon et.al., 2009; Tessier et al., 2006; Volunteer Canada, 2001). For example, in a

study exploring youth engagement in Canadian park programming, Church (2011, p.22) writes:

The first barrier highlighted was a lack of understanding by management of the value of youth engagement programming. This speaks to the need for an internal education program of parks agencies to raise the general understanding of why such programs should be considered high priorities for agencies.

In her study of younger youth volunteers, Shannon (2009, p.830) notes that “a critical challenge to volunteering has been the negative stereotypes and disapproving perceptions adults have about youth. . . . The capacity of youth to deliver meaningful and effective volunteer service is sometimes underestimated, and therefore youth are not encouraged to volunteer or given responsibilities that are appropriate for their skills and abilities”. A Volunteer Canada report (2001, p.22) suggests that organizations may question young people’s abilities to make long term commitments and reliability as volunteers; youth “may arrive late or leave early; they won’t complete their tasks properly, or won’t show up at all when you are depending on them”.

In addition, youth who have volunteered have experienced unwelcoming atmospheres as volunteers. In one study youth reported that they felt that “their opinions and insights are not valued, respected or taken into account”, suggesting that youth may be aware of the attitudes toward youth held by some adults (Hientz et al., 2010, p. 11). Lack of internal support and negative attitudes toward youth capabilities as volunteers may be constraining the participation of youth in the environmental volunteer sector. Such findings suggest the importance of exploring the capabilities of youth as volunteers and communicating the benefits of youth engagement in volunteering to a wide audience.

1.3 Studies Exploring Youth Engagement in Environmental Volunteering:

Addressing Gaps in Knowledge

Although youth are rarely the focus of research on environmental volunteerism, a small number of studies provide evidence that youth are involved in a variety of modes of environmental volunteering. Past research indicates that youth eighteen years of age and younger have been engaged as environmental educators or interpreters (Matiasek et al., 2013), wildlife monitors or citizen scientists (Kountoupes & Oberhauser, 2008), and community gardeners and environmental restoration volunteers (Krasny & Roth, 2010; Krasny & Tidball, 2009; Schusler et.al., 2009; Schusler & Krasny, 2010).

The few studies that have explored youth engagement in environmental volunteering have predominantly focused on learning outcomes (Kountoupes & Oberhauser, 2008; Krasny & Tidball, 2009; Matiasek et al., 2013). Krasny and Tidball (2009) observed that youth volunteering on community garden projects participated in multiple types of learning including science, stewardship, and advocacy. The authors write:

The plants and insects offer opportunities for students to observe and perform experiments and thus acquire content knowledge related to pollination, whereas the community gardening practice, including planting, tending plants, and collaboratively developing rules related to plot allocation, pesticide use, allow opportunities for youth to become increasingly more skilled as members of a civic ecology community of practice (Krasny & Tidball, 2009, p. 12).

In their study of youth citizen scientists, Kountoupes and Oberhauser (2008, p.17) begin to explore the reasons why youth aged five to sixteen might volunteer as butterfly monitors. The authors observed that “adults perceived that the children felt like real scientists and were proud of their contributions” and the experience connected youth with nature. Kountoupes and Oberhauser identified that the chance to be outside, to

discover plants and animals, and to spend time outdoors interacting with other children was what youth enjoyed most about being volunteers. While Kountoupes and Oberhauser's study relies on the perspective of adults working with youth to build an understanding of young people's motivations for volunteering, the authors suggest that interviewing youth is critical to informing quality volunteer programs for young people (Kountoupes & Oberhauser, 2008).

Although these studies provide valuable insight into adult perceptions of youth motivations for volunteering, and help build an understanding of some of the educational and developmental outcomes of youth participation in environmental volunteering, the voices of youth are largely missing from research on environmental volunteerism. While Schulser et al. (2009) explore the goals that those working with youth in an environmental volunteer capacity have for youth engagement and practitioners' definitions of success, little is known about the characteristics of how youth are engaged in environmental volunteering.

1.4 Research Purpose, Questions, and Objectives

Past research indicates that the way youth experience volunteering may differ from the way adults experience volunteering (Haski-Leventhal et.al.,2008; Okun & Schultz, 2003; Omoto et.al., 2000), and that volunteering in environmental contexts may differ from volunteering in other contexts (Bruyere & Rappe, 2007; Grese et.al., 2000; Measham & Barnett, 2008). While these related bodies of research can inform our understanding of youth engagement in environmental volunteering, they only provide partial insight into how and why youth might be involved as environmental volunteers.

Despite the many benefits that could materialize from engaging youth in environmental volunteering, the widespread concern for young people's relationships with the environment, and the desire to find ways to connect youth with nature, youth engagement in environmental volunteering has received little attention by researchers and environmental stewardship organizations. In this study, I continue to open up the research space on youth engagement in environmental volunteering. How and why youth are engaged as environmental volunteers were the central research questions I used to guide my study. In addition I asked a number of secondary research questions including: What contexts support youth engagement in environmental volunteering? What conditions challenge it? Who benefits from youth participation and how? How do young environmental volunteer experiences differ from youth in other contexts? And, how do the experiences of youth differ from the experiences of adult environmental volunteers?

As the voices of youth have, to my knowledge, yet to be included in discussions of environmental volunteering, a central aim of my study is to provide youth an opportunity to share their perspectives and experiences of environmental volunteering. My study is influenced by the work of Children's Geographers such as Sarah Halloway, Gill Valentine, and Roger Hart, and my research findings are situated within the context of Children's Geographies. Children's Geographies is a sub-discipline of Human Geography that "attends to the experiences, issues and geographies of children and young people hitherto over looked by Human Geographers" (Horton et.al., 2008, p. 338).

Children's geographers argue that:

The lives of young people are increasingly important for understanding larger notions of change. Furthermore, it is clear that children are actors and competent arbiters of change. These new ways of understanding children in the world are slow to penetrate that seeming wisdom of adult solutions. It is clear that despite

young people's dominance as a demographic category in the majority of the world –including their influence globally as a market niche and their importance as a focus of care and responsibility –they, and their voices are still largely missing from larger academic debates” (Aitken et.al., 2007, p. 4).

I rely heavily on the youth who participated in this project to inform my understanding of youth engagement in environmental volunteering. It is my hope that others interested in researching youth engagement in environmental volunteering, those working with youth environmental volunteers, and youth themselves will benefit from my findings.

Table 1-1 summarizes the research questions and objectives that guided my study. In the following chapter, I describe the conceptual framework that helped guide my analysis of youth environmental volunteer motivation.

Table 1-1: A Summary of the Research Purpose, Questions, and Objectives

Research Summary	
Purpose	<p>Develop insight into youth engagement in environmental volunteering.</p> <p>Provide youth an opportunity to contribute their perspectives to the environmental volunteer research landscape.</p> <p>Explore how “youth” and the “environment” might matter in understanding and assessing volunteer motivation.</p>
Central Question	How and why are youth engaged in environmental volunteering?
Secondary Questions	<p>What contexts support youth engagement in environmental volunteering?</p> <p>What conditions challenge youth engagement in environmental volunteering?</p> <p>Who benefits from youth participation in environmental volunteering and how?</p> <p>How do young environmental volunteer experiences differ from youth volunteer experiences in other contexts?</p> <p>How do the experiences of youth environmental volunteers differ from the experiences of adult environmental volunteers?</p>
Objectives	<p>Support youth and the organizations engaging or thinking about engaging youth by providing insight from young volunteers on their expectations for volunteering, and the challenges they encounter.</p> <p>Inform practice by describing the conditions that support and challenge youth engagement in environmental volunteering.</p> <p>Add to existing research on environmental volunteer motivation, and expand our current of understanding by contributing the experiences of youth.</p>

Chapter Two: **A Conceptual Framework for Understanding Volunteer Motivation**

One of the central aims of my study is to provide insight into the relationship between youth and environmental volunteering. Understanding the forces that move youth to volunteer and the expectations they have for volunteering can help organizations recruit and retain youth as environmental volunteers, something that may benefit youth, organizations, society and the environment. Much has been written about the reasons people volunteer, and a small, but growing body of work has explored the motivations of environmental volunteers (Abell, 2012; Bramston, et al., 2011; Brien et al., 2008; Bruyere & Rappe, 2007; Donald, 1997; Gooch, 2004, 2005; Grese et al., 2000; Halpenny & Cassie, 2003a, 2003b; Hunter, 2010; Kromplak, 2009; Martinez & McMullin, 2004; Measham & Barnett, 2008; Moskell, et al., 2010; O'Brien et al., 2010; Roggenbuck et al., 2000; Ryan et al., 2001; Savan et al., 2003; Schroeder, 2000; Wahl, 2010; Westphal, 1992, 1995). This literature can help build a framework for understanding youth environmental volunteer motivation.

2.1 Functional Theory and the Volunteer Functions Inventory

Functional understandings of voluntary behaviour evolved from Katz's (1960) psychological study of attitudes. Katz argued that the same attitude may serve different psychological functions for different people. Functional theory is one of the most widely applied theories used to understand volunteerism (Bruyere & Rappe, 2007). The theory assumes that a person's volunteering behaviour is an act that is planned, it is driven by purpose or motive, and those motives can be identified (Clary et al., 1998). A key proposition is that a person will engage in volunteering expecting the experience to serve

one or more personal or social functions, but motivations vary with each individual.

Clary et al. (1998, p.1517) write,

A central tenant of functionalist theorizing is that people can and do perform the same actions in the service of different psychological functions . . . acts of volunteerism that appear to be quite similar on the surface may reflect markedly different underlying motivational processes.

We can, thus, assume that while many people are engaged in similar environmental volunteering activities, the reasons they choose to do so may be markedly different. For example, if we consider the voluntary action of people who are assisting in cleaning litter off a beach, it is likely that different people will arrive at the beach with different goals for participating in the beach clean-up. While one person may engage in cleaning a shoreline because they are concerned about the health and wellbeing of local bird life (i.e., volunteering as an expression of values), another person may help with the beach clean-up because they want to spend time with someone whose company they enjoy (i.e., volunteering as a social opportunity), while another may help because they anticipate that accumulating volunteer experience will help them find future employment (i.e., volunteering as a way to improve career opportunities).

A widely used tool, based on functional theory, has been created by researchers to help practitioners and researchers of volunteerism to understand and assess volunteer motivation. The Volunteer Functions Inventory (VFI) created by Clary and colleagues in 1998 has been suggested to be a useful framework for identifying “motivations of generic relevance to volunteerism” (Clary et al., 1998, p. 1528). The population of volunteers from which Clary et al. (1998) drew from came from a wide variety of health and social service contexts. However, none of the participants seem to have been engaged in environmental work, and the youngest age category included by the researchers was a

group of college aged students, of which the average age of the youth sample was 21.25. In spite of these limitations, the functions identified in the Volunteer Functions Inventory serve as a useful starting place for exploring the motivations of youth environmental volunteers, keeping in mind that research suggests that the environment (Abell, 2012; Bramston et al., 2011; Bruyere & Rappe, 2007; Grese et al., 2000; Guiney & Oberhauser, 2009; Measham & Barnett, 2008; Miles et al., 1998; Ryan et al., 2001; Schroeder, 2000) and age (Okun & Schultz, 2003; Omoto et al., 2000) may influence the goals people have for volunteering.

Clary and colleagues found the following six categories of motivations were both “reliable and replicable”:

Values: a person may seek out volunteering as a way to express altruistic or humanitarian values (i.e., a person may volunteer as a way to act on a concern for other people or a cause, and express compassion for others).

Understanding: a person may seek out volunteering as a way to learn new things, or strengthen existing skills and knowledge.

Social: a person may seek out volunteering because of their relationships with other people. Volunteering may be seen by an individual as an opportunity for social interaction: an opportunity to spend time with friends, or meet new people. The experience may also be viewed by an individual as an opportunity to be seen favourably by people important to the volunteer (i.e., a process of social affirmation).

Career: a person may seek out volunteering as a way to improve their future opportunities for employment. Volunteering may help people gain career specific skills

and contacts, allow them to explore potential career paths, become involved in an organization where future employment is desired, and add experience to their resume.

Protective: a person may seek out volunteering as a way to alleviate negative feelings.

Volunteering may help a person feel less guilty about being more fortunate than other people, or it may provide them with an opportunity to work through or escape personal problems, or to feel less lonely.

Enhancement: a person may seek out volunteering as a process of personal growth and development, and as a way to increase positive feelings, mood, and emotions.

Volunteering may be seen as a way to enhance feelings of self-esteem and boost confidence levels (Clary et al., 1998, p. 1557).

Although identifying the potential motivations of volunteers is an important starting point to understanding volunteer motivation, it is the interaction between the volunteer and the volunteer setting that are determinant of voluntary behaviour and the overall satisfaction of a volunteer (Clary et al., 1998). It is the fit between the person and the situation, rather than the person or situation alone, that can help us understand why people volunteer (Clary et al., 1998). Volunteers are less likely to continue to volunteer if there is a mismatch between their expectations or interests for volunteering and the functions afforded by the context. For example, if a person volunteers for an environmental stewardship organization as a way to meet new people, if the volunteer context provides little opportunity for social interaction, a person is unlikely to continue volunteering. Clary et al. (1998) suggest that thinking of volunteerism in terms of functions, rather than motives or needs, is a useful way to draw one's attention to the importance of this match between the person and the context.

2.2 Understanding the Reasons Youth Volunteer

Studies suggest that life-stage can influence the motivations of volunteers. Omoto et al. (2000, p.182) found that “as people move through the life course, they attach different meanings to the volunteer role, and that these meanings are directly related to the agendas they pursue through volunteerism”. In their study of “Young People and Volunteerism”, Marta and Pozzi (2008, p.35) state that, “Researchers agree that results obtained from adult volunteer sample research cannot be generalized tout court to young adult samples”. In the following section I highlight findings from past research with young volunteers, which indicate that important similarities and differences between youth and adult volunteers exist.

2.2.1 Social reasons to volunteer

Studies with volunteers of different age categories demonstrate that people of all ages are influenced to volunteer because of social reasons (Clary et al., 1998; Donald, 1997; Okun & Schultz, 2003). However, “other people” may take on an emphasized role in young people’s initial decision to volunteer, and in supporting their continued experience of volunteering. Haski-Leventhal et al. (2008) compared the motivations of youth volunteers between the ages of twelve and nineteen years of age with that of adult volunteers over nineteen years of age, who were volunteering at drop-in centers that helped “youth-at-risk”. Findings from Haski-Leventhal (2008) echo findings from earlier (see for example Omoto et al. 2000) and suggest youth enjoyed volunteering as an opportunity for social interaction, and to develop relationships with others:

Youth volunteers have different motivations, benefits and costs than adult volunteers. Youth volunteers are more relationship oriented; adult volunteers are more service oriented; and the volunteer group plays several important roles in youth volunteering (Haski-Leventhal et.al., 2008, p. 834).

A large scale study of over 4,000 youth volunteers between the ages of thirteen and twenty-two, conducted by the youth focused social action organization “Do-Something” in the United States, observed social interaction to be the most salient motive expressed by youth for volunteering. The authors write:

In addition to asking (youth) directly why they volunteer, we also asked questions that indirectly revealed motivations for volunteering. . . . We discovered that, for a young person, having friends that volunteer regularly is the primary factor influencing a young person’s volunteering habits. . . 75.9% of [young people surveyed] whose friends volunteer on a regular basis also volunteer” (Do Something, 2012, p. 7).

Although young volunteers may participate for many of the same reasons that their older counterparts volunteer, research suggests that “they may put more emphasis on having fun and being with friends” (Shannon & Robertson, 2006, p. 11), a sentiment supported by Holdsworth (2010) and Locke and Rowe (2006). Youth aged eight to twelve in Shannon’s study (2009) were motivated for both personal enjoyment reasons and as a way to express values of helpfulness. However, the author states that, “in particular, the social aspect of volunteering was key and motivated the younger youth to participate even when tasks were unappealing” (Shannon, 2009, p. 842).

2.2.2 Invitations to volunteer

Research suggests that the initial reason youth become volunteers is often tied to an invitation from someone else (Hall et al., 2007; Shannon, 2009; Tessier et al., 2006). One of the constraints to increasing youth volunteering is the lack of invitation from other people. In a large Canadian survey of volunteer behaviour, youth respondents indicate that they did not consider becoming a volunteer because nobody had asked them to (Hall et al., 2007). Further, there is some indication that youth already engaged as volunteers would volunteer more frequently if asked to do so. Hall et al. (2007) found that 45

percent of young Canadians surveyed did not volunteer more because no one asked them to.

2.2.3 Family members and volunteering

Family members may also feature prominently in the youth volunteer experience, both in influencing them to begin voluntary activities and in supporting them throughout their experiences of volunteering (Shannon, 2009; Shannon et al., 2009). Family members often introduce youth to the idea of volunteering (Janoski & Wilson, 1995) and Sundeen and Raskoff (1995) observed that “teenagers who volunteer are more likely to have parents who volunteer” (p.338). Marta and Pozzi (2008) highlight that:

Family experiences could contribute to, inhibit, or develop prosocial behavior. . . In particular, support is one of the critical and basic dimensions in parenting that influences their offspring’s commitment to the community (p.31).

2.2.4 The role of adults in youth experiences of volunteering

Non-related adults also appear to play an important role in supporting youth throughout their volunteering experiences (Klindera et.al., 2001; Shannon, 2009; Zeldin et.al., 2013). Tessier et al. (2006) write:

Adult involvement is a fundamental dimension of youth volunteerism. The relationship that is established between the adults and youth can affect young people’s motivation to volunteer, their success, and their continued involvement (Tessier et al., 2006, p. 6).

Adults encourage youth with words of appreciation, providing mentorship and guidance for their tasks, listening to youth, taking them seriously, demonstrating their belief and confidence in young people’s abilities as volunteers, and creating a comfortable and welcoming atmosphere to work within (Gaskin, 1998a, 1998b; Shannon, 2009; Tessier et al., 2006; The National Youth Agency, 2007). Further, adults play a

support role by “signing permission slips, providing transportation, and helping to supervise youth as they participated as volunteers” (Shannon, 2009, p. 840).

2.2.5 Institutions and volunteering

Education and religious institutions influence young people’s experiences of volunteering (Do Something, 2012; Sundeen & Raskoff, 1995). In some school districts, youth are required by their schools to volunteer, which may help explain why the fifteen to nineteen age group of volunteers has increased in Canada (Hall et al., 2007; Jones, 2000). Still, this mandatory requirement only accounted for the voluntary behaviour of sixteen percent of young Canadians in the 2007 national survey of volunteers (Hall et al., 2007). Schools that do not have mandatory community service requirements may indirectly influence young people’s decisions to volunteer through encouraging a culture of community service (Jones, 2000; Raskoff & Sundeen, 1998).

2.2.6 Career related reasons for volunteering

Finkelstien (2009) contends that people who are intrinsically motivated to volunteer do so because they find the process inherently interesting or in some way satisfying. In contrast, “extrinsically motivated behaviors are performed in order to obtain some separable outcome. The individual engages in the activity because it holds some instrumental value” (p.654). In review of the Volunteer Functions Inventory (VFI), Finkelstien (2009) argues that five of the six motives can be categorized as intrinsic, while the sixth category “career” is an extrinsic category relying on a separable outcome to be satisfied. A number of studies have highlighted the importance of career motives for youth; Shannon (2009) observed that:

When considering motivations to volunteer, the main reason adults volunteer is to make a contribution to their communities, because they believe in the cause they are supporting, or because of a desire to help others. For youth, however,

volunteering is viewed as an opportunity to improve their job opportunities . . . and therefore gaining skills, experience, qualifications, and references are of particular importance (p.830).

Heintz et al. (2010) suggest that young people aged fifteen to twenty-four “see volunteering as supporting their job search, skills development, and networking” (p.11). Jones (2000, p.36) states, that “for many young people, volunteer experience is an important link to the job market”. Authors of the 2013 Volunteer Canada report indicate that in managing young volunteers, “a letter of reference is often used as a carrot to carry out the expected time commitment” (Isakson et al., 2013, p. 14). An earlier Volunteer Canada report (2001) also highlights the importance of work related motivations for youth.

While older volunteers cite a variety of reasons including social and cause-related skills as their primary motivations, youth overwhelmingly identify the desire to develop work-related skills as their primary motivation (p.8).

While older teenaged youth may be interested in gaining experiences that will benefit them in future career or university pursuits, younger youth expected volunteering to be fun and enjoyed spending time with their friends (Shannon, 2009).

The studies reviewed in this section indicate the motives people have for volunteering may be age-related, and influenced by the life-tasks that individuals face outside of the volunteer context. Some studies indicate that youth are less likely than adults to be involved in volunteering as an expression of values (Haski-Leventhal et al., 2008; Volunteer Canada, 2001). Youth have a tendency to emphasize “having-fun” or “being with friends” over expressing values as a reason for volunteering, more than their older counterparts do. Okun and Schultz (2003) suggest that this phenomenon of over-endorsement can lead to an amplified effect in the difference of motivation between age

groups. In exploring the motivations of volunteers in a variety of age categories, Okun & Schultz, (2003) found that the importance of career and understanding (i.e., learning) motivations for volunteering seemed to decrease with age, while enhancement, protective and values motivations emerged as unrelated to age.

2.3 Understanding the Reasons People Volunteer for Environmental Stewardship Organizations

Similar to volunteering in other contexts, people may engage in environmental volunteering for the functions it serves (i.e., values, understanding, social, career, protective, enhancement). Authors of previous research on environmental volunteer motivation have used functional theory as a conceptual framework for their study and while they may not have made explicit use of the VFI, some parallels can be drawn. Another theoretical perspective useful in understanding the reasons people volunteer for environmental stewardship organizations can be found in Schultz's work on environmental values. Schultz (2000; 2004) proposes that there are three value orientations associated with environmental attitudes: egoistic (i.e., values for self), altruistic (i.e., values for other people), and biospheric (i.e., values for other living things). Schultz (2004) argues that "conceptually, each of these sets of values can lead to concern for environmental issues, and ultimately to behaviour when activated" (p.32). While volunteers in environmental and non-environmental contexts may be motivated to volunteer as a way to act on egoistic and/or altruistic values, the experience of people volunteering in environmental contexts may be distinguished from volunteers in other contexts by their expression of biospheric values (i.e., values for other living things).

2.3.1 Social motives for environmental volunteering

A sense of belonging to a community of like-minded people materialized as being important to the overall enjoyment of volunteering and in participants' continued voluntary behaviour according to a number of studies on environmental volunteers (Abell, 2012; Fraser et al., 2009; Gooch, 2005; Measham & Barnett, 2008). Ryan and colleagues (2001, p.638) state that "while volunteers may be working to help the environment, the social benefits of meeting new people and developing a core group of repeat volunteers are important to their experience". Although helping the environment and learning about the environment were important initial motivators for participants, Ryan et al.'s (2001) study demonstrated that it was the social dimension of volunteering that helped to sustain volunteer commitment over the long run. Asah & Blahna (2012) and Donald (1997) also observed that those who were more oriented to social reasons for volunteering were also more committed to the volunteer cause or organization.

2.3.2 Learning motives for environmental volunteering

Research suggests that people volunteer as a way to build a better understanding about specific plants and animals and environmental issues (Bruyere & Rappe, 2007; Bushway et.al., 2011; Grese et al., 2000; Guiney & Oberhauser, 2009; Halpenny & Cassie, 2003a; Measham & Barnett, 2008; Ryan et al., 2001). Alternatively, Ryan and colleagues (2001) found a negative relationship between learning as a motivation for volunteering and long-term volunteer commitment. The authors suggest that this makes sense when one considers that expertise also emerged as a strong predictor of commitment in their study and note, "those who already consider themselves to be an expert in their knowledge and skills of natural areas may be less motivated to learn new things as a part of their volunteer activities" (Ryan et al., 2001, p. 639). Other researchers

have observed that for some volunteers, sharing their expertise and understanding about the environment with others is an important part of the environmental volunteer experience (Guiney & Oberhauser, 2009).

2.3.3 Career related motives for environmental volunteering

Career related reasons for volunteering in environmental contexts emerged from previous studies, but was often only weakly expressed. Haas (2000) observed that “career growth was a motivation expressed...by some of the younger volunteers, especially those currently attending college or those in the process of a career change” (p.37). However, the author notes that career related motives were the least prevalent motivation to emerge in his study. In addition, Bruyere and Rappe (2007) observed motivations related to career experience, but again such reasons for volunteering materialized infrequently. The age of participants may have played a role in the studies reviewed; for example, 44 percent of the volunteers in Bruyere and Rappe’s study were over the age of fifty, and the participants in Haas’ study were middle aged, and already employed in high paying jobs, making it less likely that career would factor into their decision to volunteer.

2.3.4 Seeing tangible results as a motive for environmental volunteering

Seeing the tangible difference that can be made to the landscape through volunteering can evoke feelings of deep satisfaction and enjoyment in environmental volunteers. This includes seeing a landscape re-vegetated, invasive species removed, or litter removed from a natural area (Guiney & Oberhauser, 2009; Ryan et al., 2001; Schroeder, 2000). Bruyere and Rappe (2007) identified a similar category of functions sought by environmental volunteers, which the authors labelled as “user”. This category of functions is intended to capture the notion that people volunteer to work in and improve an area that they use or enjoy. For example, people who enjoy wildlife-viewing

might appreciate projects that improve wildlife habitat or installing signs that interpret wildlife (Bruyere & Rappe, 2007)

2.3.5 Personal protection and growth as motives for environmental volunteering

Similar to people who seek volunteering experiences in other contexts, individuals who seek out volunteer opportunities in environmental contexts may do so for self-protective reasons. Research suggests that volunteering in environmental settings can offer people an opportunity to mediate stress that they experience in other areas of their lives (Guiney & Oberhauser, 2009; Miles et al., 1998), and can provide an opportunity to reduce negative feelings such as guilt (Abell, 2012; Measham & Barnett, 2008). One study found that volunteering provided participants a chance to relieve a sense of guilt that they felt for the way in which humans had treated the environment (Measham & Barnett, 2008).

For some, volunteering may provide an opportunity to experience nature without feeling guilty about “wasting time”. In Hobbs and White (2012), wildlife monitor volunteers “reported that their participation acted as justification for watching birds, e.g., ‘to be able to stand idly watching . . . the birds without feeling guilty’” (p.370). Barton (2012) suggests that structured nature interaction provided by citizen science volunteering may be particularly appealing to young people:

Participants expressed an overwhelming interest in outdoor citizen science programs and a clear excitement for such opportunities never before considered. Even for those individuals who cited time, money, transportation as barriers to participation, citizen science was praised for its “structure”, “organization”, and ability to “kill two birds with one stone” by fusing education with outdoors (p.221).

A review of past research on environmental volunteerism indicates that people volunteering for environmental organizations and causes do so because volunteering

serves self-enhancement functions. Environmental volunteering provides people with an opportunity for personal growth and development, and it can help to lift people's mood (Bramston et al., 2011; Gooch, 2004; Guiney & Oberhauser, 2009; Hobbs & White, 2012; Miles et al., 1998; Schroeder, 2000). One study of Australian environmental volunteers observed the empowering and transformative impact that volunteering had on participants (Gooch, 2004). Water quality monitoring and tree planting activities helped participants in Gooch's 2004 study gain skills and confidence, overcome fears and shyness, develop deeper feelings of self-worth, and combat depressive feelings and low self-esteem.

2.3.6 Altruistic and humanitarian concerns as motives for environmental volunteering

Similar to the values function described by Clary et al. (1998) in the Volunteer Functions Inventory, findings from studies with environmental volunteers suggest that people volunteering in environmental contexts do so because it offers an opportunity to express values related to altruistic and humanitarian concerns for others. For example, Haas (2000) found that many volunteers participating in water monitoring for the Virginia Save Our Streams Organization were involved in volunteering because:

(They) were concerned about the health of their family and neighbors because of the potential environmental threats . . . on their property or in their community, and the impact local industry, development, agriculture had on the health of their family and friends (p.35).

In a study exploring the reasons individuals volunteer for a nature conservation program, Halpenny and Cassie (2003, p.44) observed that volunteers "expressed an interest in caring for people, both in an abstract sense (i.e., society in general), and more specifically –caring for people known by the participants (i.e., friends and family)".

Findings from these studies parallel findings from non-environmental volunteer contexts

(see for example Clary et al., 1998), and suggest that environmental volunteering may serve as an opportunity for people to express values of care or concern for others (i.e., altruistic values function).

2.3.7 Expressing values for other living things as a motive for environmental volunteering

Environmental volunteering is clearly an expression of values unique to the environmental context: values for other living things. People volunteering for environmental stewardship organizations and causes volunteer because it provides them a chance to be close to nature: something volunteers enjoy and benefit from. Volunteers working in outdoor settings report that close encounters with wildlife species and the opportunity to see new places are prized rewards offered from environmental volunteering (Abell, 2012; Bruyere & Rappe, 2007; Campbell & Smith, 2006; Guiney & Oberhauser, 2009; Halpenny & Cassie, 2003a; Hobbs & White, 2012; Miles et al., 1998; Schroeder, 2000). Guiney et al. (2009) observed that increased contact with nature provided numerous personal benefits to conservation volunteers. The authors note that being “close with nature” and “to be outside”, were both ranked as key motivating factors by participants in their study. Halpenny and Cassie (2003) found that being able to express an emotional attachment to nature was an important part of the environmental volunteer experience for the nature conservation participants in their study. Guiney and Oberhauser suggest that,

In addition to strengthening and acknowledging their connection to nature, conservation volunteer work may result in improved health . . . participants felt that conservation volunteering enhanced their mental health through contact with nature, learning, and a sense of accomplishment (p.193).

Volunteering with other living things also emerges from past studies as an expression of care and concern for the health and wellbeing of other species (i.e.,

biospheric values). In a study of volunteers working with endangered wildlife species, Abell (2012) found that people were motivated to participate because they felt that volunteering offered them an opportunity to express biospheric values: a chance to “protect the best interests of the animals” (p.163). Volunteers in Moskell et al. (2010) identified one of the reasons they planted trees in their neighbourhood and parks was to provide habitat and food for animals. Turtle monitors interviewed in a study by Campbell and Smith (2006) suggested that turtles possess an intrinsic value. For some participants, volunteering served as a way to protect the turtle, not only because of the experiential value that the existence of turtles provided for the volunteers, but for the health and wellbeing of the species itself. One volunteer stated “we value these turtles more for...themselves than for their economic value”(Campbell & Smith, 2006, p. 92).

Direct experiences with nature can provide people with an opportunity to share space with other species, and to see similarities between themselves and non-human animals (Abell, 2012; Schultz et al., 2004). This can encourage a person to take the perspective of that other living thing, and may produce feelings of empathy, something that past research indicates can enhance people’s motives for acting in ways that protect the environment and the life of other living things (Abell, 2012; Schultz, 2000). In one study of environmental volunteer motivation, shared space seemed to influence participants’ feelings of responsibility toward protecting wildlife and their habitat. Abell (2012) suggests that:

Constructing similarities between humans and animals implies a moral duty of care for them. Sharing space with them provides an opportunity to anthropomorphise the animals and creates perceived reciprocal relationships. Participants expressed psychological belonging and responsibility to these animals. Volunteering offers important opportunities for direct contact (touch) with animals, which is highly attractive feature of these placements” (p.169).

Schultz (2000, p.393) states that “the types of concern for environmental problems that an individual holds are fundamentally linked to the degree to which he or she includes other people and nature within his or her cognitive representations of self”. Environmental volunteering may cultivate the development of biospheric concern (i.e., concern for the health and welfare of other living things) because it provides people with an opportunity to be in close proximity to non-human animals and the environment, and a chance to see similarities between “self” and “other-living things”. Concerns for the environment may be rooted in concern for self or other people, and both foundations of concern can result in the expression of pro-environmental behaviour such as volunteering. However, Schultz (2000) suggests that biospheric concerns provide a broader motive for behavior:

For example, we would expect egoistic concerns to be positively predictive of attitudes about specific local issues that directly impact self. In contrast, we would predict that biospheric concerns would be positively related to attitudes about global, more abstract environmental issues, as well as to more specific issues (p.394).

Using Schultz’s model of concern, one would expect to find volunteers motivated by either egoistic or biospheric concerns engaged in volunteer work aimed at measuring the water quality of a local stream for example. However, we would be more likely to find volunteers motivated by biospheric concerns engaged in volunteer projects aimed at mitigating global climate change or global biodiversity loss than we would be to find volunteers motivated by egoistic concerns on such projects.

2.4 Complexity of Motives

In my review of past research, I observed that a number of issues can complicate the ability of the reader to understand the origin of the values that underlie a person’s

decision to volunteer in environmental contexts. Studies clearly indicate that the “environment matters” to environmental volunteers, and environmental volunteering is an expression of values for the environment, but it is not always possible to decipher the root of concern underlying volunteers’ environmental values.

“Helping the environment” seems to be used to describe the action of environmental volunteering. The physical act of replanting a landscape for example appears to sometimes be referred to as “helping the environment” (Bruyere & Rappe, 2007; Ryan et al., 2001). However, little distinction is made about the origin of concern or the values underlying the actions. This is further complicated when multiple motives are combined together in one motivational category labelled “helping the environment.” In my opinion, although biospheric values often seem to be attributed to a volunteers helping behaviour, it is not always clear if and how “helping the environment” is an expression of values for self, for others, or for other living things in the discussion³ of the findings in past studies.

While “making a difference” and “helping restore natural areas” are clearly important to environmental volunteers (Bramston et al., 2011), the findings from a number of quantitative surveys leave me with questions about why people want to make a difference and why they want to help restore natural areas, and for whom? Although, Bramston et al. (2011) found that volunteers were motivated by an “environmental

³ For example see Measham and Barnett’s (2008) study of environmental volunteer motivation and their motivational category “a general ethic of care for the environment”. It is unclear if the values underlying a volunteer’s action are self focused (i.e., protective function, reducing personal guilt, protecting the ego), or if the action is intended to “care for the environment” (i.e., concern for the wellbeing of other living things).

biospheric” factor, more than one layer of values is discussed within the same category motivations (i.e., altruistic and biospheric concerns).

The values a person holds for the environment are often complex and difficult for the volunteer to articulate, and for the researcher to interpret. Campbell and Smith highlight this in their study of volunteer tourists working with sea turtles on a conservation project. The authors suggest that “intrinsic value (i.e., qualities that make turtles distinct from their relation to humans) was difficult to measure, particularly because it is something that, in being expressed, needs to be attached to nature by humans” (Campbell & Smith, 2006, p. 89).

While the opportunity to express values for other living things may be an important function served by volunteering for environmental volunteers, one study suggests that personal and social reasons for volunteering may be more important than ecological reasons in sustaining environmental volunteer commitment (Asah & Blahna, 2012). Although volunteers in Asah and Blahna’s study appeared to be drawn to volunteering because of the environment, the authors observed that social interaction rather than the environment may be influential to volunteers’ involvement over the long-term. This finding is echoed in a number of other studies that show social functions of volunteering take on an enhanced role in the experience of environmental volunteers (Donald, 1997; Fraser et al., 2009; Ryan et al., 2001). Although Fraser et al. (2009) identified a desire to affiliate with animals as an important emotional need and strong initial motivator for the volunteers in their study, the authors observed that social features of the volunteer experience became more salient over time. This theme is captured

through one participant's statement about volunteering: "People came here for the animals and stayed here for the people" (Fraser et al., 2009, p. 363).

2.5 Chapter Summary

Understanding the root of volunteers' values may provide important insight into the type of volunteer activity that people engage in (i.e., local versus global). Further, addressing the root of concern in environmental volunteers can help build an understanding of how and if environmental volunteering is an expression of pro-environmental behaviour.

The findings from the many studies reviewed in this chapter provide convincing evidence that people engaged in environmental volunteering enjoy physically, intellectually, and emotionally interacting with the natural environment, and such interactions provide them with personal enjoyment. Such findings suggest that a meaningful variation of the values function is important for understanding the experiences of environmental volunteers. The values that environmental volunteers express are not always readily identifiable or easily disentangled; however, connecting with and caring for nature are key motivators. While age-related differences may be important initially, some evidence suggests that as volunteers progress through the volunteer experience, these age-related differences may become less important. Further, while other studies on youth volunteer engagement suggest that the expression of values is not a salient motivational force for youth, another study suggests that values are important across a wide variety of age categories.

Despite the contextual differences in the way values, understanding, social, career, protective, and enhancement functions materialized, the Volunteer Functions Inventory appears to be a useful tool for exploring the experiences of youth and

environmentally focussed volunteers. Schultz's (2000; 2004) three value orientations, egoistic, altruistic and biospheric, also have direct application.

The conceptual framework developed in this chapter played an important role in guiding the analysis of my findings. In the following chapter I describe the research design I selected to frame this study, and the tools used to collect the data needed to answer the research questions guiding my study.

Chapter Three: **Research Design**

In this chapter, I provide the rationale behind selecting a qualitative, cross-case study as a research design framework. The case and participant selection process, tools used to collect data, and approach taken in analyzing my findings are described. Limitations are presented along with the steps taken to strengthen the credibility of my research findings. I discuss the procedures taken to ensure my study followed the ethical guidelines outlined by the University of Calgary's ethics review board, as well as ethical procedures recommended in previous research involving children and youth.

3.1 Qualitative, Cross-Case Study

Studies on environmental volunteerism have been approached by researchers using a variety of research techniques including quantitative methods (Bramston et al., 2011; Bruyere & Rappe, 2007; Donald, 1997; Grese et al., 2000; Martinez & McMullin, 2004; Miles et al., 1998; Moskell, et al., 2010; Ryan et al., 2001), qualitative, naturalistic techniques (Abell, 2012; Campbell & Smith, 2006; Gooch, 2004, 2005; Kromplak, 2009; Schroeder, 2000), and mixed methods (Asah & Blahna, 2012; Guiney & Oberhauser, 2009; Measham & Barnett, 2008). Naturalistic, or qualitative, inquiry is a “discovery-oriented approach that minimizes investigator manipulation of the study setting and places no prior constraints on what the outcomes of the research will be” (Patton, 2002, p. 39).

Both the research purpose and the age of participants in my study influenced my decision to take a qualitative approach to answering my research questions. The central aims of my study are to build an understanding of the contexts that can support youth engagement in environmental volunteering (i.e., “how” are youth engaged in environmental volunteering), and to understand some of the reasons youth themselves

might be interested in participating in environmental volunteering (i.e., “why” are youth engaged in environmental volunteering). Qualitative methods provide an opportunity to explore both the contextual details surrounding young people’s experiences of volunteering and participants’ subjective experiences of environmental volunteering. The perspectives of youth have not been included in previous studies on environmental volunteerism. By selecting a naturalistic approach to inquiry, I am able to provide youth participants with an opportunity to contribute their unique perspectives on environmental volunteering.

Although previous research provides insight into how age and the environment might influence the way people express motivations and experience volunteering, it is less clear how these variables will interact and manifest in a study of volunteer motivation. Qualitative methods provide an opportunity to explore the nuances of youth experiences of environmental volunteering, and how the life-stage of participants, and the environment as a volunteer context, might influence the reasons a person would volunteer with environmental stewardship organizations.

Further, during a review of research on environmental volunteerism, the study of environmental values emerged as complex and potentially difficult to measure. Using qualitative methods provided flexibility to explore the multiple meanings participants attached to their experiences of environmental volunteering, and allowed participants in my study to use their own words to describe their reasons for volunteering. Additionally, collecting data through interviews provided me with an opportunity to clarify the meanings participants attached to their experiences when I did not fully understand their initial descriptions. Further, because the participants in my study encompass a wide range

of ages, it would have been difficult to design a survey instrument that was appropriate and effective at gathering data from participants ranging in age from eight to eighteen. Marshall and Rossman (2011, p.157) highlight that, “decisions about how to gather data with various age groups requires sensitivity to their needs and their developmental issues, and flexibility”. Qualitative research methods afforded me the flexibility to re-word interview questions when the need arose and to make the concepts described in the interview questions accessible to the youngest participants.

Studying the contextual details surrounding youth engagement in environmental volunteering, I was able to explore the type of settings and conditions that are able to support youth engagement in environmental volunteering. In addition, Clary et al. (1998) indicated that in order to understand and assess voluntary behaviour, it was important to understand the fit between the person and the context. Studying youth engagement from a qualitative case study approach provided me with an opportunity to explore the relationships between youth and the volunteer context, producing a more nuanced understanding of the phenomenon than could have been achieved using alternate research methods (i.e., survey instrument).

I selected three environmental stewardship organizations as cases to study: the Friends of Fish Creek Provincial Park Society (Calgary, Alberta), the Shaw Ocean Discovery Centre (Sidney, British Columbia), and Kejimikujik National Park (Southwestern, Nova Scotia). A detailed introduction to each of the case study sites follows in Chapter Five. However, it is important to highlight here the rationale behind selecting multiple cases to study. By selecting more than one organization that engages youth in environmental volunteering, I was able to build an understanding of how the

phenomenon (i.e., youth engagement) functions in different environments. Stake (2006, p.23) suggests that “an important reason for doing the multicase study is to examine how the program or phenomenon performs in different environments”. Choosing to study the way a phenomenon operates in different contexts, however, comes at the expense of fully developing the rich contextual details of each individual case. The notion of competing foci has been referred to as the “case-quintain dilemma” and as Stake (2006) suggests that “even if careful design decisions are made, the researcher is pulled toward attending more to both the pieces and the whole” (p.7).

Although I was interested in exploring the particularities of the organizations engaging youth in environmental volunteering, I examined these cases because I saw them as being instrumental in building a better understanding of youth engagement in environmental volunteering. When emphasis is placed on the general need for understanding, rather than on the particularities of a case, Stake suggests such an inquiry is called an instrumental case study. An instrumental case study allows researchers “to understand something else” (Stake 1995, p.3). While a single intrinsic case study can help build an understanding of the particularities of a case (e.g., a particular person, program, or organization) an instrumental collective case study provides an opportunity to see how a phenomenon, such as youth engagement in environmental volunteering, operates in different situations.

3.2 Case and Participant Selection

Stake (2006, p.23) suggests that a “multicase study starts with recognizing what concept or idea binds the cases together” and adds, “for qualitative fieldwork, we will usually draw a purposive sample of cases, a sample tailored to our study; this will build in variety and create opportunities for intensive study” (Stake 2006, p.24). The concept

that binds my selected cases together is “youth engagement in environmental volunteering”. Ultimately, I selected three cases of environmental stewardship organizations as sites to study because each had young volunteers participating in environmental volunteer activities. Each case was selected based on the following criteria:

1. The organization was a Canadian environmental stewardship organization, whose operating objectives included engaging volunteers as a way to directly or indirectly bring benefit to the environment,
2. the organization had multiple youth members eighteen years of age or younger who were participating in voluntary activities on behalf of the organization, and
3. the organization was engaging youth as “volunteers”. Youth were engaged in a helping activity for the organization not because they were obligated to do so (i.e., they were not participating to fulfill school curriculum requirements), but because they were perceived to have at least some degree of choice in the decision to volunteer.

To find specific environmental stewardship organizations to serve as cases to study, I searched the Internet, and reviewed previous studies and publications on environmental volunteers in Canada. When I identified cases that seemed to fit the key criteria, I invited the organization via email to participate in my study. Although I identified a number of potential cases over the course of a one year outreach period, in preliminary discussions with representatives I discovered that many organizations were engaging youth in environmental education activities. Their efforts could not be considered “voluntary” as the monitoring work was coordinated through the schools they attended and satisfied curriculum requirements. Further, a number of naturalist clubs had

youth members who sometimes learned to make environmental observations, but the data they collected did not appear to serve an environmental purpose.

Three organizations fitting my selection criteria expressed interest in participating in my study, and it is these three cases (i.e., the Friends of Fish Creek Provincial Park Society, the Shaw Ocean Discovery Centre, and Kejimikujik National Park) that I selected as a way to study youth engagement in environmental volunteering. A summary of the data collection period and case study sites is presented in Table 3-1 and a detailed introduction to the case study sites follows in Chapter Four.

Research participants were selected using purposeful sampling techniques. I intended to interview one staff member from each organization that coordinated or worked with youth environmental volunteers, and as many youth who were engaged as environmental volunteers as possible. Although each of the case study sites indicated that they had at a minimum five youth participants, two of the three case study sites did not have information regarding the number of youth involved as volunteers, and it was unclear how many youth I would be able to interview. Cresswell (2007) suggests that the researcher should attempt to “saturate” the salient categories of information and continue looking in the interview text and interviewing until “the new information obtained does not further provide insight into the category” (p.160). Although I originally intended to conduct interviews with participants until the data generated from interviews had become saturated, logistically this proved to be difficult. Two of the case study sites were located in provinces outside of the province where I lived and studied, and required that I travel in order to conduct face-to-face interviews. In reality the number of participants I

interviewed became contingent on time, resources, and the availability of participants to interview.

Staff member participants were selected specifically because of their positions and their willingness to participate in my study. I invited one staff member representative from each of the three case study organizations to participate in an interview via an email letter, which provided the background information on my study. During this initial contact with staff members, I asked for their assistance in distributing a secondary email to their list of their youth volunteers. I provided staff members with an invitation to send to youth volunteers. In total, twenty-six youth volunteers responded to the study invitation, and I was able to interview twenty-five youth participants (see Table 3-1). The additional twenty-sixth participant initially contacted me to participate in an interview, however, we were unable to schedule an interview.

3.3 Data Collection Procedure

In case study research, the most common methods of case study are observation, interview, coding, data management, and interpretation (Stake, 2006). Stake (2006) suggests that “the more the study is a qualitative study, the more emphasis will be placed on the experience of people in the program or with the phenomenon” (p.27). When firsthand observation of the phenomenon is not an option, “the details of life that the researcher is unable to see for him-or her-self are found by interviewing people who did see it or by finding documents recording it” (Stake 2006, p.29).

I relied heavily on interviews as a method of data collection (see Table 3-1 for an interview schedule).

Table 3-1: Summary of Data Collection Period and Case Study Sites

<p><i>Case Study 1</i> <i>Fish Creek Provincial Park:</i> <i>Calgary, AB</i> <i>N=7 6 youth 1 staff</i></p>	<p><i>Case Study 2</i> <i>Shaw Ocean Discovery Centre:</i> <i>Sidney, BC</i> <i>N=7 6 youth 1 staff</i></p>	<p><i>Case Study 3</i> <i>Kejimikujik National Park:</i> <i>Southwestern, NS</i> <i>N=14 13 youth 1 staff</i></p>
<p>September 30, 2011: interviews with three volunteer snake monitors. Outdoors within Fish Creek Provincial Park, Calgary.</p> <p>October 8, 2011: interviews with two volunteer snake monitors at local coffee shop chosen by participants, Calgary.</p> <p>October 21, 2011: interview with amphibian monitor volunteer at Fish Creek Provincial Park boardroom on park grounds, Calgary.</p> <p>December 1, 2011: interview with volunteer coordinator from the Friends of Fish Creek Provincial Park Society at boardroom on park grounds, Calgary.</p>	<p>January 4, 2012: interview volunteer coordinator at the Shaw Ocean Discovery Centre, Sidney.</p> <p>February 5-6, 2012: interviews with two youth volunteers ('oceaners') at local café chosen in coordination with participants, Sidney.</p> <p>April 28-29, 2012: interviews with three youth volunteers at local café, Sidney.</p> <p>February 2, 2014: 1 interview with youth participant, at participant's home in Victoria, BC.</p>	<p>February 18, 2012: interviews with two turtle volunteer monitors at tea house chosen in coordination with participants, Halifax.</p> <p>February 19, 2012: interviews with two turtle volunteer monitors at tea house and with three turtle volunteer monitors at coffee shop as chosen by participants in Halifax.</p> <p>February 20, 2012: interview with brook trout monitor volunteer at Kejimikujik National Park office. Interview with turtle monitor volunteer at the home of a KNP biologist.</p> <p>February 21, 2012: interviews with two turtle monitor volunteers at home of a KNP park biologist. Interview with turtle monitor volunteer at participant's home.</p> <p>February 22, 2012: interview with youth volunteer at participant's home.</p>

Interviews with youth were structured around several themes, including: motives, challenges, and outcomes. In addition, I interviewed staff members about their experiences of working with young volunteers as a way to learn more about the context of youth engagement and what it was like to work with youth volunteers. I interviewed one staff member from each of the three case study programs, and a total of twenty-five youth participants from all of the case studies.

Although parents did not participate in interviews, interviews with youth participants were scheduled in coordination with their parents. I travelled to each of the case study sites to conduct interviews. During interviews I used a guide that I had developed based on my research questions and literature review (see Appendix 3 and 4) and from informal discussions with a number of representatives from organizations that work with youth in an environmental context. I conducted semi-structured, face-to-face interviews with all of the participants except for one youth participant who due to logistical constraints was interviewed over the telephone. In accordance with the ethics review board protocol of conducting research with minors, I obtained verbal or written informed consent from the participants and from a parent of each of the participants under the age of 18 (n=24). Appendix 1 and 2 provide an example of the consent forms I used in my study.

At the beginning of each interview I introduced myself, explained the purpose of my study, outlined the interview process, reminded each participant about the terms and conditions of participating in my project, informed each participant that they could stop the interview if they needed to take a break, and invited participants to ask questions about the project. Each participant provided consent allowing me to audio-record their interviews. Interviews with staff member participants ranged from 45 to 60 minutes in length. Interviews with youth participants were designed to last approximately 30 minutes and ranged between 15 to 45 minutes depending on the participant and the rapport I was able to develop. Interviews of the shortest duration were often with the youngest participants, and my first interviews were on average shorter than the interviews near the end of my project. The lengthening of interviews near the end of the research

process may be a reflection of my increasing levels of comfort with and effectiveness at conducting interviews over the course of the data collection period. When organizing interviews with youth participants, I selected an interview location convenient to youth as well as their parents.

Interviews occurred in a variety of settings, including: coffee shops; participants' homes; board rooms at case study headquarters; and outside at a park when weather permitted. Although all of the interview locations were to varying degrees effective settings for interviews, one drawback of interviewing youth participants in coffee shops is that many of the young participants spoke softly and the background noise at times made it difficult to hear youth both during the interview, and on the audio-recording. In addition, parents often dropped youth off at the interview location and either waited at a table close by or arranged to come back to pick their child up in thirty minutes. This sometimes put pressure on the interview process, prompting me to move through some of the questions more quickly than I would have done if there had not been time constraints. In the future, I would add an additional fifteen minutes to the allotted interview time, and bring a game to play with young participants if we finished the interview earlier.

I read documents from each of the case study organizations relating to volunteer tasks and training, organization management plans and annual reports, visitor guides and brochures, and volunteer program websites. When available, I also reviewed newspaper and web-based articles that had reported on each of the case study organizations and the work of volunteers. Although I relied primarily on information provided by the people who had directly experienced youth engagement in environmental volunteering, these documents supplemented information I heard during interviews, helped me to build a

contextual understanding of youth engagement, and assisted me in filling in pieces of information I had not thought to ask about during interviews with staff members and youth participants.

A field journal served as another supplemental data source. After each interview, I took notes describing the general impression I was left with at the end of an interview, and the most salient themes I heard emerging. In particular, I tried to pay attention to how the themes I heard during an interview were congruent or distinct from themes I had heard emerging from other interviews. The field journal provided an opportunity to reflect on the places where youth volunteered, and on the themes I was hearing as interviews happened, but it also afforded a valuable opportunity to reflect on my abilities as an interviewer. I made notes of questions that were awkwardly worded or did not seem to yield rich data after each interview, and this allowed me to improve upon my skills and the way I asked questions in subsequent interviews.

Although participant observation would have added another layer of depth to my study, I did not co-participate in any of the volunteer activities at the case study sites. The activities that volunteers participate in at two of the three case study sites were seasonal, and the volunteering season did not coincide with my academic schedule, teaching assistant commitments held at the University, and my availability to travel to the case study locations.

I walked through the parks where youth volunteered as wildlife monitors, and I visited the aquarium where youth volunteered as marine environment educators. Although I did not observe youth volunteering firsthand, I was able to see the context that youth worked within, and developed my own 'sense of place'. At one of the case study

sites, while I waited to interview youth participants, I had the opportunity to see one of the staff members and youth volunteers interact, and this provided me with an informal opportunity to gain insight into the relationships that can develop between youth and staff members.

3.4 Maintaining Data and Confidentiality of Research Participants

I took measures to keep the identities of participants in my study confidential. The consent forms are the only documents containing participants' names, and they are stored securely in a file cabinet that only I have direct access to. I assigned each participant a numerical code at the time of their interview and the audio-recordings, digital and paper transcriptions of participants' interviews correspond to the code. Prior to each interview, participants provided their informed consent to maintain the data I collected for this project for potential future use (see Appendix 1 and 2).

3.5 Data Analysis Procedure

During the early stage of analysis, I focused on becoming acquainted with the data and getting a general sense of what was happening in each interview and each case study before transitioning to a more targeted approach to analyzing my findings. As a general rule, I tried to transcribe each participant's audio-recording as soon as possible after each interview. The transcription process provided me with an initial opportunity to get a sense of the salient themes that emerged from each interview. I kept track of these emerging themes in a notebook, which I used to guide early rounds of my analysis work. After completing the transcription of the interviews, I grouped interviews by case study location. Paralleling Cresswell's (2007) suggestion that multi-case researchers begin with a within-case analysis, followed by a thematic analysis across the cases (i.e., cross-case analysis), I read each collection of interviews from each case study site, making notes of

themes and smaller sub-units of themes that emerged from each individual interview and from each case study site. Stake (2006) refers to these themes generated from analysis as “issues”. I then compared the themes or issues that were materializing within and between cases, and returned to the literature to better understand the meaning of the themes I had begun to observe emerging from my data.

When I began this study, I had been primarily interested in how the experience of volunteering connected youth with the environment. However, after my first round of analysis work, I became increasingly interested in the forces that moved and sustained young people’s experiences of volunteering. I reviewed past research on theories of volunteer behaviour, youth environmental volunteerism, youth volunteerism, and adult engagement in environmental volunteerism, while looking for similarities and differences between the codes I had developed from my preliminary findings and themes I observed in the literature. I then developed a conceptual framework that would help guide phase two of my analysis of youth participant interviews. Using the list of codes summarized in Table 3-2, I returned to the youth participant interview transcripts. I examined the transcripts looking for the six categories of functions described in the Volunteer Functions Inventory. In addition, I explored the data for any signs of meaningful variations from the VFI, looking specifically for categories of motivations that might differentiate youth experiences from older volunteers, and for categories that might differentiate environmental volunteers from volunteers in other contexts.

Analysis became an iterative process. Once I began to formulate a portrait of the central themes that had emerged from my data, I used these themes and themes from my literature review to conduct a content analysis of the interview transcripts. I coded all the

interview transcripts using categories related to what youth volunteers overtly or implicitly expressed as motivations for volunteering, challenges they encountered, and the outcomes from their participation. I analyzed staff member participant transcripts looking for content related to organizational motives for engaging youth in environmental volunteering, challenges encountered from youth engagement, features of the organizational context that supported youth engagement, and the outcomes or benefits realized from involving youth at each case study site.

Reviewing the transcripts multiple times and adding codes introduced more subtleties to the broad thematic categories. For example, I added exploration, discovery, and tactile interaction to the broader code of ecological motivation, and role models, social events, friendships, and community to the broader code of social motivation. Although I did not quantitatively tabulate all of the numbers of participant responses, I could readily discern common and less common responses and those that were discussed with greater richness of detail.

3.6 Project Permits, Approvals, and Ethical Considerations

This study was approved by the Conjoint Facilities Research Ethics Board on August 10, 2011 (permit no. 6962), with an extension granted to the original application until November 2014, and a modification to the original application made to permit phone interviews on November 7, 2011. Additionally, my study was approved by Parks Canada on August 1, 2011 (permit no. BAN-2011-9854), and the Alberta Tourism Parks and Recreation Parks Division on September 15, 2011 (permit no. 11-153). Letters of permission to conduct research and publicly cite the case study organization was granted by the Executive Director of the Friends of Fish Creek Society on September 26, 2011, and by the Executive Director of the Shaw Ocean Discovery Centre on October 11, 2014.

Table 3-2 Youth Environmental Volunteer Motivation Analysis Framework

Generic Volunteer Motivation	Youth Volunteer Motivations	Environment Volunteer Motivations
Values: altruistic/humanitarian concern	Social	Biospheric values: concern for other living things *values function variation
Understand/learning	Career	Physical contact with nature: to be surrounded by nature, to be outdoors, or to have tactile interaction
Social	Fun	Emotional interactions with nature *enhancement function variation
Career	Extrinsic motivators (e.g., reference letters, food treats such as ice-cream and pizza)	Psychological interactions with nature: similarities between self and other living things/shared identity with nature *enhancement function variation
Enhancement		Learning about the environment: new plant and animal understandings, ecological systems understandings *understanding function variation
Protective		Seeing a tangible difference in the environment Personal use function: protect, monitor, enhance an environment for personal enjoyment and reward

As the majority of the participants in my study were minors (i.e., individuals under the age of eighteen), I obtained both written or verbal assent from each youth participant and written or verbal informed consent from a parent of youth participants prior to each interview.

Although I obtained all of the necessary approvals to conduct this study, permits and approvals are only the first step in conducting a study that is sensitive to ethics.

Marshall and Rossman (2011) remind researchers that, “Ethical practice is ongoing:

obtaining a signature on an informed consent form is merely one observable indicator of the researcher's sensitivity" (p.48). Taylor et al. (1998) wrote, "Any interviewer-respondent relationship is bound by power, an artifact which is all the more real when the respondent is small and the interviewer is larger" (p.317). The authors provide a number of recommendations for good practice when working with children throughout their article. Influenced by the work of Taylor et al. (1998), I ensured that throughout the research process:

- I expressed to youth that they did not have to participate in my project if they did not feel like it;
- I tried to see the interview through the eyes of a child and a teenager, and think about how they might perceive me as a researcher, and what they might think about the questions I was asking;
- I asked for youth participants and their parents input in selecting the interview location;
- I asked youth for their permission to tape record their interviews, and offered to let them hear the recording if they so wished;
- I explained the basic issues that my project is tackling and shared with youth why I felt these issues were worth studying;
- I was sensitive to the length of the interview;
- I thought carefully about the words I would use to ask interview questions, and when youth misunderstood a question I did not correct them, but instead asked the question again in a different way;

- I encouraged participants to ask me questions and gave them time to think about their answers; and
- I thanked participants for doing me a favour by spending their free time talking with me.

I felt that my interactions with youth, the parents of youth participants, and staff member participants were positive. Each participant appeared pleased to participate in my study, and I believe that no ethical issues emerged over the course of my study.

3.7 Building a Credible Study

Lincoln and Guba (1985) have identified a number of procedures to help ensure that standards of trustworthiness for qualitative research can be met. Such procedures include prolonged engagement, member checks, triangulation, and peer debriefing (Lincoln & Guba, 1985). Triangulation and peer debriefing were the primary approaches I engaged in to build a credible study. Creswell (2007) describes triangulation as a process where “researchers make use of multiple and different sources, methods, investigators, and theories to provide corroborating evidence” (p.208). Although I was unable to delve deeply into the contextual details of each case study location, by selecting more than one case as a unit of study I have multiple angles from which to view youth engagement in environmental volunteering, and an opportunity to look for corroborative evidence in my findings. Stake (2006, p.77) writes that triangulation in multicase research provides assurance that “we have the picture as clear and suitably meaningful as we can get it, relatively free of our own biases, and not likely to mislead the reader greatly”.

In addition to exploring youth engagement in environmental volunteering at multiple locations, using a case study approach to inquiry provided me an opportunity to explore my research topic from multiple perspectives. I explored youth engagement in environmental volunteering from the perspective of youth themselves (i.e., interviews with youth volunteers), I explored youth engagement in environmental volunteering from the perspective of staff members working with youth (i.e., through interviews with staff members), and I explored youth engagement in environmental volunteering from an organization perspective (i.e., by reviewing organization documents).

Further, my findings are strengthened by methodological triangulation. Methodological triangulation involves using more than one method to collect data (Thomas, 2013). I collected data from interviews, a document review, and a field journal. Corroborating evidence from each source and study location is suggested by Stake (2006) to provide the researcher with additional confidence in making any assertions about his or her findings. Being able to triangulate my data added strength to the assertions or recommendations I make at the end of my thesis based on the consistencies I observed in the cross-case analysis of my findings. I engaged in peer debriefing as a way to enhance the credibility of my study. I discussed and shared my emergent findings with colleagues and supervisors to ensure that my analyses were grounded in the data, and not overtly influenced by my personal experiences of environmental volunteering.

Although I did not engage in a formal member checking process, I offered my contact information to participants and suggested that they email me if they wanted to discuss my research or the interviews they had participated in after the interviews were over. I offered participants the opportunity to listen to the audio-recording of their

interview; one staff member participant asked to review the interview transcript and approved of its contents. Some youth participants followed up to thank me for interviewing them and to share photographs of their volunteer experiences.

Field work notes provided me with an opportunity to reflect on the themes that were being generated from each interview and allowed me to assess and improve my effectiveness at conducting interviews. Engaging in this process of “reflexivity” helped me discover the types of questions that generally produced short or long narratives and to develop probing techniques that helped generate more data in subsequent interviews. Further, reviewing fieldwork notes I took during the interview stage of research provided an opportunity to recognize the wording or styles of questions that participants had difficulty understanding.

The passion, excitement, and values I hold for my volunteering experiences, described in the preface to this study, helped stimulate this research project. However, sharing my values for the environmental volunteer experience also serves a credibility function. As Marshall and Rossman indicate (2011), when the values of the researcher are “out in the open, they are more manageable and the reader of the final report can assess how those elements of identity affected the study” (p.97). I shared my personal connections with this research topic as a way to help the reader understand how my personal history of environmental volunteering may influence my interpretation of the findings. Although I have tried to bracket my personal experiences, it is difficult to fully put them aside. I observed many parallels between my experiences of wildlife monitoring and that of youth participants. Although some may argue that my subjective experiences of environmental volunteering may bias my study, I feel that this “insider” knowledge

may have helped me to see themes and patterns in the findings that someone who has not participated in environmental volunteering may have missed. However, in an attempt to see the data with “fresh eyes,” I looked for disconfirming evidence of salient themes, and themes dissimilar to my own personal experiences.

3.8 Limitations

Although I undertook a number of measures to ensure the credibility, transferability, and dependability of my study, as with any research design there are certain limitations to a qualitative collective case study approach. In choosing to study multiple cases, rather than a single case, I inevitably have traded some depth for breadth, as I have been unable to spend the time developing the rich details of each individual case and such details may have improved the transferability of my findings.

The breadth of case study work indicates that my findings are not large enough to be generalizable or statistically representative of a larger population. Findings from my study cannot explain how and why all youth are engaged in environmental volunteering. However, the findings from my study can assist in building a better understanding of how and why *some* youth are engaged in environmental volunteering, and I anticipate that other researchers and volunteer coordinators will find the outcomes transferable.

Despite the apparent limitation of the multiple case study method, Stake (2006) argues that researchers should make evident any generalizations that emerge from their data. In making the details of the study contexts available to the reader, the reader can choose which assertions might apply to other cases. Stake (2006) writes:

It would be a mistake if a multicase researcher fails to disclose whatever generalizations appear evident from the data, in a tentative way. In the obligation to be useful to society and to the individual reader (whether this is a policy maker, another researcher, or a practitioner), the researcher should enrich the reader’s experiential knowing with as much of the action and context of the cases as

possible. Because the reader knows the situations to which the assertions might apply, the responsibility of making generalizations should be more the reader's than the writer's (p.90).

Collective case studies provide people with a vicarious experience that is “useful for transferring assertions from those cases to others” (Stake 2006, p.88). By providing the contextual details of how and why some youth are engaged in environmental volunteering, I anticipate that researchers or practitioners may be able to draw on this information as a source for understanding how other youth could be involved in environmental volunteering.

Marshall and Rossman (2011, p.145) suggest that some of the benefits of interviews is that they are able to “yield data in quantity quickly” and they “allow the researcher to understand the meanings that everyday activities hold for people”. However, conducting face-to-face interviews with participants also presents a number of limitations, including: (1) rapport can be difficult to achieve between the participant and the researchers. Participants may be unwilling to share or uncomfortable with sharing all that the interviewer hopes to explore, or the participant may be unaware of recurring patterns in their life; (2) the researcher's presence could bias responses; and (3) the researcher may be unable to evoke long narratives from participants because the interviewer lacks the skills or the interviewee has difficulty expressing themselves (Marshall & Rossman, 2011).

I encountered a number of these and other challenges during the data collection stage of my study, which may have limited the richness of my findings. During interviews, I noticed that participants had a tendency to endorse their experiences as positive, and seemed to underreport negative, challenging, or difficult features of their

volunteer experience. When I first asked a question prompting participants to share something about their environmental volunteering experience that they had found difficult or had not enjoyed, the overwhelmingly first response was that they had “liked everything about it”. Upon further probing and follow-up questions, youth participants would often share something about the experience that was challenging or difficult. The overall positive focus of interviews indicates a self-selection bias. Participants who generally had positive experiences of volunteering were more likely to offer an interview than those who had negative experiences. In addition, this finding may indicate that young participants have a tendency to endorse their experiences as positive in an attempt to please the researcher.

One challenge I encountered, particularly in the beginning of the research process, was the ability to evoke long narratives with some youth participants. Participants had a tendency to provide short responses, often describing features of the volunteering experience as “cool”. When I asked youth to expand on why volunteering was “cool”, sometimes I was met with another short response such as “I don’t know; I just liked it”. We moved beyond the short responses as I became more adept at interviewing with youth, and developed new ways to ask follow-up questions and build rapport. However, in working with youth participants in the future, I would consider alternative methods to the standard face-to-face interview.

Research on the ethical and methodological considerations for project and dissertation work with children and youth draws attention to the importance of “getting the methodology right” (Taylor et al. 1998, p. 319). Previous researchers have argued that:

Giving children a 'voice' is deemed to represent a high level of empowerment, but this form of expression has an adultist emphasis. Its manifestation in the form of qualitative methods, such as semi-structured interviews or in-depth discussion groups, neglects other aspects of children's communication (art, drama, music, activity) (Taylor et al. 1998, p. 319).

This is not to say that I think interviews were ineffective at generating rich data, as many youth provided detailed and expressive narratives of their experiences. However, complementary research methods may have allowed deeper insight into youth perspectives of environmental volunteering, and provided youth an opportunity to participate more fully in the research process.

In the following three chapters, I describe my findings on youth engagement in environmental volunteering. Chapter Four focuses predominantly on describing the context of youth experiences and reports largely on findings from staff participant interviews. In Chapters Five and Six, I focus primarily on findings from youth participant interviews.

Chapter Four: **Case Study Sites and Volunteer Context**

This chapter is the first of three in which I present my findings from a cross-case analysis I conducted to explore youth engagement in environmental volunteering. In the first half of this chapter, I describe the similarities and differences in the arrangement of youth engagement in environmental volunteering that emerged from each case study site, including the organizational context and motives for engaging youth as volunteers, models of participation, responsibilities, and training process. In the second half of the chapter, I compare the challenges staff working with youth encountered and the conditions that seem to have supported youth engagement at each of the case study sites.

4.1 Organizational Context

Three environmental stewardship organizations participated in my collective case study:

1. The Friends of Fish Creek Provincial Park Society (FOFC or “Fish Creek”), a registered charity operating in Fish Creek Provincial Park in Calgary, Alberta,
2. the Shaw Ocean Discovery Centre (SODC or “the Aquarium”), a not-for-profit aquarium and marine education centre operating in Sidney, British Columbia, and
3. Kejimikujik National Park (KNP or “Keji”), a Canadian national park operated by the federal agency Parks Canada, in southwestern Nova Scotia.

The Shaw Ocean Discovery Centre (SODC) and the Friends of Fish Creek Provincial Park Society (FOFC) are similar in that they are non-government, not-for-profit organizations. The SODC has several full-time and part-time employees, and operates as a business that generates income to support the centre’s operation. The FOFC operates with a small number of paid employees, is a registered charity and relies heavily

on donor support to operate. Kejimikujik National Park is part of a large network of Canadian national parks operated by the Canadian federal government agency Parks Canada. The inclusion of volunteers at the SODC, FOFC, and KNP enhances site specific operations. However, the work of KNP volunteers is embedded in a broader and more complex environmental management structure. Kejimikujik National Park is one of two core protected areas that lie within the UNESCO Southwest Nova Biosphere Reserve. Although the work of KNP volunteers contributes to the protection of wildlife within the park, their work also feeds into a larger network of volunteers, research institutions, and conservation organizations that comprise the Southwest Nova Volunteer Program. This network of individuals and organizations, which KNP is a part of, helps to inform management decisions in relation to species at risk and the environment within the Biosphere Reserve. Figure 4-1 illustrates the location of each of the case studies.

4.1.1 Role of the volunteer coordinators

The role of volunteer coordinator differed from site to site. Fish Creek Provincial Park is part of a system of parks and protected areas managed by the Alberta Tourism, Parks and Recreation Department; however, most of the volunteer activities that take place at the park are coordinated by the Friends of Fish Creek Provincial Park Society (FOFC) and managed by the Project and Programs Director from the FOFC. The Shaw Ocean Discovery Centre had two employees working as community coordinators who managed and coordinated the work of volunteers. The coordination of volunteers at the Friends of Fish Creek Provincial Park Society and the Shaw Ocean Discovery Centre was overseen by personnel whose primary obligation appeared to be volunteer management and community outreach.

At Kejimikujik National Park no separate position of volunteer coordinator existed. One of the biologists from “Keji” shared that the scientists at the park were hired as “stewardship biologists”. As scientists, they play an important role in recovering species at risk in Nova Scotia.

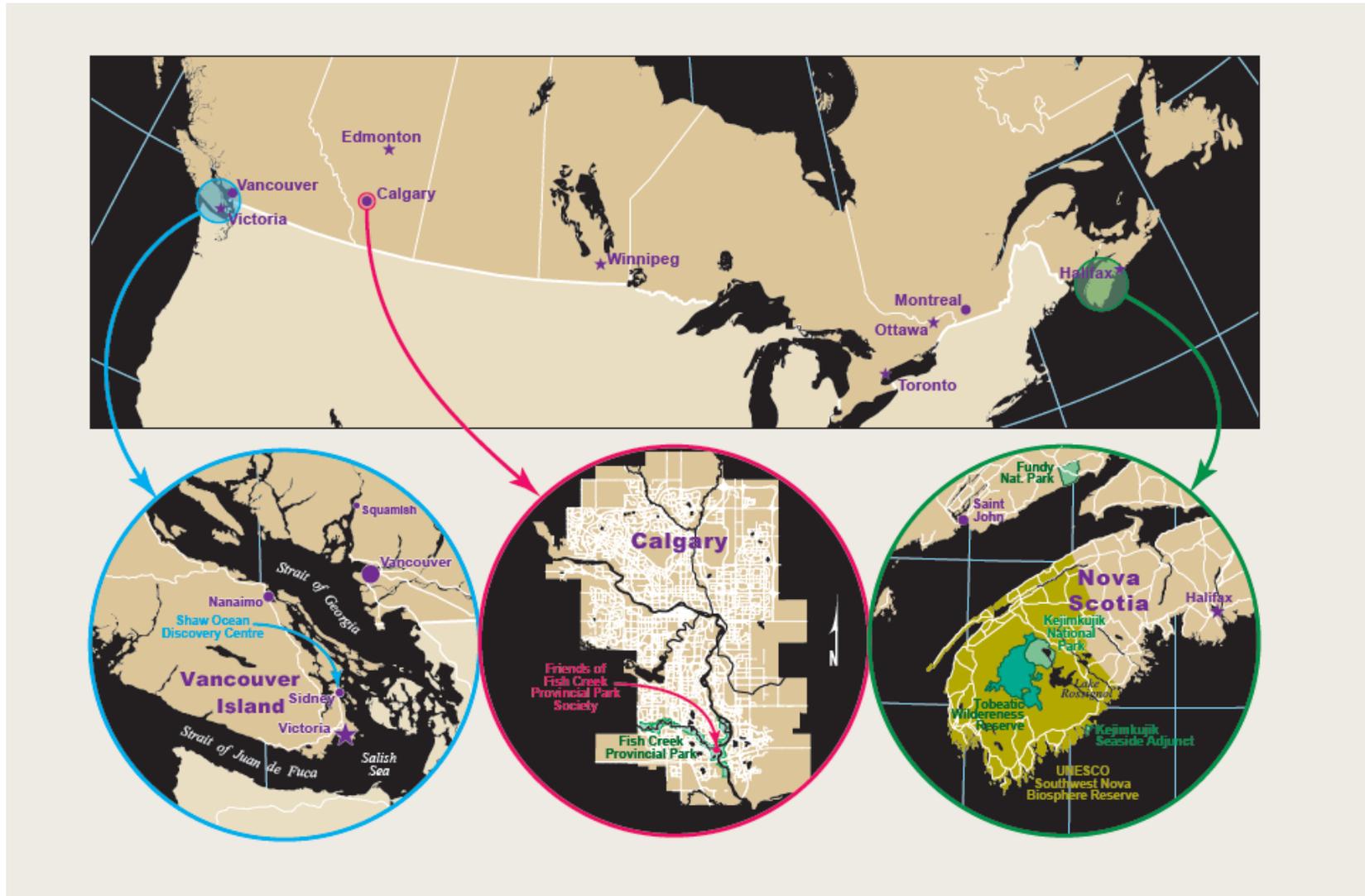
As stewardship biologists, they were tasked with engaging park visitors and the people living in the communities within the Biosphere Reserve (within which Kejimikujik National Park is embedded) in the species recovery efforts⁴. I met with two of the stewardship biologists, one of whom worked with park visitors. The second stewardship biologist, who worked with the community residents, was in a role most similar to that of “volunteer coordinator” in the other two sites and is assigned that identifier for this study.

4.1.2 The scale of youth engagement

The Shaw Ocean Discovery Centre (SODC) surfaced as the only case study organization that appeared to collect demographic information on their volunteers. The volunteer coordinator from the SODC shared that the centre had on average fifty youth volunteers between the ages of eleven and eighteen actively engaged. Compared to the SODC, I found it more difficult to build a portrait of youth engagement at the two park case study sites and to understand how well subscribed the programs were by youth.

⁴ Species at risk are plants and animals whose continued existence is threatened. Species at risk are assigned varying degrees of protective status by the Federal Government of Canada and their protection is governed by the Species at Risk Act (SARA) (Caverhill & Crowley, 2008). Under SARA, all species listed as threatened or endangered in Canada have a Recovery Team that advises how best to protect and recover these species and biologists from the KNP case study are part of that team for species at risk in Kejimikujik National Park (KNP volunteer coordinator interview).

Figure 4-1: Map locating the Case Study Sites (SODC, Sidney, BC; FOFC, Calgary, AB; and KNP, Southwest, NS).



The volunteer coordinator from the Friends of Fish Creek Provincial Park Society shared that although they would like to collect demographic information, there had not been an opportunity to do so:

I don't know the ages of any of our volunteers. I don't have that data. We would like to start a data base, but right now we don't have the ages. We don't collect that data.

Similarly, the Keji volunteer coordinator shared:

[We have] a whole data base on volunteers. But I'm not sure that the ages are in there. I don't think we ask what their age is when we get them to sign the waiver. I feel like if I guessed it wouldn't be accurate...Even though we do have a number of families that volunteer, they have young kids, and they have full time jobs and it is really hard for them to do other things and so I'd say we have a fairly large group of people that are just retired and that still have a lot of energy and they really want to do something.

While neither of the park based volunteer coordinators felt comfortable estimating the numbers of youth participation, both indicated that they had between two hundred and three hundred volunteers and that their volunteer base was comprised largely of middle-aged and retired individuals.

4.2 Motives for Engaging Youth as Volunteers

No evidence materialized from the case study locations that suggested the organizations had motives for engaging youth that differed in material ways from their motives for engaging volunteers of other ages. Although each case study organization had youth volunteers, youth volunteerism only seemed to be purposefully targeted by one of the case study organizations. The SODC invites people to volunteer at the centre through various publications (e.g., volunteer organization websites, newspapers), but extends a specific invitation on the Centre's website to youth thirteen years or older to

volunteer⁵. The SODC volunteer coordinator shared, “here we appeal to youth a lot so we want to make sure that is represented.”

Although each case study organization engaged volunteers within different organizational contexts, a number of broad similarities in the purpose of engaging volunteers emerged from each case study site. Volunteers were seen as playing a central role in helping each case study organization achieve their environmental protection objectives. Organizational concern for the environment was linked to the pressure humans exert on it:

This provincial park is completely surrounded by development. . . . There are many ecosystems at the park that are surrounded by all different threats and issues (FOFC volunteer coordinator).

The Salish Sea watershed is one of the most densely urbanized watersheds in Pacific Canada and the American Northwest. Our aims [for creating the volunteer program] are to educate, to inspire all ages to love the ocean, to learn about the ocean. You protect what you love and you love what you know (SODC volunteer coordinator).

When you look across southwestern Nova Scotia, cottages have increased by 80% in the last 40 years along the lakes, and there are these rare species there. But, there are also going to be more people there (KNP volunteer coordinator).

Two pathways through which volunteers helped organizations achieve their goals surfaced; as a resource and as an audience, volunteers could enhance an organization’s ability to bring direct or indirect benefit to a specific species, place, or ecosystem. I heard from the Aquarium volunteer coordinator that they depend on volunteers to help educate the public about ocean ecosystems and they usually have about “1000 hours a month of volunteer time” to help them reach their environmental education goals. The volunteer

⁵ Prior to 2014, the invitation had included youth eleven years of age or older and I interviewed youth eleven years old in my study. However, the website has been updated and the minimum age requirement seems to have been raised to thirteen.

coordinators from the park case studies shared that volunteers help park organizations build a better understanding about the natural environment and wildlife found in and around parks:

We want to monitor what is going on with [park species] and what is going on with the water quality To do that we need volunteers. It's a huge park! Park staff do not have the time, or the resources, or the budgets to do it all. And it's got to be done. So the only way to do that is through volunteers. [Volunteers] are essential to what we've got to get done (FOFC volunteer coordinator).

We [myself and the other park biologists] cannot protect all the species at risk in Keji, especially when they are all doing the same things in a short window of time in the summer. We would have to clone ourselves one hundred times to even begin to start to do it all (KNP volunteer coordinator).

Volunteers also serve as an important audience for each of the case study organization's environmental messages. By engaging volunteers, it seemed that each case study organization anticipated that the volunteers would become more connected to the environment and be inspired to take actions that helped further protect it. Volunteer coordinators from each of the case study sites shared:

[Volunteering] encourages and fosters that connection between the people that live around here and the park increases the number of positive users of the park (FOFC volunteer coordinator).

[Our volunteer program] gets people in here and gets them to be passionate about the oceans (SODC volunteer coordinator).

We need to have people really connected to nature. . . . The whole idea for starting the volunteer program is we just can't do it any other way. We need to get people involved and we need to empower people . . . get them involved in real and meaningful and exciting hands-on work. That is a way to really help species at risk and really increase the connection to our natural world. Volunteering at Keji is about building support and awareness, and having a voice for species that in our opinion are really important (KNP, volunteer coordinator).

4.3 Models of Participation

Youth engagement in volunteering seemed to evolve slowly and organically over time at the park case study sites. The volunteer projects offered through the Friends of Fish Creek Provincial Park Society (FOFC) and Kejimikujik National Park (KNP) appeared to be a good match for families wanting to volunteer. For example, the volunteer coordinator from Fish Creek shared:

[Youth participation] arose organically, but it turns out some of our volunteer programs are really well suited to that clientele. And, so now, we are actually marketing to that saying this is a great way for families to spend time together in the forest together. So we are definitely actively marketing in that direction.

Although I learned that Kejimikujik National Park actively recruited volunteers of all ages, it seemed that volunteer engagement, including youth volunteer participation, evolved primarily from “word-of-mouth”:

I think that there is definitely active recruitment. Although, I don’t think that we have to actively recruit people that much, but we still do. We still put out newspaper articles and we have Facebook and Twitter and let people know when there are a whole bunch of new and exciting things that are coming up to try to get new people involved, but a lot of the work is done now by the volunteers themselves. They spread the word, which is awesome (KNP volunteer coordinator).

Although volunteer coordinators from all three case studies suggested they had engaged in some form of active outreach to engage youth as volunteers, findings from my interview with the Shaw Ocean Discovery Centre (SODC) volunteer coordinator suggest that the aquarium had taken a more active and targeted approach to youth participation than the park case study sites. As already highlighted, the Shaw Ocean Discovery Centre invites youth to volunteer on their website, and I learned from the volunteer coordinator

that the centre hosts youth days at the aquarium which has been a popular way for youth to learn about volunteering at the centre.

4.3.1 Minimum age requirements and parent involvement

Youth of all ages appeared to be welcomed to participate in wildlife monitoring projects on behalf of the Friends of Fish Creek Provincial Park Society and Kejimikujik National Park, though younger youth needed to be accompanied by an adult. At Fish Creek Provincial Park, individuals under the age of eighteen were required to have a parent present with them while volunteering; youth-parent volunteer partnerships were seen by the volunteer coordinator as the best way to engage minors as volunteers while also mitigating risk to the organization and youth. While there are no rules regarding age and access to the volunteer experience at KNP, younger youth relied heavily on the mentorship and guidance of adults, most often their parents or grandparents. At the Shaw Ocean Discovery Centre, youth were not required to volunteer in the presence of a parent but they were required to be at least eleven years of age to volunteer⁶.

During interviews, I heard some of the older youth participants from the KNP case study describe volunteer scenarios where they had monitored wildlife with an older experienced volunteer or a park biologist, but without their parents. For example, one youth participant who camped at the park with her family shared that sometimes as a family they monitor turtles at the same site, but sometimes the family will split up and monitor turtles with other volunteers at different sites:

We will all go camping together as a family and then often times the volunteering is like we are all going to go out and watch the turtles and monitor the nests, but

⁶ Eleven years of age in 2012 when I conducted interviews. However, the minimum age requirement appears to have been raised to 13 years of age since I collected case study data.

we will often go out to different sites. So we sort of volunteer together and sort of not (KNP volunteer, Age 14, Interview #7).

4.3.2 Service requirements

Only one case study organization had a minimum service requirement policy dictating the number of hours youth were expected to serve. All volunteers at the Shaw Ocean Discovery Centre were asked to contribute sixty hours of service in the year following their initial orientation and training sessions. Although volunteers of all ages were asked to complete the minimum service required, an average of two shifts a month, I learned that there was some flexibility in how youth volunteers could structure their commitment. The volunteer coordinator from the SODC acknowledged that youth, particularly older teenaged youth, often have many other commitments and interests and if youth were busier at certain times of the year they were welcome to stagger their volunteer commitment.

We are not that strict about the hours commitment depending on what their schedules are like. Kids are so busy. One of the girls was in rowing and she wouldn't be able to come back until the rowing season ended, or some of them won't be able to come back until the hockey season ends. The really interested kids are usually very busy . . . but then over Christmas and New Years some of them come in and fill in their hours then. You know with some kids it is just an excuse and it gets to be where you know that you are not going to see them again. But they try to do an average of 60 hours over the year we are flexible (SODC volunteer coordinator).

Volunteer commitment at the park case study organizations was dictated by seasonal events in the life cycle of the species that volunteers helped to monitor. Although the timing of volunteer commitment was not flexible, wildlife monitoring for park organizations was approached with a more flexible attitude. No minimum service requirement at either of the park case study organizations surfaced, and it appeared that volunteers were welcome to participate as frequently or infrequently as they desired.

4.4 Training Process

Training at the three sites was similar in that youth and adult volunteers participated in the same training procedures; there was no evidence of a youth specific training process. The degree to which youth were required to participate in training prior to volunteering varied between sites. Youth volunteers at the Shaw Ocean Discovery Centre attended two training sessions prior to their first volunteer shift alongside volunteers of all ages. As one participant shared:

[Training] was two nights, I think, and they gave you a few hours of customer service training. And, they walked us through [the centre] and they showed us all of the animals, and told us what we should tell people about them. [I went to the training sessions] with my friend . . . and she is my age and there were some kids that were even younger, like I think 13 or 14 year olds were the youngest, and there was one really old lady that was like 90. . . . So all ages were there (SODC volunteer, Age 18, Interview #6).

The training experience at the two park case studies emerged as more variable. Some of the older youth participants attended information or training sessions; however, many youth participants suggested that they learned “on-the-job”.

We don’t have a special youth training program. That is a good idea, but we don’t have the resources to do that. Because the kids are never out there on their own, we rely on the parents to be continually training their children. Every time they go out they are reminding them of the rules, and the techniques, and the ‘how to’ and ‘do’s’ and ‘don’ts’ and stuff like that (FOFC volunteer coordinator).

A youth participant from the Fish Creek case study explained that much of the wildlife monitoring work was self-taught and described how she gradually learned to make observations and collect data effectively while working alongside her Mother:

They do one or two orientations and then they also give you a CD with the [amphibian] calls on it, but we [my Mom and I] found that it is a lot of self-teaching when you go out. Like the first year we didn’t see anything but after that we did, just because we got to know how to find them (FOFC volunteer, Age 14, Interview #6).

Training was described as informal at Kejimikujik National Park (i.e., provided at the beginning of a fieldwork session in person, or by email, or when a volunteer checked out a data collection kit). However, the KNP volunteer coordinator emphasized that information on how to collect data was consistent, and because volunteers always have access on-site to an experienced volunteer or park scientist the process supported volunteers in being able to collect reliable data:

An experienced person is always there and they tell the volunteers what to do, but also why they do it, and why it is important to do it this way. And how and why it is important to fill out the cards correctly and everyone might have their own spin on explaining it, but it is all very consistent.

Mentorship plays a key role: “Most of it is all mentorship; because really if you told people a bunch of rules before they began volunteering they wouldn’t remember it You remember by doing” (KNP volunteer coordinator).

4.4.1 Access to on-going support

A theme of “support” emerged from the Kejimikujik National Park case study and the Shaw Ocean Discovery Centre that did not emerge from the Friends of Fish Creek Provincial Park case study. During interviews with youth participants from the Keji case study I often heard of park biologists helping youth learn the skills they needed to carry out fieldwork, and of the friendly, helpful work environment they participated in as volunteers. One youth participant shared that although she felt hesitant the first time she participated in turtle monitoring, her feelings of concern quickly diminished after her first day of fieldwork:

When you first do it, it is intimidating. . . . I was like these people have been doing it for a really long time, like they have over 2000 hours and I am at hour 1! And at first you are like, okay, well, how is this going to work? And then you go out with people and they are so friendly and happy and willing to show you everything and you didn’t even have to ask how to do things. . . . Everyone is so great. You don’t feel out of place (KNP volunteer, Age 14, Interview #6).

Another participant from KNP shared that there is always access to a more experienced volunteer who supported him in the work he did as a wildlife monitor:

You work in a team. And there is always somebody leading the team. And you're usually always with an experienced person, unless you are the experienced person. So you always have back up there anyway (KNP volunteer, Age 16, Interview #6).

Although it was expressed less often and described in less detail by youth participants at the Shaw Ocean Discovery Centre, a sense of support was evident. Some youth expressed that they felt somewhat overwhelmed early in their experiences of volunteering at the centre. Youth participants shared that there were over 1000 marine species on display at the centre; after two training sessions they could not, nor were they required to, know all of the information about the aquarium exhibits. Access to more experienced volunteers, an aquarist, as well as books and other information resources relieved their anxiety when they were unable to answer a visitor's question:

On my second shift they put me in the gallery, which is like where all of the fish are and that was like kind of intimidating the first time, because people would come up to you and ask "oh, what is this?" And, then you have to say I actually have no idea. I don't know what it does. . . . There are books and stuff and they tell us that if you don't know the answer then obviously don't make it up. But, you can be like "Oh, I'll go and ask". And there is usually at least one really experienced volunteer that knows a lot of stuff. And the aquarist was always around the centre so when she was walking by she would be one of the people if I didn't know something I could ask her (SODC volunteer, Age 18, Interview #6).

4.5 Volunteer Roles and Responsibilities

Youth volunteers with the Friends of Fish Creek Provincial Park Society and Kejimikujik National Park were engaged in the same mode of environmental volunteering: wildlife monitoring. At FOFC volunteers helped to collect information on amphibian and snake species. At KNP they helped monitor a wide variety of species (e.g., turtles, trout, loons, Atlantic coastal plain flora, eels, and ribbon snakes) though the

majority focused on collecting information on an endangered species of turtle: the Blanding's turtle. The range of tasks conducted as wildlife monitors seemed to depend on a number of factors, including each individual volunteer's capabilities, their previous experiences, what they were motivated to be responsible for, who they were volunteering with, as well as their age.

Youth at FOFC and KNP were not required to participate in the entire range of fieldwork tasks that were charged to older volunteers. Youth participants were often partnered with an older volunteer, usually a parent, and never worked alone. Since youth under the age of eighteen at FOFC were required to volunteer with a parent, data collection was a team effort. Though not a requirement, young volunteers at Keji often co-volunteered with a parent, grandparent, siblings, other youth volunteers and non-family member adults. Since monitoring was undertaken as a team, youth could lean on the older or more experienced volunteers to ensure all of the data collection obligations were accurately fulfilled, and the park organizations could lean on adult mentors to train and guide youth in their volunteer activities.

Youth participants from both of the park case study sites helped take and record a number of observations on the species they worked with (e.g., species type, height, weight, health) and the surrounding environment (e.g., air and/or water temperature, cloud cover, weather conditions, vegetation). Youth participants from the park case studies described some of their fieldwork responsibilities:

For snake monitoring, now we are weighing the snakes, we're measuring them, we're also marking them and every time we mark one, we have to write that down. And, we also have to write down how long he is and all of that. And, we also have to write down how many marks he has [how many identification marks are present from previous captures]. . . . And if they are wounded or cut, or if they are shedding, then we have to mark

that down too. We also have to mark down the weather (FOFC volunteer, Age 9, Interview #2).

What we do depends on the time of year. If the turtles are nesting we will go out around 630 pm at the campsite and we'll go out either by boat, walking, or driving. Whatever site they assign you. There are different spots throughout the park. Basically we do a scan for turtles. If you are on the beach you have to walk up and down the beach a bunch of times and then if you see a turtle you work on some data sheets that you have to fill out. . . . [And] record how many you saw, air temperature, water temperature, cloud cover, vegetation in a certain area and all that (KNP volunteer, Age 16, Interview #6).

Turtle monitoring at KNP occurred during two key points during the year: nesting season in the summer and turtle hatchling emergence in the fall. During the nesting fieldwork season, youth volunteers were invited to help locate turtle nesting sites. Once a site had been identified, youth volunteers waited for the turtle to arrive at the site and lay her eggs. Volunteers are tasked with recording information about the site, the turtle, and how many eggs have been laid, and they cover the nest with a protective enclosure after the turtle has left the nesting site. It is the action of placing a protective enclosure over the nest that helps reduce the risk of predators disturbing the eggs and that helps to protect the nests from human disturbances (e.g., from dirt bike or ATV traffic). One youth participant explained the purpose of enclosing the nest:

There are people driving ATVs and dirt bikes, but it is where the turtles are. When there is a cage over the turtle eggs, it is like telling people to be aware. So if the turtles don't have that cage people could run over it and squish the eggs and so it is like they need that cage (KNP volunteer, Age 15, Interview #11).

Some youth participants at Keji warned people driving through the park when turtles were on or crossing the road. One youth participant described her role in warning oncoming traffic about turtles:

We would be watching the turtle and waiting to see if they come out and if they do come out on the road we have to slow the cars down. We make sure the turtles don't get hit by a car. And tell [people] not to take flash photography pictures and to just keep going cause if you do [take photos], it scares the turtle and then they will just want to go right back into the woods [and not lay her eggs] (KNP volunteer, Age 11, Interview #1).

Older youth seemed to take on more data collection and recording responsibilities than younger youth, or at least seemed more aware of the full range of tasks associated with wildlife monitoring. For example, when I asked an eight year old wildlife monitor from the KNP case study to describe what he did as a volunteer he shared:

We walk and look for turtles. When we see a turtle we would write down where we found it. And we would write down the date and then that is pretty much it I think. . . . Either my sister or the older people write it down (KNP volunteer, Age 8, Interview #2).

However, his eleven year old sister who also volunteered seemed to contribute more to the data collection process. She described tasks related to tracking, measuring, weighing, tagging, and making health assessments on turtles:

We walk back and forth along the beach or the road and if you see one (a turtle) you just watch it, and whatever it does you just watch it. Once the turtles lay their eggs we have to enclose them, because if not the racoons will get into them. We also record other types of turtles we would see. . . . There is a painted, snapping, and Blanding. . . . Other times we check on the baby turtles. . . . What we would do is we would take them out of the enclosure. We take it and we look at the charts and we would number it and then chip it, like take a little nail clipper and chip the shell, there is a code for each turtle. . . . [I would help with all of the different jobs] and there is this little scale thing and we weigh it and we look if it is healthy (KNP volunteer, Age 11, Interview #1).

A number of youth participants from the Keji case study began volunteering when they were seven years of age, and they reported that by age nine or ten they felt comfortable being responsible for carrying out the entire data collection process. One youth

participant from the KNP case study described the support she initially received from the park volunteer community, and her gradual progression of taking on more of the fieldwork responsibilities:

It's good team work. [All of the biologists that live around here] have helped us out a lot. . . . I think we were 6 or 7 when we first started. For the first few times, [one of the park biologists] would help us and say, "Okay, this goes there" and "the temperature is this", and he would hold the temperature thing in the water. He would show us different things and explain it a few times for us. I think it took us a year maybe to get the hang of it all. . . . The first year he really helped us and then after that we started to become more independent. Then after that we just kind of learned by ourselves and we just kind of depended on our binder (KNP, Age 15, Interview #10).

The work that wildlife monitors participate in at both of the park case study sites indirectly provided benefit to the environment. Volunteer collected data is analyzed and used by park management to better understand a particular animal or plant species and its environment to inform decisions that can better protect individual species and the broader environment.

Youth participants from the Shaw Ocean Discovery Centre were engaged in a different mode of volunteering than the participants from the park case study sites. Youth volunteering for the SODC were placed in a marine environmental educator role.

Working almost exclusively indoors in an Aquarium setting, volunteers guided the public through their visit to the centre, interpreting the exhibits and answering questions about the species on display at the centre. Youth participants at the SODC were given the title of "Oceaneer Naturalists", or more simply "Oceaneers". One of the youth participants from the SODC explained some of the tasks she was responsible for at the centre as an Oceaneer:

I do the greetings. So when I'm in the gallery I teach visitors about the fish that are in there. Like, the ones I know. And, if I can't figure it out, I just go to the

magnet wall and figure out what they are. . . . And, then at the touch pool, I just make sure that people don't pick anything up and I teach them a little bit about the things that are in there (SODC volunteer, Age 11, Interview #1).

Youth volunteering at the Aquarium carried out the same tasks as adult volunteers. The volunteer coordinator from the SODC shared:

[Young volunteers] are treated just like adults. They are asked to do the same things. We expect all volunteers regardless of age to do the same kind of thing. Youth often start volunteering at the touch pool, but we ask everybody to rotate [jobs]. I think working with and treating youth as adults [has really worked]. They're on the floor just like the senior volunteers.

Although the impact that youth have on the environment as environmental educators may be less tangible than the impact that youth have on the environment as wildlife monitors, the work of volunteers is intended to bring benefit to the marine environment. Youth participants at the SODC help to educate others about marine species, and the ways they can act to protect marine species. Ultimately, the objective of the centre is to motivate visitors to continue to learn about the marine environment, and to take stewardship action on behalf of the marine environment after they leave their visit to the centre.

4.5.1 Effectiveness of youth as environmental volunteers

Although an evaluation of the effectiveness of youth as environmental volunteers was beyond the scope of my study, some insights on young people's abilities as volunteers emerged. The topic of data validity did not materialize during my interview with the Friends of Fish Creek Provincial Park volunteer coordinator. However, this topic did emerge organically in a discussion with the biologist from the Keji case study who expressed that some of the youth did an excellent job of filling out their data cards in a reliable and effective way:

All the data is proofed so if something isn't entered properly [the person entering the data] won't use it and will tell the volunteers so they know for next time

(some of the youth volunteers) do a really get job with the data cards. They just fill it out exactly perfectly and with super clear writing and you can tell that they are students and that they are super keen.

The volunteer coordinator from the Shaw Ocean Discovery Centre shared that some youth volunteers felt hesitant at approaching the public when they began volunteering at the Aquarium. Some youth seemed to struggle to engage visitors in conversation, while other youth seemed to be natural teachers. In addition, the volunteer coordinator shared that many youth become more confident in their public interaction skills over time and some youth became particularly effective in an environmental educator role: “Some of them are really good at it and some of them are really nervous. Now obviously not all kids are as good at teaching others, but some of them are really good.”

4.6 Challenges Associated with Engaging Youth as Environmental Volunteers

I asked volunteer coordinators from each of the three case study organizations to describe some of the challenges they had encountered working with youth volunteers. Some similarities surfaced in the challenges shared by the volunteer coordinators from the Shaw Ocean Discovery Centre and the Kejimikujik National Park case studies. Most of the challenges encountered by the volunteer coordinators at these two case study sites evolved from working directly with volunteers, and originated from intrapersonal characteristics of the volunteer (e.g. personality traits or capabilities). At the Shaw Ocean Discovery Centre, volunteer tasks revolved around interacting with the public. I learned from the volunteer coordinator at the SODC that it can be challenging to convince youth that are shy to approach visitors to the centre:

Some of the kids are so shy. Our idea is for them to walk up to the public and say “Oh, don’t you love that little guy?”, or just to engage in a conversation and some

of them just cannot make themselves do it. Some kids just will not get comfortable with it and they don't relax (SODC volunteer coordinator).

A unique set of challenges emerged from an interview with the Kejimikujik National Park where young people had direct interactions with wildlife. According to the volunteer coordinator, it can be challenging to harness the energy and enthusiasm of some of the younger youth volunteers during certain fieldwork scenarios, posing a challenge when working with wildlife:

With really small youth, some of them can get really excited about turtles. And, you don't want to diminish that excitement at all, but at the same time, you can't have them just run up to the turtles, because the turtles are going to run away (KNP volunteer coordinator).

The volunteer coordinator emphasized the importance of trying to find balance between protecting wildlife species and the environment, collecting data, and facilitating special experiences for volunteers:

You have to make sure that the experiences are real and meaningful and you can't have twenty people on a turtle nest each. That wouldn't be very special and you wouldn't be able to do any work. Because you can't cause a great impact, it is all about not impacting the habitat too much. You have to respect the species and you have to be able to do things to help them, without doing anything that would negatively impact them. There is definitely a balance.

Youth, similar to volunteers of other ages, are individuals who each bring their own strengths and experiences to the volunteer context. Some youth seem to catch on to fieldwork techniques quickly, while others require more time and mentorship. "Youth are just like adults, it is very individual; I know that there are going to be some people that are better at data collection than others" (KNP volunteer coordinator).

One set of challenges that emerged from the Shaw Ocean Discovery Centre, which did not materialize from the park case study sites, seemed to originate from an interpersonal source (i.e., from the dynamics created between two or more people). The

context of volunteering at the SODC is markedly different than the context of volunteering at the park case studies. Youth volunteering for the Shaw Ocean Discovery Centre carry out their work in a confined, indoor space. While containing the excitement of youth volunteers during fieldwork to avoid disturbances to wildlife emerged as important in the outdoor context at Kejimikujik National Park, containing the energy and excitement of interactions between youth volunteers to avoid disturbances to visitors and staff members at the aquarium surfaced as a challenge. Certain combinations of youth personalities and large groups of young volunteers working on the same shift at the Centre have posed challenges:

We do have a little problem of kids joking around and we did have a problem where we had a lot of kids on a weekend at a time in here and we have calmed that down a little bit because if you get more than five kids on the floor it could be interesting for the staff as well so that is one challenge.

Another challenge unique to the Aquarium case study was ‘missed shifts.’

According to the volunteer coordinator “kids-will-be-kids” and even the most responsible youth volunteers can forget to come in for a scheduled shift:

Well, you have the problem of kids being kids and forgetting what they are doing. . . . Even the most responsible young volunteers can sleep in and miss a shift. There is this one young man he comes in almost every Saturday and he is the typical teenage boy you know every once in a while you get an email that says “Oops, I slept in!” But he is pretty good. He comes in and does a double shift most Saturdays.

It was emphasized that missed shifts are not always a result of young volunteers not being mindful of their responsibilities; it is important when working with youth volunteers to, “remember it is not always the kids, it is often the ride that they don’t have or the parents that say I’m not taking you there this week, you know that sort of thing” (SODC volunteer coordinator).

Also unique to SODC was the challenge of finding effective pathways to communicate with youth volunteers. I learned that youth who volunteer for the SODC do not seem to regularly check their emails, and as a result sometimes they missed important information about volunteering at the centre. As the volunteer coordinator shared:

I think it is important to keep up with what they are using. You know we keep saying, “You must check your email. We do it by email, you must check your email”, but even in the last three years communication has changed a lot. A lot of the kids will say “I don’t check my email!”

One challenge that surfaced from an interview with the volunteer coordinator from the FOFC case study site was directly related to the organizational arrangement of volunteering. Fish Creek Provincial Park is a large urban park, and the volunteer coordinator felt that there was an element of risk associated with having youth under the age of 18 volunteer. As a result, it emerged that youth engagement without a parent was seen as a liability:

We just don’t have the desire to take on that responsibility of having 14 year olds out there in the park on their own. I think a big part of it is that this is an urban park. Not that it is a dangerous place, but there are illegal activities that happen in parks, especially urban ones, so it is not necessarily a safe place for young people to be on their own. There’s lots of uncharted territory so to speak where there are no sightlines, and you can’t see what is going on, and you can’t hear what is going on.

A lack of formal policy outlining youth participation left the volunteer coordinator feeling hesitant about how to support youth in having volunteer experiences while minimizing the organizational risk and liability of engaging minors in volunteer work at the park. As the volunteer coordinator shared:

One challenge with us as an organization is we haven’t developed a policy regarding ages of volunteers being able to volunteer without a parent. We haven’t developed that and we need to. It does say on our volunteer agreements that if the volunteer is under 18 the parent needs to sign up, but it doesn’t say anything about the parent needing to be there [when their child is volunteering]. So there are a lot

of ‘what-ifs’ and I don’t know how to proceed. So, I think that is one of our biggest challenges.

A second challenge involved a certain aspect of the monitoring projects that were underway. The beaver monitoring project requires volunteers to cover a large geographical area, and requires that volunteers be in the park near dusk. These fieldwork conditions left the volunteer coordinator feeling that the beaver monitoring project would be a poor match for families with younger volunteers:

Some of our programs are more suited for older volunteers, for example beaver monitoring. It is very self-directed and each volunteer takes a section of the park. It’s not really a child friendly program per se because it is a huge area and they are often monitoring at dusk right before the park closes because that is when the beavers are the most active so for a ten year old it’s probably their bedtime so it depends on the program.

4.6.1 Negotiating the challenges of working with young environmental volunteers

All three volunteer coordinators shared approaches they had taken to negotiate the challenges encountered from engaging youth in environmental volunteering. The volunteer coordinator from the Aquarium shared that when coordinating and managing the work of youth volunteers she had found it useful to try to see the volunteer experience from the eyes of youth and to leave some space in management approaches for “kids-to-be-kids”:

It is important to try to think like the kids and remember what you were like when you were twelve and remembering that they’re not going to be the same [as adults]. You want kids to be responsible, and they can be, but they aren’t always going to be the same as an adult. Sometimes kids-will-be-kids.

The volunteer coordinator at KNP felt that a balance between protecting wildlife and facilitating special experiences for young volunteers was achieved by limiting the number of volunteers permitted at a turtle monitoring site:

Although we try to be flexible as to when volunteers can participate, there are times when we have to tell people sorry we're full for this day. Or yes, but if you want twenty people to come we are going to have to split you up or you are only going to be able to do this type of activity. . . . Because you can't cause a great impact. We try to find a balance.

Similarly, the FOFC volunteer coordinator explained that youth volunteer experiences needed to occur in way that encouraged youth to have fun, but also happened in an ecologically responsible way:

It is "hands-on". Both the snake and the amphibian monitoring program, we encourage them to touch the snakes and amphibians. We encourage them to do so with gloves on, but we encourage them to have that experience and get in the wetlands and find things, check it out, get involved, you know? But, leave it there. We do teach them, and really impress upon them, the youth, that you don't take animals from the wild to take home as pets.

Themes of mentorship surfaced during interviews with the SODC and Keji volunteer coordinators. From the KNP volunteer coordinator, I learned that mentoring can help youth gain the skills they need to collect data on wildlife and offer guidance on acceptable ways to behave around wildlife in fieldwork situations:

With those kinds of things you really have to take a mentoring approach. With an adult you wouldn't do that necessarily. If a child is running at the turtle all excited and yelling, than a turtle will decide not to lay its eggs at that time, and they will just go back to the pond. So, there are some things like excitement and energy, which are excellent, but sometimes it can be harder to contain.

The volunteer coordinator from the SODC shared that some of the older youth volunteers who have been involved at the Aquarium for several years have been able to serve in a mentor role for the younger youth volunteers. Scheduling the experienced youth volunteers with the younger or new youth volunteers has been an effective youth volunteer management tool at the SODC:

If you look at the names on the schedule and if there are youth that have been here for a long time, like [this one youth volunteer] he's still a kid, but he is

responsible and he will be a mentor to the younger ones and so we kind of rely on that.

In addition, the volunteer coordinator from the SODC described the role of mentorship in the experiences of shy volunteers. By providing shy youth with additional direction in the form of a script or by changing the dynamics on how youth engage with the public, volunteers who were hesitant to interact with the public were able to slowly build the confidence and the skills needed to carry out their role as marine environment interpreters:

With many kids they need a direct 'what to do'. So if you say to them, tell everyone that comes in "please wash your hands, please only use your pinkie finger [at the touch pool]" then they've already said three things before they've started. And, you've kind of broken the ice for them. And then that usually that gets them started or at least it makes them feel a little more comfortable. Or if they are working at the front, now some kids hate it, but if they have a set script to say "Welcome to the Shaw Ocean Discovery Centre" and so on then they are okay. So those are ways of getting around it.

Although the Aquarium volunteer coordinator seemed to have developed a number of tools to help negotiate challenges of working with shy youth in a public setting, she shared that some youth volunteers cannot seem to overcome their hesitations about interacting with the public. As every volunteer task at the Aquarium involved some form of interaction with the public, if volunteers cannot bring themselves to try to interact with the public then this mode of environmental volunteering is likely not the best match for them:

But some kids just will not get comfortable with it and they don't relax. And public speaking can be terrifying for some of the adults too. But if you're not prepared to do that, then this is probably not the place for you to be.

The challenges experienced by the SODC volunteer coordinator that originated from interpersonal dynamics seemed to have been mitigated by active and responsive

approaches to volunteer scheduling. By getting to know the volunteers and their personalities, the volunteer coordinators could avoid putting certain combinations of volunteers together and improve the work flow at the centre. In addition, the volunteer coordinator tried to avoid scheduling large groups of young volunteers together on any one time:

Youth joking around, that has been mostly overcome by mixing the ages and learning very quickly what kids not to put together, because they are always trouble together. And we have tried not to put so many kids in here at one time. You need to balance it out and space out the ages. . . . You know that if it is all kids volunteering staff could have some problems that day. But most of that has been overcome with scheduling fixes.

Although the challenge of communicating with youth volunteers had not been fully negotiated at the time of my interview, the SODC volunteer coordinator shared that emailing the parents of youth volunteers strengthens the chance that volunteer program messages reach youth. She also suggested that adapting to a more youth effective communication pathway was on the horizon:

Make sure that you send the emails to the parents as well as the kids, because half the time the kids don't get emails anyway. We've also been thinking about getting group texts going and starting a facebook group just for the volunteers.

As youth volunteering at the Aquarium often seemed to rely on the support of their parents to carry out their volunteer commitments, an important strategy for negotiating the challenge of "missed shifts" seemed to be tied to developing a positive relationship with the parents of youth. The volunteer coordinator from the SODC had found ways to help parents gain insight into the value that the volunteer experience serves for their children:

We will send out a little thing that says their child is doing well and if they get a compliment in the guest book. And they will say wow, she would never say boo before. . . . We try to do that reinforcement thing and I try to send stuff back to

parents. It is rewarding to see the kids gain confidence. And then they get comfortable and we get the emails back from parents saying oh I just love to see “so and so” talk to people.

In order to negotiate the challenges of risk and liability of engaging youth at Fish Creek Provincial Park, I learned that the volunteer coordinator from the Friends of Fish Creek Provincial Park Society had enforced an informal policy on youth engagement in volunteering at the park. This informal, verbal policy required youth under the age of 18 to partner with a parent to carry out volunteer work. Such an approach seemed to help the volunteer coordinator feel more confident about engaging minors in the park. However, this solution emerged as a temporary way to negotiate the challenge of “risk and liability” associated with engaging minors in a large, urban park, until a formal policy on youth engagement in volunteering could be developed:

In the interests of protecting myself, I have said there has to be a parent. And in the interests of the volunteers too. . . . I don’t want to ask a 15 year old to cycle through the park and do something that he or she may not be equipped to do: intellectually, emotionally, or physically.

4.6.2 Support mechanisms

In this section, I primarily focus on describing additional insights that surfaced from interviews with the volunteer coordinators. Despite the several challenges encountered at the SODC, the volunteer coordinator suggested that she would recommend to other organizations that they give youth engagement a chance. Although engaging youth as environmental volunteers could be at times challenging, the volunteer coordinator felt that the value added by engaging youth was great:

Don’t be afraid of getting the kids involved. For the places that are thinking of having youth, and thinking that it is too much of a hassle, or it is too much trouble. While, it is some trouble and scheduling is interesting, but I think it is well worth it in a place like this. It depends on the context of what you are doing, but here we appeal to youth a lot so we want to make sure to represent

that interest, and to us it is worth it. It has been worth the hassle of doing it. The positives outweigh the negatives.

I also learned from the Aquarium case study that including youth in the same tasks as adults had facilitated youth engagement, because it had provided an opportunity for youth to learn from adults (i.e., a system of mentorship), and allowed youth to work within the same management structure as other volunteers (i.e., use the same resources to manage youth volunteers as other volunteers). The volunteer coordinator also suggested that being flexible with youth, accepting that they will be different than adults, and fostering a positive relationship with parents were important ways to support youth engagement in volunteering.

The two volunteer projects operated by the Friends of Fish Creek Provincial Park Society that seemed to have achieved the greatest level of success in terms of youth involvement differed in the way they were arranged. The amphibian monitoring project provides volunteers with flexibility in the timing and length of their commitment, while the snake monitoring project requires that volunteers commit to specific dates and times for volunteering. The volunteer coordinator suggested that some families seemed to be attracted to the flexible arrangement of the amphibian monitoring project, while others find the structure and certainty of the snake monitoring project appealing:

I think structure and flexibility. Both [have helped engage youth]. With the snake monitoring program there are some families that really enjoy structure. They are in that program because they know that it is Thursday night at 7 pm and they are [at the site volunteering], or Sunday morning at 8 am, or whatever. But, the other program that has high youth involvement is a very flexible program. The amphibian monitoring program has families just come out to the training to get their kits and then they are on their own. They go into the park whenever works

for them and they adopt their own little wetlands that they get to monitor. . . . I think diversity of our programs is what really makes it work for families.

Similar to the theme of flexible involvement at Fish Creek Provincial Park, there were no mandatory service requirements for volunteers at Kejimikujik National Park. Although dictated by ecology and the seasonality of life cycle events of certain wildlife species, volunteers were free to choose the number of hours they would like to commit to volunteering. At Kejimikujik National Park they strive to help people find a volunteer opportunity that best meets a volunteer's needs:

If someone wants to come we always say you can come out for half an hour, or you can come out for two weeks. And depending on how much time they have we will fit them with an appropriate volunteer opportunity.

One volunteer described how he and his family participated in volunteering when they came to camp at the park on family holidays. They found it easy to fit in volunteering with their holiday schedule:

We will go out as long as we can. So sometimes that is a couple of nights and sometimes it is a week, depending on what fits our schedule. They are really flexible. They are always happy with just whatever you can give them (KNP volunteer, Age 16, Interview #6).

Helping people to have experiences that are real and meaningful emerged as the foundation to successfully engaging people of all ages in volunteering at Kejimikujik National Park. Youth volunteers help collect the same data that the park biologists are collecting, and the volunteer collected data is used to help recover and protect endangered species in Nova Scotia.

I think the fact that it is a real, meaningful, hands-on program. The hands-on is super important. It is not fluff. It is based on what we can get volunteers to do out there to help. For us it is our job, but for them they are like, "Wow we get to do this stuff that park biologists get to do." And, that is really appealing. [At Keji] it is not just some PR exercise where we are saying, you know, whatever do this stuff and it doesn't matter. It does matter (KNP volunteer coordinator).

Providing feedback to volunteers and letting them know that the work they do makes a difference to wildlife is an important piece of sustaining volunteer engagement:

Volunteers are collecting the exact same data that we are collecting and we are using everything that they are collecting. I know if I was someone who spent a whole lot of time [volunteering] and thinking that it was for some really important cause, I would feel disappointed for sure if I found out it was just some paper exercise. So I think that it is really important that [the volunteers] know that it is really important work that they are doing and that it is exactly the same work that we are doing.

At its core, volunteer engagement at Kejimikujik National Park originates from a serious concern: the health of endangered species. However, despite the serious nature of the work, the biologist I spoke with who worked with volunteers emphasized how important it is that wildlife monitoring be a fun experience for volunteers of all ages:

Making it fun. Remembering that it is okay to be silly. Just because it is serious research doesn't mean that it can't be fun and that you have to be a serious person. I think sometimes people think that if you are collecting really meaningful data that you have to be really serious about it all the time and you don't! You can make it a really fun experience. They know exactly what they have to do, but it doesn't have to be all serious all the time.

Community emerged as a theme unique to the KNP case study; social interaction, relationships, and a community made up of volunteers and researchers working together to recover species at risk had helped support the engagement of volunteers of all ages on KNP monitoring projects:

I think relationships are really the foundation of it. It is the relationships that volunteers have with each other and the relationships they have with the coordinators. Even if [the young volunteers] had the most amazing experience monitoring turtles that is not what I expect they are talking about in your interviews. I think they are more talking about the fun times that they had with friends and going to [another volunteer's] campsite. . . . [Successful volunteer engagement] is about real and meaningful experiences. It is all about the relationships and the people that are involved and the fun that they have. . . . It's not fake. Volunteers really care about each other here, and that is neat.

Recognizing the contributions of volunteers and thanking them for their commitment is an important part of supporting the engagement of volunteers of all ages. At Kejimikujik National Park, volunteers were thanked with small gestures of appreciation, such as hats and invitations to social gatherings along with grander gestures such as the “walk of honour”, a trail in the park dedicated to volunteers.

I think the recognition, like the hats. Those kind of things make it like you are kind of in a club. And there is the volunteer banquet and so that is just a huge social part and everybody is like old friends seeing each other again. There are certificates and the walk of honour and all of those kinds of things [have helped support youth volunteer engagement]. In July we go out to the walk of honour and all of the people that were inducted into the program are there...and it is very much like they are family (KNP volunteer coordinator).

At the Shaw Ocean Discovery Centre, volunteers were invited to attend enrichment events throughout the year where they had the opportunity to learn more about the marine environment from experts in the field. Furthermore, volunteers earn rewards for increments of volunteer service; after forty hours of service volunteers receive an annual pass that allows them to visit the centre free of charge. They can also earn additional passes that they can give to friends and family. With every year of service, volunteers receive an art print, by a local artist whose paintings also hang on the walls in the gallery. A special youth award recognizes the commitment of the centre’s young volunteers. The volunteer coordinator from the SODC shared:

There are little incentives along the way. We do awards once a year in volunteer week in April. This year they got a print, a fish print, but there are nine different prints they can earn. Not one with their name on it or anything, because those things tend to get put in drawers and forgotten about. . . . And there is a special youth award given out and they can bring their parents to the appreciation event. . . . When you’re a volunteer after you have done 40 hours to start with you get an annual pass so you can come anytime, and you get passes to bring family, and you get 4 extra passes so you can bring your Mom and your Dad so you can use them for anybody. And every year we do that so they can bring more people.

4.7 Chapter Summary

Although findings from a textual analysis of program related documents and findings from youth participant interviews informed the findings in this chapter, insight into the context and characteristics of youth engagement in environmental volunteering was largely informed by interviews with the people who coordinate youth volunteers at each case study site. A number of salient similarities and differences emerged from a cross-case analysis (see Table 4-1). The next Chapter presents findings from interviews with youth participants.

Table 4-1: Case Studies Context

	Case Study 1: FOFC	Case Study 2: SODC	Case Study 3: KNP
Organization type	Non-government, registered charity, under the Friends of banner, operating in a provincial park.	Non-government, not-for-profit business model, aquarium and marine learning centre.	Government, park agency, national park embedded within a UNESCO biosphere reserve.
Staff member role	Volunteer coordinator: works with youth, but not designated as a youth coordinator. Interacts regularly with youth.	Volunteer coordinator: coordinates youth, but not designated as a youth coordinator.	Stewardship biologist: role similar to volunteer coordinator, works alongside youth volunteers.
Motive for engaging youth volunteers	Youth, like adults, help fulfill organization objectives of raising awareness of and protecting park environment. Volunteers serve as an audience for organization’s messages.	Youth, like adults, help fulfill organization objectives of raising awareness of and protecting marine environment. Volunteers serve as an audience for organization’s messages.	Youth, like adults, help fulfill organization objectives of raising awareness of and protecting species at risk within national park and surrounding communities. Volunteers serve as an audience for organization’s messages.
Volunteer context	Urban provincial park: Fish Creek Provincial Park, Calgary, AB	Aquarium and marine learning centre: Sidney, Vancouver Island, BC	National park and UNESCO biosphere reserve: southwestern, Nova Scotia
Volunteer mode	Wildlife monitoring	Environmental Education	Wildlife monitoring
Youth recruitment strategy	Youth targeted through family recruitment. Social media, organization website, park brochures, word of mouth etc...	Yes. Youth engagement targeted on organization website, by holding “youth days” at aquarium, in local newspaper and volunteer websites, word-of-mouth.	Some active youth recruitment, primarily through family recruitment. Social media, park events, newspaper articles, word-of-mouth etc...
Number of youth volunteers	Information unavailable	Approximately 50	Information unavailable
Minimum age requirement	No	Yes. Originally listed as 11 years of age, raised to 13.	No.
Parent participation required	Yes. Required for youth <18.	No.	No.
Youth volunteer obligation	Flexible. Snake monitoring requires volunteers to sign up for shifts, amphibian monitoring flexible. Seasonal participation timed with species life cycle.	Youth expected to contribute 60 hours of service per year.	Flexible. No minimum requirement. Seasonal participation timed with species life cycle.

	Case Study 1: FOFC	Case Study 2: SODC	Case Study 3: KNP
Training strategy and style.	Mentorship system. Learning-by-doing. Parents expected to oversee and guide youth.	Two formal training sessions prior to first shift as volunteers. Informal mentorship. Learning-by-doing.	Informal approach to training. Mentorship system. Learning-by-doing. Team work environment.
Access to continued support	Limited support in the field beyond parental support, but help available if contact is made with the office.	Yes. Access to volunteer coordinators, aquarists, older volunteers, and books.	Yes. Volunteers work in a team environment often with a parent or grandparent, volunteers of all ages, biologists & experienced volunteers.
Youth responsibilities	Shared responsibilities with parents: youth co-monitor taking and recording a variety of wildlife measurements and observations.	Same as adult volunteers: interact with visitors to the centre, facilitate their experience, answer questions, and share knowledge about marine environment.	Youth co-monitor with team members, recording wildlife measurements and observations. Some youth able to carry out all aspects of monitoring process.
Challenges encountered by staff	Structural challenge: youth volunteer policy needed. Fear of risk and liability of engaging youth in urban park without parent.	Intra-and inter-personal challenges: shyness prevents youth from interacting with the public, youth-to-youth dynamics, youth-parent dynamics, communications and missed shifts.	Intrapersonal challenge: youth excitement and energy can constrain ability to collect data on wildlife.
Staff strategy to negotiate challenge	Informal verbal policy enforcing youth <18 must co-volunteer with a parent.	Mentorship, getting to know volunteers, adaptive scheduling measures, building relationships with parents, and improved email communication strategies.	Mentorship and guidance.
Conditions supporting youth engagement	Parent involvement, diversity in program offerings and arrangement, and providing opportunities for hands-on experiences of wildlife.	Mentorship, treating youth like adults, volunteer coordinator familiarity with youth volunteers, recognition and rewards for youth.	Mentorship, authentic monitoring experiences that serve a legitimate ecological cause, providing an opportunity for hands-on experiences, a fun and social work atmosphere, a strong sense of community, team atmosphere, feedback helps volunteers understand their value, flexible arrangement, diverse project offerings, family engagement, public recognition.

Chapter Five: **Understanding Youth Volunteers**

My focus throughout this chapter is on reporting findings from interviews with youth participants. In the first half of this chapter, I introduce the youth participants, describe the similarities and differences in the paths youth took to become volunteers, and summarize the reasons youth remained engaged as volunteers. In the latter half of the chapter, I summarize the challenges youth have encountered as environmental volunteers.

5.1 Youth Who Volunteer for Environmental Stewardship Organizations

Twenty-five youth environmental volunteers participated in my cross-case study (Table 5-1). I conducted interviews with six youth volunteers from the Friends of Fish Creek Provincial Park Society, six youth volunteers from the Shaw Ocean Discovery Centre, and thirteen youth volunteers from Kejimikujik National Park. Across case studies, youth participants ranged in age from eight to eighteen years old, and each case study had a mix of younger youth (i.e., youth in the 8 to 12 age bracket) and older youth (i.e., youth in the 13 to 18 age bracket), and female and male participants. The average age of participants from each of the case studies was approximately thirteen years of age. However, participants were on average slightly older from the KNP case study. The youngest participant in my study was an eight year old volunteer participating as a wildlife monitor at Kejimikujik National Park, while the oldest participant was an eighteen year old participating as an environmental educator at the Shaw Ocean Discovery Centre. In addition, findings from my cross-case analysis indicate that over half of the youth participating in environmental volunteering (56%) were under the age of fifteen.

Table 5-1: Collective Case Summary of Youth Participants

	Case Study 1: FOFC (N=6)	Case Study 2: SODC (N=6)	Case Study 3: KNP (N=13)	Collective Case Summary (N=25)
Average Age	13 years	13 years	13.6 years	13.3 years
Younger Youth (8 to 12)	3 (50%)	3 (50%)	4 (31%)	40%
Older Youth (13 to 18)	3 (50%)	3 (50%)	9 (69%)	60%
Female	3 (50%)	4 (67%)	8 (62%)	60%
Male	3 (50%)	2 (33%)	5 (38%)	40%

I learned that participants travelled different distances to reach their volunteer sites. Many of the youth participants from all three case studies lived close to the sites where they volunteered (i.e., less than thirty minutes). For example, some participants from the Friends of Fish Creek Provincial Park Society case study lived in the neighbouring communities around Fish Creek Provincial Park and only minutes from their volunteer activities. On the other hand, some youth participants from the Kejimikujik National Park case study travelled long distances to reach their volunteer commitment, and some of the youth participants from the KNP case study were “voluntourists”. These participants came to the park with their families as part of a camping holiday, which included volunteering as one of the activities they participated in at the park. However, some of the youth participants who travelled more than an hour to volunteer did not camp at Kejimikujik National Park. I learned that these participants drove long distances with a parent or a grandparent to and from their KNP volunteer commitments to volunteer for the day or evening only.

The length of time participants had been volunteering varied greatly. No participants from the SODC case study had been volunteering for more than a year, and each participant reported they had been involved as volunteers somewhere between six

months to one year. Youth participants from the Friends of Fish Creek Provincial Park Society (FOFC) case study reported they had been volunteering between two and four years, and findings from the KNP case study suggested that youth participants had been engaged for the longest duration, between three to seven years. Although I did not have the opportunity to interview any of the long-term volunteers from the SODC, the volunteer coordinator shared that some youth had been involved in volunteering at the centre for several years, indicating that long-term youth participation also occurs at the SODC. Although most of the youth I spoke to from Kejimikujik National Park were older youth (69%), many had been engaged for several years and seemed to have begun volunteering as younger youth.

5.2 Motivations to Become Environmental Volunteers

A number of broad similarities and differences in the paths youth took to begin volunteering materialized between each of the case study sites. For some youth participants from the park case study sites, the initial decision to volunteer clearly emerged as someone else's idea. These youth seemed intrigued by the idea of volunteering, and accepted another person's invitation. For other youth participants the decision to volunteer seemed to be a family decision. Some youth participants from the Fish Creek case study reported that a parent invited them to try monitoring work:

Mom brought home this pamphlet and she just asked if we were interested in doing it. So we just said "yeah, sure" (FOF volunteer, Age 12, Interview #5).

My Mom finds really weird things like this and we just go into them (FOFC volunteer, Age 17, Interview #4).

A number of youth participants from the park case study sites began volunteering as a family at the invitation of family friends. As one youth from the Fish Creek case study shared:

As my Mom was saying, [another family that we are friends with] they were doing this and they told us and then we wanted to get involved in it as well. They actually took us, they brought us along on one of their snake monitoring trips (FOFC volunteer, Age 12, Interview #1).

Some youth from the Keji case study began volunteering at the invitation of a parent or a grandparent:

My grammie told me about helping the animals and I just thought “Oooh, that would be fun!” (KNP volunteer, Age 11, Interview #1).

Well, my father he also did the volunteering with my Grandfather and then because I grew up with him doing stuff like that, I just got into it and it is kind of like a family thing (KNP volunteer, Age 15, Interview #8).

For some youth participants from the KNP case study, it was an invitation from a park biologist that played an important role in their initial motivation to volunteer. One youth participant shared how a park biologist came to the family home one day accompanied by a turtle and asked the family if they had seen this species of turtle before:

He came to our house one time and said that there were turtles where we lived. And, he brought one with him. We were about 7 or 8 years old and he showed us the turtle, and asked if we wanted to help him out with them. And, ever since then basically we’ve loved doing turtle work and helping out (KNP volunteer, Age 15, Interview #10).

Also at Keji, Participants learned about volunteering during a day trip to the park as a family, while camping at the park, or saw a flyer advertising volunteer opportunities. For these youth participants, the decision to volunteer seemed to be made cooperatively as a family:

We’ve been camping at the park since I was two. And, we just kind of decided to start getting into it. (KNP volunteer, Age 10, Interview #3).

Well, we have been camping at Keji ever since I was three. So we just sort of heard about one year and we decided to try it (KNP volunteer, Age 11, Interview #5).

For some youth participants from the Keji case study, the family park leisure experience appeared to have become blended with the volunteer experience, making it difficult for them to decipher when leisure ended and volunteering began. As on youth participant from the KNP case study described:

We've been going there for 8 years I think. And I've been volunteering for [pause], oh I don't know? It's hard to say! Because we do different group activities and then there is actual volunteering, so I can't really remember how long we've been doing it, but a few years anyway (KNP volunteer, Age 15, Interview #4).

Some youth participants from all three case studies described a personal interest in nature, a particular wildlife species, an ecosystem, or a general interest in the work of the environmental stewardship organization as the force that moved them to begin volunteering:

Well, I really like nature and animals. We talked to the Friends about [a beaver dam] that we had seen when we were out in the park one day. And, they gave us a list of programs and we thought we might as well try it. We hadn't seen frogs before. Well, at least I hadn't and I thought that it would be cool (FOFC volunteer, Age 14, Interview #6).

I'm interested in the biology thing and I like all the fishes and stuff so that was part of the reason I was attracted to it (SODC volunteer, Age 18, Interview #6).

I was interested in wildlife ever since I can remember. We would always go back in the area behind our house and look for frogs and turtles. There were never any turtles and we go through Keji, go for a hike, go for a kayak and look for turtles too, but we would never find them. I wanted to find turtles so Dad emailed the park And so it just started from there (KNP volunteer, Age 16, Interview #13).

Unlike the parks-based cases, neither parents, nor any adult figure, emerged as an important pathway for youth volunteering at the Aquarium. For youth participants from the SODC case study, it seemed to be other youth that influenced their decision to volunteer:

I started this year in like February, but my cousin was volunteering before, like two years ago and she really liked it. She would tell us about how much fun she was having. And, so I was like “Oh, I want to try that”, so then I tried it” (SODC volunteer, Age 11, Interview #5).

My friend is into the whole marine biology thing so she got me to go with her (SODC volunteer, Age 18, Interview #6).

Another unique pathway to volunteering emerged from the experiences of youth volunteers at the Aquarium case study; some of the youth participants from the SODC began volunteering after they visited the Aquarium as guests and had seen other youth volunteering during their visit:

I went with my class. And, that was my first time ever coming to the centre and I just thought it was so interesting and I saw other young people volunteering and I wanted to learn so much more about the centre and volunteering (SODC volunteer, Age 11, Interview#1).

Often there was more than one force moving youth to begin volunteering. Many youth shared that it was the combination of another person, and an interest in some aspect of the environment that moved them to volunteer. For some youth from the SODC case study, it was an interest in the marine environment and a desire to find something to do with their discretionary time that moved them to volunteer:

I came there once and I thought it was cool and I wanted to volunteer out there And I thought it would give me something to do on Sundays or Saturdays (Oceaneer, Age 11, Interview #2).

My cousin did it before and had fun doing it and told me how much fun it was and I had spare time on my hands in the summer so I decided to do it (Oceaneer, Age 13, Interview #3).

5.3 Motivations to Continue as Environmental Volunteers

Based on my research findings, the following outlines the key reasons that some youth continue to volunteer.

5.3.1 Emotional attachment to people, places, and other living things

Youth participants from the KNP case study expressed a strong emotional attachment to the experience of volunteering, and to the people and species they interacted with as volunteers. I did not hear the same level of attachment to the volunteer experience emerge from the SODC and FOFC case studies. One youth participant from the KNP case study described wanting to attend a local university after he graduated high school so that he could remain close to the park and the species he worked with:

I'm thinking that I am leaning more towards studying at [a local University] for biology. That is where I think [three of the biologists I know from Keji] studied . . . and it would be close to the Blandings (KNP volunteer, Age 16, Interview #13).

Other participants from the KNP case study suggested that they would like to find a way to continue volunteering when they finished high school and expressed a desire to volunteer with their children, and to have their children interact with the wildlife species they had encountered as volunteers. One participant from the KNP case study shared:

I've liked all of it! That is why I am still doing it today. I hope I can do it when I graduate and further it on and then when I have kids that they do it (KNP, Age 15, Interview #10).

The theme of attachment consistently expressed during KNP youth participant interviews is captured eloquently by one youth's description of wildlife monitoring for Kejimikujik National Park: "You become attached. It's an emotional attachment to the people, to the animals, and to the places" (KNP volunteer, Age 14, Interview #7).

5.3.2 Opportunities to have fun

Every youth that participated in my study described volunteering as an enjoyable experience and a fun way to spend their time:

It's kind of thrilling. I just find it fun (FOFC volunteer, Age 14, Interview #5).

It's fun (SODC volunteer, Age 10, Interview #2).

It is like going to see a movie only you are turtling. . . . It is way more exciting than it sounds (KNP volunteer, Age 15, interview #4).

A number of youth volunteering at the park case study sites described wildlife monitoring as “weird” and “unusual” and not something that youth typically engage in. One youth shared that while most of his friends spent their summer evenings partying or playing video games, he participated in turtle monitoring. Although it seemed that environmental volunteering was a “weird” thing to do, the fact it was unusual seemed to add to the specialness of the experience. As one participant shared:

Some teenagers don't get tired from staying up until 2 in the morning playing x-box. I don't get tired from staying awake and watching turtles all night. I've been doing it for quite a while now. So come summertime my friends are out partying and they will ask what I am doing that night and I'll be like, “you know just going to go hang out with some turtles. I'm just hanging out with turtles tonight.” You know maybe it is not for everyone. Everyone has their own likes and dislikes. I'm not going to say that everyone would love it. . . . [I think] volunteering has just been a really special experience (KNP volunteer, Age 16, Interview #13).

5.3.3 Social reasons for volunteering

For youth participants from the Shaw Ocean Discovery Centre (SODC) and Kejimikujik National Park (KNP) case studies, the fun associated with volunteering was often linked to the social interactions the volunteer context provided. Volunteering for many participants at these two case study sites emerged as an opportunity to spend time with people they already knew and to meet new people.

It's fun. And, if you don't have something to do on the weekend, then you can just go in and see everybody, and it is also fun to meet a whole bunch of new people. Like there is one girl that I have been volunteering with and she is my new best friend (SODC volunteer, Age 11, Interview #1).

I liked talking to people and meeting all of the people and teaching them about what I know about all of the animals, I just thought that was so much fun (SODC volunteer, Age 18, Interview #6).

Volunteering on monitoring projects for Kejimikujik National Park served additional social functions. Youth participants from the KNP case study described the social gatherings that had grown around the wildlife monitoring experience. I heard of the fun youth had drinking hot chocolate and trading stories around campfires, and the chance to see other volunteers at barbeques, and award ceremonies. As one youth participant from Kejimikujik National Park shared:

I guess the other great part is meeting all of the awesome people. You get to meet people like [this one couple who stays and camps at the park]. You get to tell stories and have campfires. It's just a great time with all of these people and there are parties afterward. It is a lot of fun. The nesting is my favourite time to volunteer, because you get to stay out late and have fun on the beach (KNP volunteer, Age 16, Interview #6).

Park biologists featured in many of the youth participants' stories of wildlife monitoring and the biologists seemed to enhance young people's experiences of volunteering. Biologists expressed enthusiasm for plant and animal species, and could transform a species, such as lichen, into something interesting to youth. In addition, it seemed that park biologists were able to make youth feel like they were on a great adventure while wildlife monitoring. The enthusiasm and excitement biologists expressed for the fieldwork experience, and the environment left an impression:

[This one park biologist], we've gone out a few times with him, and he just jumps out of a canoe and grabs it. He grabs the turtle! He's like a turtle ninja. It's incredible (KNP volunteer, Age 15, Interview #4).

Oh my gosh! The stories! You come to school the next and can say 'I can't believe what (this one biologist) just did. Last night we were out looking for turtles and he dove off a canoe into the water after the turtle!' (KNP volunteer, Age 15, Interview #9).

Youth seemed to enjoy the company of park biologists, but they also appeared to look up to them as role models. As one youth participant shared:

[One of the park biologists] has really helped the community and he really helped the Blanding's up there. He is definitely one of the most unique and inspiring people I have ever met. He makes you want to do the work. I think if I had a boring kind of A to B kind of person teaching me how to do it and not [this one biologist] showing up hair crazy flowing everywhere it would have been different. He is such a vibrant person. He is probably one of the coolest people I have ever met (KNP volunteer, Age 16, Case Study 3, Interview #13).

Volunteering for Kejimikujik National Park offered an opportunity to be part of a community of people who shared similar experiences of wildlife monitoring and interests for helping people and other living things. One youth participant shared:

I think volunteering is important because you really get a feeling of community. You help other people, and you help other things, and you get to feel what it is like to be a part of the community. It is like a big community, like everyone is a great big huge family. There is a whole community that does this stuff and if it wasn't for this we wouldn't have known that (KNP volunteer, Age 15, Case Study 3, Interview #10).

Some youth participants felt that wildlife monitoring was not something that all "youth" would typically be interested in. Discovering that some of their peer group were not interested in volunteering seemed to solidify the importance of belonging to a volunteer community for a number of youth participants. Youth appreciated having a community of people that they belonged to and with whom they could talk about their experiences of wildlife monitoring:

I talk to my friends at school about volunteering. I don't know though at times it is hard when people aren't as interested as you are, but still you try to get that message out [about volunteering and the turtles]. I think if you meet a whole bunch of people who do the same work as you it is good. It is good if you can talk to someone else, like if I talk to [my volunteer friends] about our work it's like our conversation is something that normally another two of my friends wouldn't talk about, so it is really good. (Turtle monitor, Age 15, Interview #11).

5.3.4 Ecological reasons for volunteering

Youth from all three case studies seemed to enjoy volunteering as an opportunity to interact with other living things. Youth participants from the Shaw Ocean Discovery Centre (SODC) seemed to take pleasure in being around the marine species and enjoyed seeing and touching marine life:

Lots of them are slimy or sticky and some of them are spiky, some of them feel like jell-o (Age 10, Interview #2).

I used to always touch the anemones because they felt really weird. And when you are touching them they are actually stinging you but you can't really feel it (SODC volunteer, Age 11, Interview #5).

I've been able to see so many creatures volunteering. When it was my first day, they needed to do the Salmon feeding and I didn't really know what to expect. And, when they started feeding the Salmon it was complete chaos in the tank! So it was quite funny to watch how they all went for the food. It was a cool experience." (SODC volunteer, Age 13, Interview #3).

The joy young park volunteers felt from directly experiencing nature seemed to be expressed with greater intensity than their aquarium counterparts. Most youth participants from the park case study sites described opportunities they had to handle wildlife, and they shared how much they enjoyed those hands-on opportunities as wildlife monitors:

My favourite part is catching the snakes. I really like that, *really* like it. . . . And, the snakes their scales actually feel quite cool if you pet them on the head (FOFC volunteer, Age 9, Interview #2).

You get to handle turtles. I like to see the turtles and see what kind of different ones there are. And pick them up and see what they are like (KNP volunteer, Age 10, Interview #3).

When I asked youth participants to share a favourite day or moment they had spent volunteering, none of the participants from the SODC case study had a favourite moment to share and it seemed that their day-to-day experiences were quite similar.

Many of the participants from the park case study sites shared favourite moments of

volunteering that involved a special interaction with wildlife or the natural environment; they described stories of seeing a new species for the first time, watching turtles lay eggs, observing newly hatched turtles, releasing turtle hatchlings, and having unexpected interactions with wildlife as favourite moments. Participants from the park case study sites shared:

The first time I saw a frog [is a favourite moment from volunteering]. I'm sure that first year we walked past so many, because we didn't know how to look. And they are so tiny. Yeah, I would definitely say the first time I saw a frog. That is my favourite memory of volunteering. And, we've seen some migrations, and so there is like hundreds of them! And that is memorable too (FOFC volunteer, Age 14, Interview #6).

One of my favourite times volunteering would have been the one night where I actually watched the turtle all night lay her eggs. I waited for hours. It was just really cool because I had just never seen a Blanding's Turtle lay her eggs. And once they start laying you can get right up close and you have to count every time she drops an egg (KNP volunteer, Age 16, Interview #12).

Youth participants from the park case study sites described a wide range of feelings they experienced being immersed within the natural environment while volunteering. I heard awe, both fear and a sense of wonder in participants' descriptions of wildlife monitoring, as well as a sense of contentment:

Once I was doing turtle work and we heard a lot of coyotes. It was scary, but also really cool. Because you're out doing turtle work and then you hear coyotes and you hear all this nature and all these animals come around (KNP volunteer, Age 15, Interview #10).

When you go out on the beach and you are waiting for the turtle and you will be talking and then there will just be the quiet that settles and it is so peaceful (KNP Volunteer, Age 14, Interview #7).

I like being out there when it is in between the spring and the summer when it is just nice and cool. Usually you will have to wear your waders and stuff so you don't get wet, but around that time you can just go out in your shorts. It's nice to be outside when it's like that (KNP volunteer, Age 15, Interview #8).

Through young people's stories of wildlife monitoring for parks, I heard how exciting unexpected encounters wildlife could be:

Once we saw a baby mouse in the snake trap! And, we opened it up and the mouse came flying out! And it went zooooooming! (FOFC volunteer, Age 9, Interview #2).

We were walking and it was a grey day and I was looking down [searching for frogs]. . . . And, my Mom said, "look there is a moose there! There is a moose!" It was just so cool to see a moose! (FOFC volunteer, Age 14, Interview #6).

Although youth participants described the adventure of looking, searching, and tracking wildlife species while conducting fieldwork, discovery emerged as the rich reward of youths' exploration efforts:

It is actually really fun some days, because some snakes they don't get into the little traps and they're just wandering beside it. And, then it's like a little hunt and you just try and grab them before they run away. And one day we found a bunch of snakes, like three in each of the 12 traps! (FOFC volunteer, Age 17, Interview #4).

You get to put a GPS on them and track them. And it beeps louder and louder when you get to it. And we even found one by doing that. Tracking the turtles is my favourite part of volunteering. No, actually *finding* the turtles is my favourite part! (KNP volunteer, Age 10, Interview #3).

Exploring the landscape for turtles seemed to resemble a game, and there was an element of competitiveness to the sport of turtle monitoring. The person who is successful at discovering the turtle seemed to be the person who won the game:

I get so excited when I am the one that finds it and the nest. . . . I think my favourite is the day where it was a very, very rainy day and I was looking around, and it was splattering, and we got out and nobody could see turtles, but I did. I said, "Turtle! Turtle! Turtle!" And, I found all the turtles in all of the nests that we looked in that day. And no one could find anything else. I found all the turtles for that day (KNP volunteer, Age 11, interview #1).

5.3.5 Volunteering as an opportunity to express values

Volunteering seemed to serve as an opportunity for many participants to express values for other people and/or other living things. This was the case for every participant

from Kejimikujik National Park and several of the participants from the Shaw Ocean Discovery Centre and the Friends of Fish Creek Provincial Park case study sites.

For some youth, volunteering at the Shaw Ocean Discovery Centre emerged as a way to help other people gain a better understanding about marine life. One youth participant from the SODC case study shared that he was drawn to volunteering out of an interest to be around the marine species at the centre, but teaching others had become an important part of his volunteer experience:

Once I was actually there and volunteering, teaching people became one of my favourite parts. Like one time after a shift, these two old ladies came up to me and I chatted to them about the Octopi or whatever, and then afterwards they just expressed that they were so happy that I taught them this stuff and that made me feel pretty good (SODC volunteer, Age 18, Interview #6).

For some youth participants from Kejimikujik National Park, volunteering as wildlife monitors provided them with an opportunity to protect the environment for the enjoyment of future generations. As one participant shared:

I want my great-great-grandchildren to be able to see turtles. [Volunteering is] about preserving turtles for the future generations, because I don't want to be telling stories about these amazing creatures to my grandchildren and not be able to show them a turtle. I want to be able to go and out and track turtles with them and say, "Look that is one of the best parts of the turtle; it smiles all the time" (KNP volunteer, Age 15, interview 9).

One youth participant from the Fish Creek case study and several youth participants from the Keji case study described helping other people with their work as an important function they served as volunteers:

You are helping other people with their work. I feel like it is helping the people that work at Keji. You are helping to contribute to their research [as a volunteer] (KNP volunteer, Age 16, interview #12).

We do the amphibian monitoring just so they [the FOFC] can tell if the populations are decreasing. A lot of the fun is going and doing it [the monitoring work], but then also showing it to them [the Friends] and then knowing they can

use it like for a purpose and get feedback on it (FOFC volunteer, Age 14, Interview #6).

One youth participant from the KNP case study felt that wildlife monitoring could bring benefit locally in her home province, but also provide benefit on a more global scale. She shared, “I feel like it is making a contribution to our species in Nova Scotia, and to Nova Scotia. And, working with the species at risk program you are helping to make a change in the world” (KNP volunteer, Age 16, Interview #12).

Values for building a better understanding of species ecology materialized as a unique theme from the Kejimikujik National Park case study. I include values for science as a sub-theme of social values, as it seemed youth were expressing values for developing a better communal understanding of other living things. As one participant shared:

Keji has enough people to cover what they know exists, but you could have people there 24/7. I'm sure there are hundreds of turtles out there that we don't even know about. If you catch them we could bring them in and do blood tests and notch them and we would have a better understanding of what is actually out there. You would know more, if you had more people out there (KNP volunteer, Age 16, interview #6).

Participants from all three case studies made statements that suggested volunteering was as an expression of values for the health and wellbeing of other living things (i.e., an expression of biospheric, rather than egoistic or altruistic values). This theme was most prevalent in the Kejimikujik National Park participant interviews, and least prevalent in the SODC participant interviews.

What I'm doing here as a snake monitor is, well, the snake monitoring started because the snake population was decreasing because bikers would run over them and people would step on them, and they were decreasing in numbers a lot. So they made habitat for them so that they could go up in there and hibernate and so then when they come out of there they get caught in the traps and we measure them. The habitat here is like the only safe place for them (FOFC volunteer, Age 12, Interview #1).

One of the most important reasons to me to do the volunteer work is teaching the community. By teaching them about the Salish Sea, and teaching them to keep it clean, we can keep the species safe and healthy and because if one species goes down, everyone goes. All the species could go down. It's important to teach people that they shouldn't do some things in the long run. If one species goes down, all of them just fall (SODC volunteer, Age 11, Interview #1).

I don't want to see a species that is so unique and has its own personality going away. Just being wasted. It's just good to get out there and help the turtles. I just *love* animals. I don't want to see the animals go away that fast and they need help keeping them alive (KNP volunteer, Age 11, Interview #1).

I have separated out values for other people, for the welfare of other living things and for building scientific understanding but for many participants, the action of volunteering seemed to be an expression of a number of different and interrelated values. As one participant from the Kejimikujik National Park case study shared, "Volunteering is totally worth it. It is important to volunteer, because you are helping the community and the turtles, and having fun" (KNP volunteer, Age 15, Interview #9).

5.3.6 Understanding and learning as reasons for volunteering

Learning as a function of environmental volunteering emerged from one Friends of Fish Creek Provincial Park youth participant interview and from several youth participant interviews from the Shaw Ocean Discovery Centre and the Kejimikujik National Park. Interviewees shared that they had enjoyed volunteering as an opportunity to learn about specific plant and animal species:

I've liked learning about all of the creatures and I've been able to see many creatures that I hadn't known about. So, it has been quite an experience. And, it also helps in biology classes and science and stuff (SODC volunteer, Age 13, Interview #3).

You really get to know the species that you are working with and learn all about how they are endangered and all that crazy stuff about the animals (KNP volunteer, Age 16, Interview #16).

Other participants suggested they had enjoyed learning new skills specific to the mode of environmental volunteering they were engaged in. Environmental educators appreciated volunteering for the opportunity to develop public interaction skills, while wildlife monitors enjoyed learning the skills needed to collect scientific data:

It helps with my social skills, because in front of people it can be hard to talk to people and at school it can be hard to give presentations, so I can get a little more used to it from volunteering. I like that (SODC volunteer, Age 14, Interview #4).

It's a good way to get out and learn new hands-on skills. I've really liked learning new skills and how to deal with situations that come up (KNP volunteer, Age 16, Interview #12).

5.3.7 Volunteering as a path to future career or study opportunities

Career related reasons for volunteering did not emerge often from participant interviews. Career motives seemed to manifest in three ways: resume development, social affirmation, and future career/study exploration. For some youth, volunteering offered an opportunity to develop a resume. One youth participant from the Fish Creek case study shared, "I have it on my resume under volunteer experience" (FOFC volunteer, Age 14, Interview #5). With respect to social affirmation, volunteering seemed to offer an opportunity to be viewed positively by others who might be considering them as an employment or student prospect:

When I'm going to be getting a career, people are going to think that I have a good background because I volunteered (SODC volunteering, Age 11, Interview #2).

Because of volunteering people would be more likely to accept you. Because you have volunteered they know that you are loyal, and truthful, and dedicated to something. And I think that it is something that gives you a good name and shows you have good dedication (KNP volunteer, Age 15, Interview #11).

One youth participant from Keji discovered that wildlife monitoring had come to play an important role in helping with decisions about what to study in university:

I'd say that it isn't like a normal volunteer thing. I'm not going out to the highway and picking up trash. I'm doing something that I love to do. It is probably what I will pursue with my career. I think definitely what I have liked most about volunteering is getting the chance to figure out that I want to do something in that field. I don't know if the other volunteers feel the same, but for me this is probably what I am going to be diving into for the rest of my life so it feels good to get a head start on it. School has always been on my radar, but this has given me a lot of purpose. Even my brother who is in second year has no idea what he wants to do (KNP volunteer, Age 16, Interview #13).

5.3.8 Volunteering as an opportunity to reduce feelings of guilt

Two participants from the Kejimikujik National Park case study shared that wildlife monitoring had allowed them to alleviate feelings of guilt associated with being human. These youth participants felt that humans had caused harm to turtles and their habitat, and volunteering served as an act of reparation for the damage that others had inflicted on an “innocent” species:

The species need the help because they are dying out because of us. We need to fix our actions. We need to go and help them. (KNP volunteer, Age 14, Interview #7).

They haven't done anything to us but we have destroyed their habitat. We do so much to them. We need to help them (KNP volunteer, Age 15, Interview #9).

5.3.9 Volunteering as an opportunity to enhance self-esteem

Participants' statements indicate that volunteering offered opportunities to build self-esteem in three ways: developing skills, having special privileges, and helping others. I heard stories of volunteering from youth participants from each case study site that indicated the experience of volunteering had taught them new skills and knowledge, which seemed to elevate their feelings of self-esteem:

I don't do well at that the cell type science stuff at school. But, I really like the nature and animal stuff I do at the park. I think the hands-on stuff and the park sort of made it seem a bit more possible that I could do this kind of stuff (FOFC, Age 14, Interview #6).

It also builds up my confidence in talking to people. It has helped me a great deal (SODC volunteer, Age 13, Interview #3).

I didn't know about the turtles or the different kind of turtles before volunteering. And, now it is amazing when you get to tell a little kid what you do, or what kind of turtle it is. You're like, yeah, I know that! (KNP volunteer, Age 15, Interview #11).

Participants from all three case study sites described the special perks that came from volunteering. As volunteers, they had opportunities to go to new places, to meet new people, and to work with species that people did not normally get a chance to interact with. For these participants, volunteering seemed to offer a "backstage pass" to the volunteer site, and it was this "insider" experience that seemed to enhance their feelings of self-esteem:

You get to handle snakes and not a lot of people get to do that (FOFC volunteer, Age 17, Interview #4).

A few days ago I got to see baby wolf eels at feeding time and the Ruby octopus at feeding time, which you wouldn't normally see when you go there [as a visitor]. You get to learn about stuff and get to experience stuff that you wouldn't experience as a visitor (SODC volunteer, Age 11, Interview #5).

There are all these places that you get to go to, that you are not allowed to go if you don't volunteer. And you get to see the beauty of it and the awesomeness that lies within the places. You get special access. You get special tour guides (KNP volunteer, Age 16, Interview #7).

For participants from the Kejimikujik National Park and Shaw Ocean Discovery Centre, realizing that the work they did as environmental volunteers had helped other people or other living things seemed to elevate their feelings of self-esteem:

We are just basically getting a message out for the animals when they can't and if it protects them it is the most rewarding thing when you are volunteering especially when it is with animals (KNP volunteer, Age 15, Interview #11).

It's just good to get out there and help the turtles, and once you're done you know you've done something real important. It makes you feel good inside (KNP volunteer, Age 11, Interview #1).

Then afterwards they just expressed that they were so happy that I taught them this stuff and that made me feel pretty good (SODC volunteer, Age 18, Interview #6).

5.4 Challenges Youth Encounter as Environmental Volunteers

Initially youth participants seemed to experience difficulty coming up with anything about volunteering they felt had been challenging. In time, participants from all three case study sites described situations that fit two types of challenges: conditions internal to the volunteering experience and factors outside of the volunteer experience.

5.4.1 Boredom

Boredom materialized as the most significant challenge for youth participants volunteering as environmental educators at the Shaw Ocean Discovery Centre. As social interaction and teaching others were some of the functions youth had come to expect, when few visitors came to the aquarium youth seemed to find the experience boring:

When there is lots of people it just flies by just like that, but sometimes there would only be one person that would come through the centre, and it was a really slow day, and that was agony. And you just have nothing to do and it's just like quiet and dark in there and you just stand there and look at the fish (SODC volunteer, Age 18, Interview #6).

The only thing that I don't like is when I go there and it is a really quiet day and you are on greeting and you're just standing there. It's like uhhhhh -people come in, come in! (SODC volunteer, Age 11, Interview #5).

One youth participant from the SODC case study shared that she found sitting in one spot for a long period of time difficult:

Well even though it is fun to answer people's questions at the touch pool, it isn't fun to be sitting the whole time, so you're not actually moving your whole body (SODC volunteer, Age 12 Interview #3).

While youth from the Aquarium case study found it difficult to volunteer on days when there were few opportunities to interact with other people, youth participants from the

park case study sites found it challenging when few opportunities or long delays between interactions with wildlife surfaced:

Well, mostly when it is cold out I don't like it. Because the snakes don't like to go out in the cold, so all you're doing is checking traps and nothing is in there so it's kind of boring (FOFC volunteer, Age 11, Interview #3).

Sometimes the turtle just digs, and digs, and digs and it just never stops! Just digging at something that it can't get through and so you stay up all night waiting for it to lay its eggs and then sometimes it leaves without even laying eggs! (KNP volunteer, Age 11, Interview #1).

5.4.2 Fieldwork conditions and skill-development

The most common challenge for youth participants from the park case studies involved fieldwork conditions. I consistently heard about the insects, poor weather conditions, early mornings, late nights, long distances walked, and uncomfortable interactions with wildlife species as challenges encountered by youth from the park case study sites:

Nope, I've enjoyed all of it. Well, not when they bite you It did make me a bit nervous to touch them again at first, but then you start getting into it again and it is actually really fun (FOFC volunteer, Age 17, Interview #4).

Bugs! You know sometimes you'll be trying to do data cards and you can't see the data card because there are too many black flies! (KNP volunteer, Age 14, Interview #6).

Once we had to go out in the rain, the pouring rain! We had to go out in the boat and it was all foggy and it was pouring rain, and when we came back we were soaked! (KNP volunteer, Age 8, Interview #2).

Some of the participants from the Kejimikujik National Park case study described challenges related to mastering the data collection and fieldwork techniques:

The data sheets were one hard thing. Because you have to have everything detailed, because they put them on computers, and they have to know exactly what is going on, and at what time. And, so, yeah getting the hang of that. When I first started doing it the main thing was measuring and weighing and clipping the turtle, those things were difficult at first (KNP volunteer, Age 15, Interview #10).

Finding them with the big antenna is *so* hard! I couldn't do it. You have to walk around back and forth and you can't really wear shoes because you don't want to squish them. And, you are in a bog in the middle of nowhere. When you find a turtle it can be rewarding, if you actually find it (KNP volunteer, Age 15, Interview #4).

5.4.3 Lack of interest and support from peer group

Youth participants from each of the three case study sites enjoyed their experiences of volunteering, but expressed mixed feelings towards a willingness to share stories of their volunteer experiences with friends outside the volunteer community. Youth participants felt that their non-volunteer friends might not understand the appeal of volunteering, and that it could be difficult to convey to their non-volunteer peer group why volunteering was interesting or fun. For one youth participant, volunteering did not pass a threshold of excitement that warranted relaying it to his peer group:

I've told my neighbour that is also my friend about it, but I don't really think that it's that great to tell everyone about it. If a teacher asked what I did that summer then that is cool, then I might tell her. But, I don't need to go around telling everyone about it. It's kind of like saying you skateboard, but you can't do any tricks. It's not like it's *so* great, it's just okay (FOFC volunteer, Age 12, Interview #3).

5.4.4 Maintaining youth interest in volunteering

Although youth participants from the Shaw Ocean Discovery Centre (SODC) case study consistently described their volunteering experiences as fun, when asked if they would continue to volunteer in the following year some of them replied "maybe". When I inquired as to why they might not continue to volunteer, some youth suggested they might find something else to fill their discretionary time:

Maybe. I'm not sure. Maybe I would get tired of it. And maybe I would have other stuff to keep me busy (SODC volunteer, Age 11, Interview #2).

Maybe [I'll be volunteering next year]. I could be. I might get a job, or school might just get to be too much and I might have to leave. But, I don't think that is going to happen anytime soon (SODC volunteer, Age 13, Interview #3).

5.4.5 The pull of external interests and commitments

Older youth participants from the Shaw Ocean Discovery Centre and Kejimikujik National Park case studies described challenges that originated from outside of the volunteer context such as balancing other interests and commitments with their responsibilities as volunteers:

I went regularly throughout the summer, like more than twice a week probably. And pretty much once the school year came along I kind of weaned off of it and I haven't been for like two and a half months now. I want to go back, I'd like too. But, I don't know when, because the grad year is really busy. I'm really busy right now and so my semester is really heavy right now and so I'll see. And, it is like a half hour commute out there and all the gas and everything (SODC volunteer, Age 18, Interview #6).

I'm in the junior fire department. I don't specifically have a lot of other volunteer work, but just a lot of extracurricular things, like 4-H. I'm worried for this year. I have five 4-H projects and school (KNP volunteer, Age 15, Interview #9).

I think one thing that is challenging is that at the end of May and June I have a lot of homework and I really want to keep up with the volunteering program, and it is just hard to do after school. There are late nights. It is when they are laying in the summer. It makes it hard. You have a lot of school work, but you don't want to miss it (KNP volunteer, Age 16, Interview #12).

One of the older teenaged volunteers I interviewed from the Aquarium case study shared that he had not volunteered at the aquarium in a number of months. When I asked if he thought volunteering at the Aquarium is something that he would eventually return to, he expressed uncertainty, and shared:

I want to, yeah. But, I don't know because the grad year is really busy. I'm really busy right now and so my semester is really heavy right now and so I'll see (SODC volunteer, Age 18, Interview #6).

I learned from the volunteer coordinator and the youth participants from Kejimikujik National Park that the teenaged volunteers from the KNP case study had found ways to negotiate these external challenges. A number of youth participants from KNP had remained volunteers from early childhood into their teenaged years. The commitment young volunteers to the Kejimikujik National Park wildlife monitoring projects had left an impression on the volunteer coordinator:

Being eight and volunteering, and being sixteen and volunteering, are such different ages. I wondered for awhile what is going to happen? They are getting part time jobs and busy with their studies and I remember what it was like when I was their age and there are parties and things. And, I am amazed that they are so dedicated to this program still, and as a teenager. Because, even for me, I always knew that I wanted to be a biologist and I was really into the environment, but in my teenage years I don't think I would have been out every night doing turtle nesting! The fact that they are willing to do that, I'm just blown away.

5.5 Chapter Summary

In this chapter, I introduced the characteristics of youth who participated in my study, and described my findings on the reasons they volunteered, and the challenges they have encountered as environmental volunteers. Although youth began volunteering at the invitation of another person, out of a personal interest in the environment, or because they observed other youth having enjoyable experiences of volunteering, participants in my study continued to volunteer for many additional reasons. They expect it will serve social, ecological, value, understanding, career, enhancement, and/or protective functions.

Although youth described their volunteer experiences as positive, I learned that many participants had encountered a number of challenges as volunteers. Conditions from within the volunteer contexts appeared to challenge young people's ability to volunteer (e.g., boredom, fieldwork skills, insects), as did factors external to the volunteer

context (e.g., other commitments and interests). A number of salient similarities and differences emerged from my cross-case analysis of youth volunteer motivations (Table 5-2) and challenges, which I discuss in detail in Chapter Seven.

Table 5-2: Youth Environmental Volunteer Motivations

Function	Case Study 1: FOFC	Case Study 2: SODC	Case Study 3: KNP
Having fun	Fun linked to ecological interactions.	Fun linked to social interactions.	Fun linked to both social and ecological interactions.
Social	Beyond family interactions, social interactions were limited and did not play a role in youth motivation.	Social functions of volunteering important. Peers played a role in youth decision to volunteer and social interaction important part of experience.	Social functions of volunteering important. A number of unique sub-themes emerged: role-models, social events, and community.
Ecological	Hands-on interaction with snakes and frogs important motivator. Being outdoors important. Exploration and discovery, and unexpected encounters are important sub-themes.	Youth enjoyed the presence of other living things at the centre, but not a strong motivational force.	Hands-on interaction with wildlife an important function of the experience. Being outdoors, immersed within nature important. Exploration and discovery, and unexpected encounters are important sub-themes.
Values	Values for other living things emerged as the dominant value expression, and one participant expressed values for helping other people.	Values for other people emerged as the dominant value expression, and one participant expressed values for helping other living things.	Both values for other people and other living things were strongly expressed. Values for building a scientific understanding emerged as a unique sub-theme.
Learning and Understanding	Learning surfaced as a motivational variable, but only in one participant interview.	Learning surfaced with moderate strength.	Learning surfaced with moderate strength.
Career	Weakly expressed.	Weakly expressed.	Materialized as a salient motive for some of the teenaged volunteers. Unique sub-themes: social affirmation, and career exploration.
Protective	Not expressed.	Not expressed.	Weakly expressed. Volunteering helped reduce feelings of guilt associated with being human
Enhancement	Moderately expressed in most participants, strongly expressed by one participant.	Strongly expressed by many participants.	Strongly expressed by many participants.

Chapter Six: **Outcomes from Engaging Youth in Environmental Volunteering**

Findings in this chapter are based on youth participants' and volunteer coordinators' responses to interview questions about successful youth engagement, learning outcomes, and environmental stewardship behaviour. Six themes emerged from their responses: (1) experience, (2) education, (3) sensitivity and values, (4) environmental stewardship, (5) organizational benefits and (6) intergenerational experience.

6.1 Experience: An Opportunity to Experience Something New

Volunteering provided youth with an opportunity to experience something new.

As one youth participant from the Kejimikujik National Park case study shared:

I guess what I've liked [about volunteering] is it is a new experience. You get to go out and do hands-on work and really get to know the species that you are working with and learn all about how they are endangered and all that crazy stuff about the animals (KNP volunteer, Age 16, Interview #6).

We hadn't seen frogs before. Well, at least I hadn't. The first time I saw a frog [is a favourite moment from volunteering]. I'm sure that first year we walked past so many, because we didn't know how to look, and they are so tiny. So, yeah, I would definitely say the first time I saw a frog. That is my favourite memory of volunteering (FOFC volunteer, Age 14, Interview #6).

Mostly it was my first time seeing all these species. You know like the star fish and the anemones and stuff I had seen before, but I didn't really know anything about them though. I learned everything that I know about them from when I was there (SODC volunteer, Age 18, Interview #6).

I had no idea. I had no idea that there were turtles back where we lived. I didn't even know that there were different types of them until I started helping (KNP volunteer, Age 15, Interview #10).

For the young participants who volunteered at the park case study sites, wildlife monitoring introduced them to a new park, to new places within the park, and/or to a new experience in the park:

I was surprised to learn that they actually did this [monitored turtles]. I was really surprised the first time I heard that. And actually that is the way I even heard about the park was through the turtling. I had never been to the park, but once I heard about the turtling I was like “oh, let’s go!” (KNP volunteer, Age 11, Interview #1).

Volunteering has also been good to get to know about the park. And, now I know most of the park really well, before I would get lost really easily and so I have liked that about volunteering (FOFC volunteer, Age 14, Interview #6).

There are all these places that you get to, that you are not allowed to go if you don’t volunteer. And you get to see the beauty of it and the awesomeness that lies within the places that you can’t get to if you don’t volunteer. It is one of those things where so few people can get there, but you can go there. You get special access. You get special tour guides (KNP volunteer, Age 16, Interview #7).

6.2 Education

Environmental volunteering cultivated intellectual curiosity in youth participants at each of the case study sites. Youth appreciated the opportunity to build new understandings of the environment, and seemed to have developed a new lens to view the world around them. As a result of their participation as environmental volunteers, a few of the youth participants had become motivated to ask questions about the environment and to search for answers.

6.2.1 Environmental volunteering builds new understandings of the environment

When I invited youth participants to describe some of the things they had learned about the species they worked with as environmental volunteers, they reported that almost everything they knew about these species had been a result of their involvement in volunteering:

I’d say I knew practically nothing. So everything that I know about turtles I didn’t know before I started volunteering. I came in with an understanding that turtles move extremely slowly, their shell protected them from everything, and when they were babies their shells were really hard. But, I’d say pretty much everything is false about that (KNP volunteer, Age 16, Interview #13).

When asked to share something they had learned from volunteering, all twenty-five youth participants across each of the case study locations shared a number of environmental learning outcomes they gained from participating as volunteers.

There is like two kinds of snakes the red sided and wandering (FOFC volunteer, Age 12, Interview #1).

Well, there are lots of interesting kinds of crabs. And, lots of the names of things for animals aren't true. Like there is a squat lobster and it is not a lobster, it's a crab! And then there is the wolf eel and it's a fish, not an eel! Because it has fins (SODC volunteer, Age 11, Interview #2).

If it is really cold outside turtles can stay underground until it warms up, because they have a sac around them that gives them nutrients and then they don't have to come out to eat right away (KNP volunteer, Age 15, Interview #11).

Volunteering expanded participants' understandings of the connectivity of ecosystems and humans' place within them:

They are actually coming very close to extinction here in Fish Creek Park. People were stepping on the snakes, killing them. Their mass was going down a lot, and a lot, and it was coming down to almost extinction in that park so that is why they started the snake monitoring program (FOFC volunteer, Age 9, Interview #2).

I learned how pollution is a big thing. Like weeding, like adding fertilizers or pesticides to your garden at home and when you wash it off it goes down the drains and pollutes the water and the things that live there And [I learned] it is all connected (SODC volunteer, Age 14, Interview 4).

When there is a cage over the turtle eggs, it is like telling people to "be aware". So if the turtles don't have that cage people could run over it and squish the eggs and so it is like they need that cage. If they don't have it, it wouldn't be very good for the rate of turtles coming out at the end of the year. (KNP volunteer, Age 15, Interview #11).

6.2.2 Environmental volunteering provides an opportunity to learn applied skills

Participants from the park case study sites seemed to enjoy volunteering as an opportunity to learn applied science skills in an outdoor context. One youth participant from the Fish Creek case study shared that she had struggled with biology in a classroom

setting; however, volunteering helped her to see how science could be applied in an outdoor, wildlife conservation setting and she felt that she had benefited as a result:

I've learned a lot about how they gather their data and stuff and how they kind of gauge what is going on in the park, which I found was cool because I like science, but I've struggled with the cell type stuff in school. I've learned about science through volunteering, but also how to apply it (FOFC volunteer, Age 14, Interview #6).

Youth participants from the park case study organizations shared a range of skills they had learned from being a wildlife monitor, including how to: safely handle wildlife, take measurements of species (e.g., length, weight) and the environment (e.g., temperature, weather, vegetation assessments); make assessments on the health of a species; identify different types of species by sight and/or sound; interpret wildlife tagging systems and to tag species; track species (e.g., radio transmitter, visually scan environment); and record each of these observations.

You take out a snake, you measure it, you mark it with a felt marker, and you measure how long it is and how much it weighs (FOFC volunteer, Age 17, Interview #4).

We get the temperature for the air and the water before we start looking and then we just look and then we also listen to see if we can hear them calling (FOFC volunteer, Age 14, Interview #6).

We went out in the canoes and checked a bunch of the eel traps and we had to bag them on the side of the canoe and take them to shore. And, when we got to shore we had to insert a microchip to tag them so we could trace them later on and see if one of the same eels was found in one of the traps (KNP volunteer, Age 16, Interview #12).

We record how many eggs we saw, and air temperature, water temperature, cloud cover, vegetation in a certain area (KNP volunteer, Age 16, Interview #6).

Volunteering at the Aquarium seemed to provide youth participants with the skills and confidence they needed to approach people they did not know, to talk with them and

teach them about the environment, to be patient with other people, and to work with people of different ages:

It also builds up my confidence in talking to people. It has helped a great deal. And, I learned that you have to have a lot of patience with people. If some kids don't want to do this or don't want to do that then you can't really push them to do it (SODC volunteer, Age 13, Interview #3).

You get to learn how to speak to a big crowd especially if you are not that good at speaking to big crowds. At first I was nervous. When they first asked me to do greeting I was like 'but I don't know what to say yet!' So then I just ended up shadowing another lady (SODC volunteer, Age 11, Interview #1).

I definitely learned how to interact with all different types of people. Like old people, and young people and like angry people. People weren't always grumpy, but every once in a while you would get someone that wasn't happy about something and you'd say "Sorry, I don't know". I learnt how to interact with the public and to represent the centre and how to be professional (SODC volunteer, Age 18, Interview #6).

When prompted to reflect on volunteering as a learning experience, some youth seemed to value the volunteer experience because it afforded them a learning opportunity not accessible to them as young people elsewhere. Youth participants from the park case study sites shared:

One of the important things I think I learned is the skills. You get to learn certain skills from volunteering that you wouldn't learn anywhere else and I think that is really important when you are growing up. To know that there is those types of skills that you can use to work with nature (KNP volunteer, Age 15, Interview #10).

Kids get a lot out of it. And, maybe adults get the same amount out of it but to me kids get more out of it, because they are just learning about things (FOFC volunteer, Age 14, Interview #5).

The learning that happened in an environmental volunteer context seemed to be valued in part by some youth participants because it was distinct from learning in a school context:

You learn more than you would in school and it is more fun than learning at school (KNP volunteer, Age 14, Interview #7).

6.2.3 Environmental volunteering sparks an intellectual curiosity for the environment

Youth participants had developed questions about the environment based on their experiences as volunteers and were motivated to search out answers:

We found out a little bit more about [the deformities we saw] from doing research. . . . One pond where we found quite a few deformities was . . . directly by where they were building a golf course, so I'm thinking maybe it could be chemicals from a golf course that caused the deformities? (FOFC volunteer, Age 14, Interview #6).

When I was working in the touch pool . . . my friend and I found out that there were two fish in the touch pool. I hadn't seen those fish or heard of those fish before and when I looked them up in the book I found out they were juvenile buffalo sculpin and juvenile kelp greenlings but I had never heard or seen those so that was cool (SODC volunteer, Age 11, Interview #5).

For one participant from the Kejimikujik National Park case study, a curiosity about the environment where she monitored turtles developed into a science fair project, which earned her a bronze medal. The research process seemed to deepen her feelings for the place where she worked as a wildlife monitor:

When I was doing the turtling I was like okay, what is a sandbar? What is it made out of? And I ended up doing a heritage fair project on it and going to regionals for it and learning a whole bunch of stuff on it and mining. It was mining till that the sand was made out of! And it was amazing how it all comes together. You have respect for the turtles, but now you have respect for what's behind my house (KNP volunteer, Age 15, Interview #11).

6.3 Developing a Sensitivity for the Environment and New Values

Volunteering provided opportunities for youth working in different contexts to emotionally interact with other living things. The park case study sites seemed to offer youth an opportunity to develop psychological connections and values for other living things in a way that differentiated their experiences from their Aquarium counterparts. In addition, for the youth who volunteered as wildlife monitors at Kejimikujik National Park,

the experience provided them with an opportunity to develop deep connections to other people, and in many youths' descriptions of volunteering I heard a collective sense of identity emerge.

6.3.1 Wonder and affection for other living things

Youth participants from the Aquarium case study site described the species they interacted with as environmental educators as “cool”, “neat”, “interesting”, and “scary”, indicating to me that their interactions with other livings as volunteers stimulated a sense of wonder for other life forms. Participants shared:

When I first saw a nudibranch, I was like “Wow! Is that a snail without a shell or something?” I’ve liked seeing those and some of the other creatures here (SODC volunteer, Age 11, Interview #2).

They’re kind of really scary, because you don’t notice them at first, and they are this big [motions with hands] and all you see is their red eyes if they’re male. And for the girl, while she just looks like a rock. It’s really cool. (SODC volunteer, Age 11, Interview #1).

There are these green surf anemones They eat algae off of rocks and instead of just digesting all of the cells from that algae they take the photosynthetic cells from it. . . . When the tide goes down, and when they have nothing to eat, they can use their little tentacle feelers and they can like photosynthesize, which is so neat because they are animals, but now they can photosynthesize like plants (SODC volunteer, Age 18, Interview #6).

Some youth participants from the Fish Creek case study who volunteered as snake monitors had experienced what it was like to be bitten by a snake, or had witnessed a snake biting a family member. I wondered if they had become fearful of working with snakes. Youth participants reported that such experiences had not made them feel frightened of snakes, but a sense of reverence for snakes emerged in their descriptions of volunteering that suggested to me that youth were aware of the power and strength of the species. Further, youth seemed intrigued by their tactile interactions with snakes:

Snakes are just kind of cool to be around. I like handling the snakes, because I think they feel kind of cool, and I like it when they wrap around your hands. It's just an interesting feeling. Sometimes they can get really tight around your hand, but most of the time it's pretty loose (FOFC volunteer, Age 14, Interview #5).

Well, snakes are really strong, they can reach up and bite you . . . but the snakes they are not poisonous and I learned that snakes are actually really cool and they are not scary (FOFC volunteer, Age 9, Interview #2).

Similarly, youth monitoring turtles for Kejimikujik National Park seemed to be amazed by the species they worked with:

Turtles are *awesome*. I like looking at them and looking at all the different kinds there are (KNP volunteer, Age 10, Interview #3).

It is cool to see the turtles. Turtles are just really cool. (KNP volunteer, Age 8, Interview #2).

I'm amazed at how fast they run! And, I didn't know they hissed until the day I picked one up and it hissed at me (KNP volunteer, Age 15, Interview #9).

Nature as a source of amusement and humour sometimes materialized:

I was surprised to learn that turtles can breathe out of their bum when they hibernate! (KNP volunteer, Age 16, Interview #6).

Feelings of affection for other living things did not materialize during interviews with any of the youth participants volunteering as environmental educators at the aquarium case study site, and I only heard affection once in a statement made by wildlife monitors at the Fish Creek case study. One young volunteer working with snakes at Fish Creek found snakes to be both "cute" and "nice", suggesting to me he had some feelings of affection for the species he worked with: "Some of them are actually really nice...and, once I saw a baby snake. He was just really cute" (FOFC volunteer, Age 9, Interview #2). Turtles also seemed to be a species that were loved and respected, and a number of youth suggested they would grieve their loss if anything were to happen to them:

Seeing the babies. That's my favourite part. They are really cute. They are small. They are not even the size of your hand (KNP volunteer, Age 8, Interview #2).

When I got to hold the turtle. That was a favourite moment. It was a big one! And he was so cute (KNP volunteer, Age 15, Interview #4).

I just *love* turtles. I would be devastated (if something happened to the park). . . . Because that is where the turtles live! Or if there was a forest fire, I would think "Oh man, how many turtles died in there?" "Are they still alive?" (KNP volunteer, Age 11, Interview #1).

Other evidence emerged from the Kejimikujik case study, indicating to me that some youth wildlife monitors felt an emotional connection to the turtles they monitored. One young volunteer shared that he wanted to attend university near the place where he volunteered in order to continue to be close the Blanding's turtles, a species he had been monitoring since he was twelve years old. Another turtle monitor suggested that she wanted to return to the place where she volunteered in the future as an adult and be able to show her children and her grandchildren descendants of the turtle she had been monitoring since she was seven years old. She shared: "I want my great-great-grandchildren to be able to see turtles and to show them the turtles, and to be like, yeah, that is the descendent of the great Ella that I used to watch" (KNP volunteer, Age 15, Interview #9).

Many of the volunteers from KNP referred to the turtles they worked with by name. I heard stories about turtles they called Shy, Fern, Phantom, Suzie G, Ella, Mary, Hope, and Jeanette, and many of these turtles were described as having their own personalities. Working with turtles seemed to inspire youth to create art based on the species. During an interview with one youth participant, she shared a photo of a cake she had baked in the design of a turtle, and after I finished interviews at Kejimikujik, some of the volunteers emailed me their favourite photographs of turtles they had taken while

volunteering. The biologist who coordinated the volunteer work for Kejimikujik National Park shared that one volunteer had created artwork based on the Blanding's turtle she monitored: "She made this CD case with a play-dough Blanding Turtle on it; it was super cute thing to do" (Figure 6-1).

Figure 6-1: Art Created by Kejimikujik National Park Youth Wildlife Monitors⁷



6.3.2 Forming psychological connections

Participants from each of the park case study sites made statements about volunteering that suggested a blending between their conceptions of self and other living things. They expressed feelings of empathy:

Sometimes we find frogs with deformities. Some of them are missing limbs. It's really sad. It's such a shame to see them like that (FOFC volunteer, Age 15, Interview #6).

Handling brook trout carefully is important because they can get stressed really easily. We usually try to keep them in the water as much as possible to minimize their stress (KNP volunteer, Age 15, Interview #8).

Youth from KNP felt connections between themselves and turtles based on shared space, moments, and physical attributes. One youth participant described a moment he shared with a turtle that seemed to indicate a reciprocated understanding between the turtle and the volunteer:

⁷ Photographs used with permission from KNP youth volunteer and volunteer coordinator

Releasing some of the Blandings from the traps. That was a favourite experience. It was in a cove, the water is probably 30 degrees, there is stagnant moss all around. You release it and it kind of pokes his head up at you and looks at you for a minute and then swims away. It was a pretty cool moment (KNP volunteer, Age 16, Interview #6).

Another youth described her first interaction with turtles in the same way a person might describe being introduced to a friend:

I think the first turtle I ever met was Ella's hatchling. Ella lives on the rail road tracks, which is on my grandfather's property. I've been watching her for years (KNP volunteer, Age 15, Interview #9).

In other anthropomorphic accounts, youth described smiling turtles, turtles with happy and relaxed personalities, lonely turtles who had lost their mates, and turtles that felt a connection to other family members:

They smile, the Blanding turtles' smile. Such a sunny disposition! (KNP volunteer, Age 15, Interview #9).

One of my favourite days would probably be seeing the turtles hatch for the first time. There was like five of them and for some reason they couldn't stay away from each other. They always wanted to stay together and I thought that was really sweet and awesome. They knew they were family. When one person went one way the other one would follow. It was really cute and sweet (KNP volunteer, Age 15, Interview #10).

Two of my favourite turtles are Suzie G and the Phantom. Suzie G, she is very, very unique. She has a bent leg. Her leg got bent when she was born . . . and, then there is Phantom. She comes out and digs a hole but doesn't lay any eggs. That is why she is called Phantom. The Phantom turtle. They are thinking it is because of her age, or she is young or she is lonely. Or she doesn't have a mate or her mate died. She comes up every year, digs a hole, buries it and she does the same thing that the other mother turtles do (KNP volunteer, Age 11, Interview #1).

A sense of community emerged as a unique outcome from the Kejimikujik National Park case study. The biologist filling the volunteer coordinator role at Keji valued the volunteers not only for their contributions to research efforts and the park monitoring projects, but also as friends and as members of a community:

I think a lot of times when people talk about volunteers and volunteer programs they talk about the number of volunteers that they can get to do a job. We want forty volunteers to do this or that, and that can just sound like faceless numbers. You know, we say all those numbers too, and they are important for funding, but I think in the end it is all about relationships. A lot of people, they feel like my family. They are not just like this faceless volunteer. They are people that you want to spend time with, that you like and that you have fun when you go out with them and you get excited. The turtling is why you are there, but it is much more than that.

The experience of wildlife monitoring for Kejimikujik National Park put youth in close contact with other volunteers and park biologists, and many participants described a deep sense of belonging to a conservation “family”.

You help other people and you help other things and you get to feel what is like to be part of the community and being involved and everything. . . . It’s like a big community, like everyone is a great, big, huge family (KNP volunteer, Age 15, Interview #10).

Many youth participants’ statements of volunteering began using “we”. “We” seemed to be used as a reference to a collective identity, rather than a description of a particular volunteer partner. For some participants this collective identity appeared to be built on shared values for building a scientific understanding of turtles:

We could always use more volunteers. I’m sure there are hundreds of turtles out there that *we* don’t even know about. If you catch them *we* could bring them in and do blood tests and notch them and have a better understanding of what is actually out there” (KNP volunteer, Age 16, Interview #6).

Youth participants seemed to generate feelings of self-esteem based on the groups’ collective accomplishments. As one volunteer shared:

We have like double the hours of all the other National Parks in Canada. *We’re* killing it! *We’re* awesome! (KNP volunteer, Age 14, Interview #7).

6.3.3 Values for other people and other living things

Some youth expressed awareness of what it means to act altruistically:

I learned that you can do something for somebody or something, and not have to get something back. That is the main important one thing that I learned from turtling (KNP volunteer, Age 15, Interview #10).

I think the most important thing I learned is that it helps others. Not only does it help animals, but you can also help the community with your volunteering (KNP volunteer, Age 15, Interview #11).

Young wildlife monitors cultivate a greater sense of respect for the species they worked with and the environment they worked within:

I've learned like don't break anything, because that will just hurt the wildlife. Like don't break trees and stuff, and I've learned to be really gentle with the wildlife (FOFC volunteer, Age 12, Interview #1).

[I've learned] to be careful with the snakes and not to throw them, not even if they bite you (FOFC volunteer, Age 12, Interview #3).

Some of the most important things that I have learned would be that you should treat everyone and everything with respect, and especially the turtles. Because, they all play a part in our life and you should try to help them as much as possible. You hear people running over a turtle or other animals purposely, but they are all part of our environment (KNP volunteer, Age 16, Interview #12).

First you get to catch the turtle itself, and you hold it, and then you want to go and help that turtle (KNP volunteer, Age 14, Interview #7).

6.4 Environmental Stewardship

By asking participants what they might like to study or work at in the future, evidence of a link between young people's experiences as environmental volunteers and their motivation to act in pro-environmental ways outside of volunteering materialized. Findings from interviews with youth from the Aquarium case study were not as obvious, however, it can be said that participants from each of the three case study sites described future intentions for engaging in careers or embarking on study paths that could bring future benefit to the environment. The following section describes pro-environmental and stewardship outcomes.

6.4.1 Environmental volunteering cultivates pro-environmental behaviour

A volunteer from the Fish Creek case study shared that since he started snake monitoring he began carrying a bag with him when he visits his favourite spot in the park and collects any garbage he finds along the way:

Me and my friend when we go to that cliff spot we always find garbage and we always bring a plastic bag to put it in. And one time there was this fish that this kid was catching and we weren't sure what he was going to do with it, because it was in a net and it was flopping around. So we just told them to put it back in the water. . . . I probably started picking up garbage around the same time I started the snake monitoring (FOFC volunteer, Age 12, Interview #3).

Another volunteer shared that becoming an amphibian monitor increased her awareness of how litter can affect the parks ecosystem, and she has found herself chasing down litter to avoid it getting into the waterways at the park:

Since I learned about the ponds I'm definitely more aware of litter because all the sewers at least near the park a lot of them run into the ponds and they take the crap with them and it is gross walking through and there are mounds of garbage on it. Before if a little piece of candy wrapper fell out I'd just let it go but now I will chase it down (FOFC volunteer, Age 14, Interview #6).

In another participant's description of pro-environmental behaviours, I heard a sense of responsibility for the environment that seems to have grown from her experiences volunteering for Kejimikujik National Park:

Especially at home it has been a bigger experience since when we started this . . . You just have a bigger responsibility. Because you know okay I help the turtles, but I can't always help them here. So what can I do to help the other species when I am not always there helping the turtles? And, so it is like recycle and look after everything and be environmentally friendly. And, at school we have an environment program that has four of us in it and we just do a whole bunch of things to get people involved into it. And, we are trying to get a dishwasher so we don't have to hand out paper plates so we are raising money for that. There are just so many things that make you aware of what you should do not only to help the turtles, but my sister and I want to help others so these changes will do good for the others too (KNP volunteer, Age 15, Interview #11).

As result of volunteering for Kejimikujik National Park some participants have sought out similar wildlife monitoring experiences when they have been on family holidays in other places. For example, one participant shared:

Two summers ago I went to Florida with my family and I made my parents take me out to do some sea turtle monitoring while we were there. We were talking with the guy who was working there and we were like we are going to go out and do some turtle work and he said, “oh really?” and we were like ‘yeah, just go out on the beach. We do it in Nova Scotia’. We got in contact with a girl and she took us out at about 6 in the morning before it gets super hot. It is definitely the coolest thing that I did down there for sure (KNP volunteer, Age 16, Interview #13).

I learned that one of the participants from the Kejimikujik National Park case study had raised funds and awareness for species at risk in his community by running in a ten kilometre race (personal communication with one of the parents of a KNP volunteer). The volunteer coordinator from the Kejimikujik case study shared that several youth had advocated for species at risk giving presentations at their schools, and encouraging others to take on volunteer activities:

They take their experiences and then they spread it right back to the school, and to their parents too. Because their parents might not be that interested in it sometimes, but kids are the voice to their parents and they will say ‘oh my god turtles!’ and ‘you have to do this’ or ‘that is important because we have to help the turtles!’ And then they get their parent’s involved in it too (KNP volunteer coordinator).

I got [one of my friends] to come out and help and I got a couple of older people, like people in their fifties to come out. They wanted to see turtles lay eggs for the first time and they came out and it was nice (KNP volunteer, Age 15, Interview #15).

The concept of being pro-environmental was lost on some volunteers. One youth participant shared that he was unsure if he did anything that could be considered helpful to the environment, while another reported that she often lacked the motivation to engage in pro-environmental behaviours.

I don't know. I can't think of anything that I do all the time or anything that I do to go out of my way to save the environment (SODC volunteer, Age 18, Interview #6).

I'm kind of lazy when it comes to that. Like with the blue box my cans and stuff go in the blue box and deposit cans get recycled. I know that there is stuff that we could recycle more. Like even bread bags, I tend to just toss them. They can go into the bluebox but I'm too lazy to bring them to the garage to be honest. So yeah, I recognize that there is more that I can do. I kind of do the bare minimum (FOFC volunteer, Age 14, Interview #6).

6.4.2 Volunteering is a path to environmentally minded career and post-secondary study choices

Youth from each of the three case study sites suggested that volunteering had influenced their projected life path, or strengthened a previously held desire to work or study in an environmental field. One youth participant from the Aquarium case study shared that her motivation to study marine biology had been reinforced by her experiences as a volunteer at the Aquarium:

I'd like to go to University or college and study marine biology or something. . . . I've always wanted to be a marine biologist. I like sharks and marine life. But, since I've been here I've become more interested, because I've learned more about it and I volunteer (SODC volunteer, Age 14, Interview #4).

For participants from the park case study sites, volunteering as a wildlife monitor introduced new ways of thinking about science and careers that linked science and the environment. One participant from the Fish Creek case study indicated that she had gained new insight into the study of biology and into conservation as a career opportunity through her experiences as an amphibian monitor. In addition, wildlife monitoring not only seemed to provide her with new insight into a job that she might like to have one day, but it also appeared to enhance her self-confidence when it came to studying science:

I really like the nature part of science and the animals. I don't like the cell type of stuff though which is basically all they cover in school. I don't know what my

options are if I don't want to do that kind of stuff. And, I don't do well at that stuff. I'd like to do something with nature. . . . I've always loved animals, but I think the park sort of made it seem a bit more possible and it opened my eyes to the different possibilities within science. Before you know, especially when you're little, it's like "Vet" or "Zookeeper". But now I know how many other options even like "conservation officer" which may not necessarily be science, but they are still in the park (FOFC volunteer, Age 14, Interview #6).

Several youth participants volunteering as wildlife monitors for Kejimikujik

National Park shared that volunteering had shaped their ideas about future work or study options:

I think volunteering helps with what I want to do. I think it shapes it. I think especially volunteering with the turtles helped me get over the fear of being a researcher and I've liked the working with animals part of it (KNP volunteer, Age 15, Interview #10).

A biologist has always been something I want to do; it has been an option all the way through for me. Turtle monitoring is basically where I started to think about that. Realistically I don't know if there is good work in it, but it is so much fun. So I am trying to find something that will be needed in the future and that will be tied to animals (KNP volunteer, Age 15, Interview #9).

At eleven years of age, the experience of working with turtles at Kejimikujik National Park left one young volunteer feeling like working with and helping animals might be her life purpose:

I have thought about doing something with animals. . . . Volunteering made me feel like maybe this is what I was made to do (KNP volunteer, Age 11, Interview #1).

Other youth shared that interacting with the park biologists shaped the way they think about future work or study paths:

I think that volunteering has made me realize that I actually want to take more challenging courses, because I know that if I want to be up there with the (Kejimikujik biologists) of the world and do the kind of work that they do, I definitely have to dedicate myself a lot to school (KNP volunteer, Age 16, Interview #13).

I'd like to do some of the field work just like [one of] the biologists at Keji. It would be fun to have his job. At Keji they hire people to do the field work so I'm trying to get into that next summer maybe. It's good to experience all this stuff so I can find out if I don't like that or I like that and you can kind of decide where you want to go (KNP volunteer, Age 16, Interview #6).

6.5 Organizational Outcomes

The findings described in this section suggest that the way organizations benefit from youth participation is through connecting a wider audience with the environment, increasing awareness of the park and its features, building a volunteer base and establishing a pool of future employees.

6.5.1 Reaching a broader audience

Findings from the Aquarium case study illustrate how youth teaching other youth can be an impactful pathway for organizations to deliver educational messages to a young audience. According to the volunteer coordinator:

Youth teaching youth, it works. You can see it with the kids. They'll listen to an older kid talking about stuff. Whereas with an adult they wouldn't talk to them, they are nervous about it, but they chat away when it is the kids telling them about how there are tube feet on the seastar. And, the kids are going, 'wooooo'. So, it is fun to watch it happening. And, it does happen. Now, obviously not all kids are as good at teaching as others, but it really works and it is fun to see (SODC volunteer coordinator).

6.5.2 An additional source of dependable volunteers

Volunteer coordinators from each of the three case study organizations described youth volunteers who were reliable, committed, and passionate about their volunteer work. The volunteer coordinator from the Friends of Fish Creek case study described one mother-daughter team as "dedicated" and "passionate". This volunteer team had contributed several years of volunteer work and together had made an important ecological discovery while volunteering. One season they noticed a number of dead tiger salamanders at the park, and brought this to the attention of the park. The salamanders

had been impacted by a virus and the following season it proved difficult for any volunteer to observe salamanders in the park. However, the mother-daughter team who had initially discovered the dead salamanders were amongst the first to re-discover salamanders in the park:

A couple of years ago they found 10 or 11 Tiger Salamander carcasses that were dead in a wetland in the western part of the park. . . . (The) specimens were sent to labs to get them tested to find out what is going on in that wetland. . . . A virus had killed all of the tiger salamanders -that was 2009. In 2010 our volunteer amphibian monitors found none, and so we were worried. Does this mean they have been extirpated from the park? Or does it mean they are just hard to find? Or were they just really only in that one wetland and they are all dead? We just didn't know. So this year we asked (volunteers) to really keep an eye out. And we really focused on the training to find tiger salamanders and still nobody was finding anything. . . . After these training sessions we hosted two different night time outings. . . . The first outing we didn't find any. The second outing we . . . found like fifty Tiger Salamanders! So it is really, from a youth perspective, a success. I think especially for the one volunteer that was there for both. She was also the one that found the dead ones a few years ago. Oh, for her, it was just like, it was, -how do I say it? It really expanded her sense of how much this matters in the broader scheme of things.

The volunteer coordinator from the Aquarium case study shared a story of a young individual who has volunteered every week for several years, and is relied upon by staff members to help train other volunteers:

Some of [the young volunteers] have really stuck by us. There is [one youth] that comes in and does a double shift most Saturdays. He started when we opened, and he has been here for a couple of years. We get him to help with our training days, and he is so good with the younger kids.

The volunteer coordinator from the Kejimikujik National Park case study shared stories of youth who began volunteering in early childhood and had remained engaged throughout their teenaged years.

I wondered for a while what is going to happen? They are getting part time jobs and busy with their studies and I remember what it was like when I was their age and there are parties and things. And, I am amazed that they are so dedicated to this program still, and as a teenager. . . . Because, even for me, I always knew that

I wanted to be a biologist and I was really into the environment, but in my teenage years I don't think I would have been out every night doing turtle nesting! The fact that they are willing to do that, I'm just blown away (KNP volunteer coordinator).

Additionally, the KNP volunteer shared that some of the young volunteers had been inducted into the "walk of honour," a park trail dedicated to celebrating the commitment and contributions of volunteers. Being inducted to the walk of honour requires that volunteers have contributed at least 250 hours of service, "The fact that there are (these four young volunteers) that have all been part of the walk of honour...that is one thousand hours right there of volunteer commitment" (KNP volunteer coordinator).

I heard a sense of dedication in a number of KNP participants' descriptions of volunteering. One young participant shared that wildlife monitoring had provided him with an opportunity to learn the value of working hard at something he enjoys, but also serves an important purpose:

I'd say that if you work hard at something that you like and enjoy, then you get a lot of benefit from it. Perseverance, perseverance, perseverance: I learned that perseverance definitely helps out a lot. I think in the wild the amount of Blanding's that would make it out of each clutch would be something like two percent. If there weren't so many volunteers, contributing so many hours, there wouldn't be half the amount of nests being built and there would be fewer turtles surviving every year (KNP volunteer, Age 16, Interview #13).

Kejimikujik National Park participants demonstrated an awareness and respect for park rules, indicating to me that they understood the importance of interacting with wildlife during fieldwork activities in a responsible way, and that they took their role as wildlife monitors seriously:

If we see a turtle out there by the road we are *not* allowed, we are not allowed to touch them it's against the Park's rules (KNP volunteer, Age 11, Interview #1).

One of them was stuck underground, it was still in its shell and its head was sticking out, but we weren't allowed to touch it, because it's against the rules (KNP volunteer, Age 8, Interview #2).

Recognizing that the work they did supported park scientists and the protection of turtles, youth volunteering for KNP could be depended on to carry out the data collection protocols effectively:

We want to be faithful to the turtles and we don't want to miss them, because then it is hard to collect the data, and to help them more, and to cover their nests. . . . You go back and you don't make any excuses, and you collect all of your data faithfully and it is just really good (KNP volunteer, Age 15, Interview #11).

You have to have everything detailed because they put them on computers and they have to know exactly what is going on and what time (KNP volunteer, Age 15, Interview #10).

6.5.3 Broadened awareness of the role of parks and sites

For some participants, their experiences of wildlife monitoring for parks seemed to have transformed their conception of parks from a place of leisure to a place where people worked hard to protect wildlife. Youth seemed surprised by the number of species that park organizations worked to protect:

They do a lot more then you think. I didn't know they did so much here at Fish Creek before I volunteered (FOFC volunteer, Age 16, Interview #4).

How much they really do. You just don't really know how much time and effort they put into what they do, but they put a lot of work into what they do (KNP volunteer, Age 15, Interview #10).

There are actually a lot more programs at Keji than I thought. When I first went in there I thought it was all paddling and paths, but there is a lot of stuff going on and people are involved in working with all of these different species (KNP volunteer, Age 16, Interview #13).

Participating in wildlife monitoring provided youth with a new understanding of public participation in park research efforts and taught youth that they could have a role in protecting wildlife species:

I've learned that the park takes extra precautions to keep wildlife safe which I think is kind of important because it is very nice to enjoy the nature there. And they do a lot of programs here and I didn't know that you can get involved in the programs and that they let volunteers do this before I volunteered (FOFC volunteer, Age 14, Interview #5).

6.5.4 Future employees

Participants from the Kejimikujik National Park study talked about working for Keji, or the agency Parks Canada in the future, while others hoped to volunteer for Kejimikujik when they were older:

I've thought that I could get a job being a Parks Canada person (KNP volunteer, Age 10, Interview #3).

I know that when I am old enough to that I want to work at Keji for at least a year (KNP volunteer, Age 11, Interview #5).

Maybe I'd like to be one of those volunteers that comes and stays at the park when I'm older (KNP volunteer, Age 11, Interview #1).

6.6 Intergenerational Experiences

At Fish Creek Provincial Park, youth worked with their parents, at the Aquarium case study youth worked alongside non-related adults of all ages, and at Kejimikujik National Park youth had an opportunity to work with parents and grandparents, as well as non-related adults. This arrangement of volunteering provided an opportunity for youth to learn from adults, for both youth and adults to learn more about one another, and for people of very different ages to have positive interactions with one another. The volunteer coordinator from the Aquarium case study suggested that although it is the adults that often mentor youth in developing skills as volunteers, young volunteers can inject fresh insight into the world of older volunteers:

You know we'll have a 12 year old and an 80 year old beside each other . . . and they get along great! The elder volunteers are very open and they chat with the [youth volunteers] and have a great time and they always say that they learn

more from the young kids because ‘kids know stuff!’ So the cross-age combining really works. I like to see that (SODC volunteer coordinator).

The Aquarium also provided a chance for youth to interact with people from the broader community who came to visit the Aquarium as guests.

Well, teaching the little kids was fun but they were [always making noise] and didn’t care what you were talking about, but the old ladies who would come over and I would tell them about everything that I knew about the fish and they would be all interested in it and I thought that was pretty fun (SODC volunteer, Age 18, Interview #6).

6.7 Chapter Summary

Findings from my collective case analysis provide evidence of the wide range of benefits that can be realized from involving youth in environmental volunteer activities. Wildlife monitoring helped youth participants to develop values for other people and other living things, an outcome of youth engagement that will likely continue to yield positive benefits for the communities where youth live and the environment. Furthermore, experiences of volunteering had stimulated an intellectual curiosity for the environment in some youth, and moved others to engage in new pro-environmental behaviours outside of volunteering. The organizations engaging youth benefit from an additional source from which to draw dependable and passionate volunteers and future employees. Overall, environmental volunteering provides people of very different ages with an opportunity to interact.

In the following chapter, I discuss the significance of these intergenerational interactions for the health of communities, and the important role that youth-adult interactions can play in encouraging youth participation in environmental volunteering.

Chapter Seven: **Discussion**

This chapter focuses on findings from my study in relation to previous research on youth volunteering. The arrangement, conditions supporting and challenging participation, motives and the outcomes of youth participation in environmental volunteering are discussed.

7.1 The Arrangement of Youth Engagement

Youth participation in environmental volunteering differed across each of the case study sites, suggesting there is no single formula for involving youth volunteers (see Table 4-1). The differences that surfaced between case study sites influenced the way youth interacted with volunteerism, the environment, and other people, and in turn these contextual differences impacted youths' expectations for volunteering, their experiences, and the outcomes that materialized from their involvement.

Each case study site engaged youth in activities that served a legitimate purpose. The organizations participating in my study involved volunteers because public involvement was a means to connect the local community with the local environment and environmental information. They also viewed the public as having a vital role to play in fulfilling environmental protection objectives either as environmental educators or wildlife monitors. The approach organizations took to targeting youth volunteer participation varied and ranged from active advertising and recruitment (SODC), to passive involvement through friends and families (FOFC and KNP). Once youth were involved as volunteers, they seemed to participate in the same stream of activities as adults at each case study site.

Previous reports on youth volunteerism favoured arrangements of youth volunteer engagement that differentiated youth from volunteers of other age categories.

Organizations that are “highly successful” at engaging youth are described as having created projects designed specifically for youth volunteer participation (Volunteer Canada, 2001, 2010a). For example, one report identifying best practice strategies for involving youth as volunteers states that few organizations design volunteer projects with youth in mind, which has been argued to be a critical piece for successful youth engagement:

In most cases, organizations will extend existing volunteer positions to young people without taking the time and resources needed to craft something youth-specific (p.5). While most charities and not-for-profits will make minor adjustments to their existing volunteer programming to involve youth, few have created uniquely youth-oriented volunteer opportunities (Volunteer Canada 200, p.11).

The authors of the report add that “people who recruit and manage volunteers know that young people need a different kind of support, different training, different positions and different recognition” (Volunteer Canada, 2001, p. 12). In addition, authors of another report on youth engagement in volunteering argue that the community organizations which are “highly successful at involving and retaining youth volunteers . . . have programs and procedures targeted specifically toward youth involvement” (Volunteer Canada 2010, p.4).

Involving youth in “environmental volunteering”, as opposed to “youth environmental volunteering” offers young people an opportunity to work alongside adults, and may provide them a chance to feel like they are making adult sized contributions to organizations and the environment. Work by children’s geographers indicates that youth appreciate the opportunity to be treated like adults, and as Valentine (1999, p.150) suggests “children, particularly teenagers, hanker after being identified as ‘grown up’ and respond well to being treated as adults”. Other research highlights a

number of benefits that surface from youth-adult partnerships in civic engagement projects (Camino & Zeldin 2002; Klindera et. al. 2001; Zeldin et.al. 2013).

From a cost perspective, the design of youth positions, projects, tasks, training, and recognition procedures likely requires additional human and financial resources. Many non-profit environmental organizations encounter budgetary constraints (Bruyere & Rappe, 2007). Organizations might be less likely to make space for youth volunteers if they perceived youth participation to require extensive resources. Negative attitudes and stereotypes held by adults towards youth capabilities as volunteers are a commonly cited constraint on youth volunteerism (Moffatt, 2011; Shannon et al., 2009; Tessier et al., 2006). How willing will organizations be to invest resources in youth participation and design projects for youth if they are unsure if and how youth volunteerism can work?

During interviews with the staff members coordinating youth volunteers, I heard descriptions of dependable, passionate youth, of young volunteers who had contributed hundreds of hours and multiple years of service, of youth who had made important ecological discoveries, and of youth who had been highly effective at interacting with and sharing environmental information with the public. During interviews with youth volunteers, I learned how much enjoyment they had experienced as volunteers, how deeply satisfied many of them had been with their volunteer experiences, how some had become advocates for endangered species in their community, how volunteering had enhanced their self-esteem, encouraged some of them to work harder at their studies, and had influenced the trajectory of a number of participants' lives. These findings support that youth engagement in environmental volunteering may also be effective without

designing programs, projects, and training protocols specifically tailored to youth volunteer involvement.

Each case study site experienced success in different ways, and some contexts seemed to produce more meaningful outcomes than others. Although there are likely many benefits to be realized from creating volunteer projects with youth in mind, my findings suggest that successful youth engagement is more complex and contextually nuanced than can be explained by the presence of youth projects, training, and recognition strategies alone. As Oates (2004, p.14) suggests, “just as every community is different, every foundation and organization is different, and what works for one may not work for another”. A “one-size” fits all approach is unlikely to work for youth engagement, and organizations can benefit from exploring different models or component parts of different approaches of youth engagement to find the arrangement that can best meet “the character, needs, opportunities and resources” (Oates, 2004, p. 14) of individual organizations.

7.2 Conditions Supporting Youth Engagement in Environmental Volunteering

Exploring environmental volunteer behaviour through a functional lens reminds us that it is the fit between the person and the situation, rather than the person or situation alone that will determine voluntary behaviour. Clary et al. (1998) observed that “volunteers who serve in roles that match their own motivations will derive more satisfaction and more enjoyment from their service and be more likely to intend to continue to serve than those whose motivations are not being addressed by their activities” (p.1528). For many of the volunteers participating in my study, there seemed to be a good fit between their motivations for volunteering and the functions provided by the volunteer context.

A welcoming, friendly organizational attitude towards youth has been suggested to be an important condition for supporting youth participation in volunteer activities (Gaskin, 1998b). Previous research highlights negative perceptions about youth capabilities as volunteers as a constraint to advancing youth volunteerism (Gaskin, 1998; Shannon, 2009; Shannon et al., 2009; Tessier et al., 2006; Volunteer Canada, 2001). The three case study organizations in my study displayed a sense of openness to youth participation in environmental volunteering. This contradicts previous research that reports openness and internal support for youth participation in parks and protected area programming is lacking (Church, 2011).

Church (2011) suggests the lack of internal support is a reflection of larger underlying issues:

The lack of funds and capacity many park agencies suffer from in relationship to the development and continuation of youth engagement programming speaks to a larger underlying issue of the value this type of programming is seen to carry within park agencies (p.36).

Golombek (2006) notes that negative attitudes held by adults towards young people's capabilities seem to prevent youth from being extended opportunities at civic participation more broadly. The authors of one study on youth volunteerism suggest that:

In North America, adult views of young people as problems or liabilities in the community have created and maintained narratives that discount the potential contribution youth can make to community (Shannon et al., 2009, p. 32).

My findings do not support these previous assertions. Adult supporters both within and external to the volunteer context directly and indirectly supported youths' abilities to participate as environmental volunteers in my studies. At FOFC, youth were only permitted to volunteer as wildlife monitors if their parents co-volunteered with them. Even when youth wildlife monitors were not required to co-volunteer with a

parent, adult family members and non-related adults provided younger youth with the support, guidance, and assistance they needed to volunteer. Youth who did not require their parents to be present to volunteer, still relied on their parents to sign consent forms, and to transport them to and from the places they served as volunteers. Without the support of these family figures, organizations would likely require additional human resources in order to supervise children in wildlife monitoring roles

Related and non-related adult figures supported youth in their experiences of volunteering by providing a mentoring role. Although some youth received advanced training to carry out their volunteer tasks, all youth reported that they had learned how to be volunteers “on-the-job”, and by watching and working alongside others be it a volunteer coordinator, a parent or another volunteer. This system of informal mentorship allowed organizations to lean on parents and other volunteers to train youth, and likely facilitated environmental stewardship organizations’ abilities to engage youth without the injection of additional resources into youth training protocols or supervisory positions.

In addition, mentorship allowed youth to have hands-on learning experiences. Previous research on youth volunteerism has suggested that youth prefer “learning-by-doing” as it is an active and fun way to learn, and youth seem to prefer not to have “a lot of written instruction and lengthy classroom sessions. [As] this can feel too much like school and not enough like real life” (Volunteer Canada, 2001, p. 38). Youth in my study suggested that they enjoyed the learning context offered by environmental volunteering, largely because it contrasted to their learning experiences at school. Learning as an environmental volunteer was fun, hands-on, exciting, and youth described the skills and knowledge they gained as useful and relevant to real life situations.

In line with my findings, adult support, expertise, and guidance have been demonstrated in previous research to play an important role in sustaining the engagement of youth volunteers (Camino & Zeldin, 2002; Gaskin, 1998; Locke & Rowe, 2006; Oates, 2004; Shannon et al., 2009). Shannon (2009) states that parents can play an important role in training and supervising youth, and “could be an efficient and effective way of meeting the non-profit organization’s needs and address challenges related to the capacity of such organizations to manage volunteers” (p.843). In addition, findings from past studies indicate that sharing knowledge with others can be an important sustaining force in the experience of adult environmental volunteers (Bell et. al., 2008; Ryan et.al., 2001). Given that “teaching others” has been identified as an important motivator for some adult volunteers in past research, the opportunities that youth engagement provided for mentorship may have helped sustain the experiences of both the adult volunteers working with youth in my study, and the youth who volunteer.

Past research has identified the role that direct interactions between youth and adults can play in overcoming overt and hidden negative stereotypes and attitudes that adults may hold toward youth (Klindera et al., 2001; Zeldin et.al., 2000). The authors of one study highlight that working with youth provides an opportunity for adults to see the potential children and teens have to contribute to their communities:

Firsthand, personal experience often provides the most effective and far-reaching results in terms of changing people’s opinions. One of the benefits of involving young people... is that it enables adults to see teens as thoughtful and contributing people. When anyone comes to see a formerly undifferentiated group as varying and diverse, that person is much more open to disbelieving and refuting negative stereotypes about the group and to valuing the individuals within the group (Klindera et al., 2001, p. 13).

Environmental organizations need not involve youth, however, making room for all members of the public to participate in civic action, even the small ones, is an important component of a healthy functioning democratic society (Aitken et al., 2003; Golombek, 2006; Hart, 1997). Shannon et al. (2009) suggest that if parents and non-familial adults viewed “youth as competent citizens, valued their potential and ability as volunteers, and provided support for their efforts to become engaged in their community” (p.32), some of the structural, intrapersonal, and interpersonal constraints that youth encounter as volunteers could be lessened or eliminated.

As volunteer coordinators spent time interacting with youth, they seemed to be more responsive to the abilities and needs of youth volunteers, and they seemed more likely to view youth as individuals rather than dependents, and to acknowledge and celebrate young people’s individual contributions to volunteerism. They were sensitive to the fact that youth were not a homogenous group; similar to adult volunteers, youth brought their own strengths, experiences, and needs to the volunteer context. The KNP volunteer coordinator who worked most frequently and closely with youth had an adept understanding of what youth sought from the volunteer context. Many of the youth volunteers I spoke with who interacted with her and the other park biologists looked up to the biologists, spoke positively about them, enjoyed their company, appreciated their help, and felt that the biologists cared for youth volunteers, and the wider volunteer community.

Previous research shows that coordinators who spend time getting to know youth volunteers, have conversations with them, take note of their personal interests, and spend time interacting with them often make a positive impact on young volunteers’

experiences (Gregor & Geale, 2010). In addition, such interactions provide coordinators an opportunity to understand which young volunteers are ready to take on greater levels of responsibility in their roles and provides opportunities to empower youth (Gregor & Geale, 2010). Adult figures who are able to see that both youth and adults have abilities, strengths, and experience to contribute, are more likely to have a positive attitude toward youth and to feel comfortable and enjoy working in an environment that has both youth and adult volunteers (Klindera et. al., 2001). Youth have the capacity to make positive and wide-ranging contributions to organizations when they receive support and the opportunity to develop their skills (Klindera et. al., 2001).

Volunteer coordinators expected youth to carry out many of the same tasks as adults, they understood that youth were different than, not less than, adults, and tried to leave room for ‘kids-to-be-kids’. The coordinators who worked closely with youth adjusted tasks when youth experienced difficulties, and offered additional mentorship and guidance until volunteers developed the skills and confidence needed to carry out their volunteer tasks more independently. Such findings parallel past research, which suggests that successfully engaging youth as volunteers requires an attitude of inclusivity, flexibility and the ability to view volunteering through a youth lens (Oates, 2004).

Diversity in the way volunteer projects were structured and variety in the type of projects offered for public participation emerged as another way to support youth environmental volunteerism. Flexibility is a supporting condition of youth volunteerism that surfaces consistently from past studies (Gaskin, 1998a, 1998b; Gregor & Geale, 2010; Oates, 2004). Although past research emphasizes “flexibility” as a necessary requirement for youth volunteer projects (Gaskin, 1998b), a mix of flexible and

structured projects materialized as effective approaches to involving youth as environmental volunteers in my study. The greater variety in the ways in which organizations arrange their volunteering programs, the wider the volunteer audience they will be able to reach, including youth and families. Some youth and families seemed to prefer having structured interactions with volunteering, while others preferred having flexible interactions. Some contexts provided families with an opportunity to be volunteers and offered park visitors a chance to add volunteering to their other park leisure experiences. Some contexts provided an opportunity to work with snakes, while others offered an opportunity to work with turtles.

Youth, particularly older youth, seek flexibility in their volunteer commitment and schedules. Gaskin (1998) writes:

Flexibility is given top priority by young people, particularly in respect of flexible work and working times for volunteering. The pressures and demands on them make it hard for them to find the time and make a commitment to volunteering. They have a sizeable number of other outlets for their free time, and voluntary work has to compete with this. Much of their life is programmed and controlled by others and it is important to them to have an element of choice and spontaneity in volunteering (p.38).

The importance of flexibility may diminish the more attached youth become to their role as a volunteer, and the more intrinsically motivated they are to participate. For example, the timing of wildlife monitoring projects is dictated by the seasonal cycles of plant and animal species. Although youth in my study were free to choose if they would participate during a particular seasonal event or not, there was no flexibility in the timing of the fieldwork. Older teenaged youth described having exams and end of year social gatherings that conflicted with parts of the turtle monitoring season; however, youth chose to participate in the late night turtle monitoring sessions. They felt that their

contributions to turtle monitoring were important and valued, and although it was a busy time of the year, the sacrifice was worth it.

Feedback and recognition surfaced as important features of young people's experiences of volunteering, with certain forms of feedback being particularly potent. Sometimes the most powerful feedback and recognition came from volunteer coordinators and the organization itself. For example, some youth who worked closely with park biologists as wildlife monitors were thanked and recognized in front of the rest of the volunteer community by the biologists. Working alongside biologists reinforced that the wildlife monitoring served an important purpose; being recognized by these "important" figures left youth feeling proud and special.

Tangible and short-term feedback mechanisms that demonstrated to youth how and who they helped as volunteers materialized as another powerful support tool. For example, visitors to the Aquarium made the effort to thank youth volunteers directly for sharing environmental information with them during their visit, while other visitors left messages in the aquarium's guestbook thanking individual youth volunteers for their help. This type of immediate, personal feedback enhanced young people's feelings of self-esteem, and provided volunteers with a tangible way to see who and how they helped as volunteers. Findings on the importance of tangible and timely feedback parallel, at least in general terms, the findings of other studies on adult's experiences of environmental volunteering, particularly for volunteers in restoration contexts (Grese et al., 2000; Haas, 2000; Kromplak, 2009; Ryan et al., 2001; Schroeder, 2000; Westphal, 1992). Ryan et al. (2001) suggest that there is a link between seeing tangible results as a volunteer and people's expressions of values as a motivation for volunteering: "It could

be that these activities provide more ‘visible’ benefits to the environment and give participants a more tangible proof of the way in which their work has helped the environment” (p.639).

For youth participants in my study, seeing how they had helped other living things, and being thanked by the people that they served as volunteers provided tangible proof of the way in which their work helped others. These feedback mechanisms may have reinforced some young people’s altruistic and biospheric values for volunteering, and helped develop these value sets in other youth who did not begin their journey as volunteers out of a desire to express helpfulness. These forms of feedback made youth feel good and enhanced their feelings of self-esteem, further supporting their involvement in environmental volunteering.

7.3 Conditions Challenging Youth Engagement in Environmental Volunteering

Youth engagement in environmental volunteering is not without its difficulties. The adults coordinating the work of young environmental volunteers, and the youth who volunteered for environmental stewardship organizations both experienced a number of challenges. Past research has identified three levels of constraints that limit young people’s ability to access and/or enjoy volunteering: structural, interpersonal, and intrapersonal constraints (Shannon et al., 2009). Each of these categories of constraints surfaced during interviews with volunteer coordinators. Two of the three volunteer coordinators in the study worked closely with youth, while the third volunteer coordinator had limited interactions with youth volunteers.

For those interacting directly with youth, the challenges encountered seemed to occur primarily on a personal level and included both intrapersonal and interpersonal challenges. For example, volunteer coordinators reported intrapersonal challenges that

surfaced when traits, characteristics, or feelings of a volunteer sometimes created friction between the volunteer and the volunteer context (e.g., shyness in a public interaction/education context, or excitability in a wildlife monitoring context). In addition, coordinators working directly with youth experienced challenges on an interpersonal level. These challenges surfaced when dynamics between one or more people reduced the ability for youth to be effective as volunteers (e.g., parents interfered with young people's ability to volunteer, large groups of similar aged youth working together disrupted work flow). Volunteer coordinators had found ways to negotiate the intra- and inter-personal challenges using a variety of techniques, including: getting to know youth volunteers and their personal strengths, providing additional mentorship and guidance as needed, making adjustments to volunteer schedules, and having a flexible and patient attitude when working with volunteers.

Parents surfaced as both a supportive and potentially constraining force on young people's participation in environmental volunteering. Young people's participation in environmental volunteering activities, particularly wildlife monitoring, was coupled tightly to the involvement of parents. Parents provide many benefits to youth engagement (e.g., reduced training and supervision costs, helping youth access volunteering). However, when parents become a necessary condition for youth participation to manifest, they become a potential weakness of this model of youth environmental volunteerism. In such cases, youth participation becomes hinged to the continued interest, support, and motivations of parents. Such findings parallel past research outcomes on youth volunteerism. For example, Tessier et al. (2006) observed that adult involvement was a fundamental dimension of youth volunteerism, and "the relationship that is established

between the adults and youth can affect young people's motivation to volunteer, their success, and their continued involvement" (p.8).

In addition, although some volunteer contexts support youth in having volunteer experiences that are autonomous from their parents, many youth still rely on the help of their parents to access these experiences. If parents are unable or unmotivated to assist youth in getting to and from the place where they volunteer, or unwilling to sign consent forms, then youth will experience difficulty accessing environmental volunteer experiences. Fostering positive relationships between environmental stewardship organizations and the parents of youth volunteers, and understanding the motivations and needs of parents can help organizations maintain a relationship that has become an essential component of youth involvement in environmental volunteering.

7.3.1 Developing a youth volunteer policy and battling boredom

Two challenges materialized from my research that could potentially limit youth involvement if not recognized and addressed; the first is situated in structure and policy. Past research suggests that while intrapersonal constraints are easily negotiated, "structural constraints are the most difficult to negotiate" (Gage & Thapa, 2011, p. 409). According to Shannon et al. (2009, p.19) structural constraints include "rules and policies governing use of public space" which limit or inhibit participation in volunteering. A structural challenge to youth environmental volunteerism materialized from the Fish Creek Provincial Park research site. A lack of organizational policy on how to engage youth as environmental volunteers emerged as a challenge that had constrained youths' access to environmental volunteering in my study, and which seemed poised to be a significant threat to youth participation elsewhere.

Youth engagement in wildlife monitoring grew organically at this park case study site, and the organization engaging youth had yet to respond to youth participation with the development of a formal policy on how to involve youth as environmental volunteers. The volunteer coordinator had implemented an informal policy that required all youth under the age of eighteen to co-volunteer with a parent. This solution had allowed the coordinator to feel more confident about engaging youth as volunteers and by having parents assume the risk and responsibility of their child's participation, the coordinator seemed to have mitigated her concerns about the risks and liabilities associated with youth environmental volunteerism until a formal policy could be developed.

Although this challenge occurred on a structural/policy level and had been negotiated by mandating youth-parent partnerships, it seemed to reflect deeper underlying issues related to perceptions about youth capabilities as citizens and volunteers. I heard "risk and liability" surface as a concern of youth participation in volunteering during my interview with the volunteer coordinator from this case study, during informal conversations when I first outreached organizations to participate in my study, and when presenting my findings at a conference. I heard that: it was unsafe and unwise to have youth volunteer without anyone other than a parent in an urban park; there had been crimes committed between youth group leaders and youth, which may have led to an increase in insurance premiums, making youth participation seem expensive, risky, and undesirable; and youth volunteerism would require supervision and organizations did not want to be a "baby-sitting service."

In discussing the liability issues that surround youth engagement in volunteering, Parker (2000, p.19) writes, "Liability is about responsibility. It is about who is

responsible in the event of an accident, injury, or damage”. If liability is about responsibility then organizations will likely be hesitant or unwilling to take on the responsibility associated with young people’s participation in volunteering, particularly if they are unaware of the benefits youth can bring. The concern I heard may reflect a lack of understanding about the benefits of youth engagement, the tools needed to mitigate risk, and deeper societal attitudes toward young people’s abilities to negotiate public spaces.

A growing body of work has identified the culture of fear that has grown around youth interactions with outdoor spaces, including parks and natural areas (Charles & Wheeler, 2012; Clements, 2004; Karsten, 2005; Louv, 2005; Muñoz, 2009; Nairn et.al., 2003; Outdoor Foundation, 2012; Skår & Krogh, 2009; Valentine & Mckendrick, 1997; Valentine, 1994, 1997). Valid concerns have become heightened or exaggerated in recent years and have led to an unwillingness by parents and other adults to trust youth’s abilities to manage their own safety in public places (Valentine, 1997b).

Of greatest concern is young people’s vulnerability in public spaces and their potential interactions with strangers (i.e., “stranger danger”), traffic, as well as the potential trouble that youth might cause together in public spaces (Elsley, 2004; Matthews & Limb, 1999; Hugh et.al. 2000; Valentine et.al., 1998; Valentine, 1994, 1997). Matthews and Limb (1999) suggest that:

Although, statistically, children are more at risk in private space and from people they know, the moral panic about ‘stranger danger’ is leading parents to encourage children of both sexes to spend most of their free time either at home with friends or taking part in activities organized by adults” (p.23).

Adult constructions of “geographies of danger” appear to have led to the control and restriction of young people’s spatial ranges, modified youths’ use of public space,

resulted in instances where children and adolescents are excluded from social and environmental landscapes (Muñoz, 2009; Valentine & Mckendrick, 1997; Valentine, 1997b), and could be negatively impacting the involvement of youth in environmental volunteering. Although evidence suggests that the risks associated with youth navigating outdoor public spaces have been heightened or exaggerated by constant media coverage of relatively few crimes, it has been argued that “societal fear is not going away” (Charles et al., 2008, p. 22).

Perceptions of risk are complex, concern for youths’ safety as volunteers are real and important, and responsibility for youth’s safety as volunteers needs to be addressed when engaging youth. However, without opportunities to work closely with youth, organizations might miss an opportunity to see and understand the many and rich rewards of youth participation. It has been my observation that the volunteer coordinators who worked closely with youth in my study did not raise concerns about risk or the abilities of youth as environmental volunteers, and were more likely to suggest that the benefits outweighed the challenges experienced.

The second challenge posing a significant threat to the continued engagement of youth volunteers was boredom. Of all the difficulties youth in my study encountered - carrying out certain volunteer tasks, bad weather and insects, long volunteer shifts – boredom was the least likely to be mitigated. The more frequently and intensely youth experienced boredom, the more they seemed to feel the pull of school and other commitments.

Environmental educators and wildlife monitors experienced boredom while waiting to interact with the target of their work (i.e., Aquarium visitors, or wildlife

species). Youth wildlife monitors were more accepting of this as the reward of seeing a turtle lay its eggs was described as special and well worth the wait. Youth at the Aquarium enjoyed interacting with visitors but the-in-between times when there were no visitors seemed difficult for youth to endure.

Youth wildlife monitors worked outdoors in parks and protected areas. While waiting for a turtle to lay its eggs, the environment around them changed in subtle ways. Youth enjoyed listening to the sounds of nature and taking in the view. In addition, they recognized that the work they did after the turtle laid its eggs would help increase the survival rate of turtle hatchlings, something youth wildlife monitors cared deeply about and felt was worth waiting through the boredom for. Working, and waiting, in teams provided a chance for social interaction.

Youth environmental educators enjoyed interacting and helping visitors to the Aquarium, and although they may be interested in helping marine life as volunteers, the way they help the environment is less tangible than it is for wildlife monitors. It can be difficult for youth environmental educators to see how they have an impact on the environment as volunteers. Insights from young people's experiences as wildlife monitors might be useful for those coordinating the work of youth environmental volunteers indoors. Boredom at the Aquarium could be mitigated by scheduling youth with their peers on shifts that are typically slow days and by providing special interaction with the wildlife to look forward to, like feeding time, to help them navigate through the boredom.

Shannon et al. (2009) observed "having fun" to be an important motivator for youth volunteers, and "boredom" materialized as a primary reason youth reported that

they would choose to stop volunteering. However, the authors also note that youth were better equipped to negotiate boredom if they were paired with a friend. Other possibilities for helping youth negotiate through boring shifts include making a specific effort to thank youth on slow shifts for their dedication, or providing them with a special reward such as ice cream, or an opportunity to interact with important figures such as marine biologists/aquarists.

By letting youth know how and who they assist as volunteers, it can help make the experience more meaningful for youth, and the more youth think that the work they do matters to someone else or to another living thing, it seems the more likely they are to endure the boring days and continue to volunteer.

7.4 Initial Motivations to Volunteer

Youth participants' motivations for environmental volunteering were dynamic, expanding as they experienced what it was like to be an environmental volunteer. The paths youth took to find their experiences of environmental volunteering varied across the different contexts in my study. Wildlife monitoring often began with an invitation from an adult, and that invite typically came from a parent. Many past studies on youth volunteerism have observed that a common link between youth and volunteering is the invitation from someone else (Hall et.al., 2007; Shannon, 2009; Tessier et al., 2006). Tessier et al. (2006, p.16) state that "young people generally have to be asked to volunteer", and "approaching young people directly is the most effective means of reaching those who do not volunteer on their own accord".

For environmental educators, hearing peers describe volunteering as "fun" played an important role in their initial decision to take part. Other youth environmental educators decided to try volunteering after visiting the Aquarium as a guest and seeing

other youth volunteering. Peers can play an important role in influencing youth to volunteer (Do Something, 2012; Gregor & Geale, 2010; Locke & Rowe, 2006; Roker et.al.,1999; Shannon, 2009), or in dissuading them from volunteering (Gaskin, 1998). Youth “appreciate the opinions of their peers and are influenced by word of mouth and peer recommendation” (Gregor & Geale, 2010, p. 8). Making youth visible as volunteers, and having motivated youth reach out to their peers, may be important ways to raise awareness amongst youth about environmental volunteering opportunities.

Youth who volunteer for environmental stewardship organizations differ from youth who volunteer in other contexts. Wildlife monitors and environmental educators were drawn to volunteering by a personal fascination for wildlife, nature, or a particular ecosystem, contradicting research suggesting youth are becoming less interested in interacting with the environment and increasingly “disconnected” from nature (Charles & Wheeler, 2012; Charles, 2013; Fraser & Yocco, 2010; White, 2004). My study provides evidence that some youth are interested in having interactions with nature, and that volunteering is one way they seek out nature experiences.

7.5 Reasons Youth Continue to Volunteer

Although similarities emerged between case study sites, unique motivational themes materialized, reflecting the nuances of place on young people’s experiences as environmental volunteers. In line with the range of functions proposed by Clary et al. (1998) in the Volunteer Functions Inventory (VFI) my findings show youth continued to volunteer because environmental volunteering offered them an opportunity to express or develop values, to have social interactions, to learn, to build employment experience or explore potential career or study paths, to feel good, and to protect themselves from negative feelings. Youth volunteering at the Aquarium enjoyed the opportunity to be with

friends, to interact with the public, and to share their knowledge about marine life with others. Youth volunteering as wildlife monitors at both park case study sites enjoyed the opportunity to have hands-on, close encounters with other living things. Youth volunteering at Keji also enjoyed volunteering because of the rich social interactions it offered.

I was interested in understanding how the experiences of youth environmental volunteers differed from youth volunteers in other contexts. How did the “environment” matter to youth environmental volunteers? This line of inquiry revealed findings that suggest to me the need to expand the VFI to include a category of functions related to ecological interactions. Although the importance of interacting with the environment differed across case study sites, all youth had an opportunity to interact with other living things and this influenced their motives for volunteering. Youth sought to interact with other living things physically, emotionally, intellectually, and psychologically. These rich and diverse interactions with the environment helped sustain them in their experiences of volunteering, and differentiated them from others volunteering in non-environmental contexts. The environment played a significant role in sustaining young wildlife monitors’ experiences of volunteering, while it played a less pronounced role for the environmental educators at the Aquarium.

Youth, particularly wildlife monitors, enjoyed seeing, handling, hearing, and being surrounded by other living things. Exploration and discovery emerged as important subthemes of young volunteers’ ecological interactions. Youth enjoyed searching the landscape for animal species, and they found much joy in discovering the species they had set off exploring for. Further, youth participants’ clearly communicated

the importance of expressing and developing biospheric values through volunteering, indicating that to better understand and assess the motivations of environmental volunteers, the values function proposed by Clary et al. (1998) should be expanded to include values rooted in care and concern for the welfare of other living things.

Another important variation that surfaced in youths' experiences of environmental volunteering was the way in which volunteers interacted emotionally and psychologically with the environment, indicating that an expansion of the enhancement category of functions proposed by Clary et al. (1998) may be warranted. Youth described feelings of awe, respect, and affection for the species they worked with. Some participants described similarities between themselves and the species they worked with, and seemed to develop a connection with other living things based on shared traits, space, and moments. These connections with other species seemed to help sustain their commitment to volunteering.

In exploring young people's experiences of environmental volunteering, I was interested in understanding how their experiences might differ from the experiences of people in other life stages. How did being "young" matter in the expression of motivations for environmental volunteering? As already discussed, it seemed relatively clear to me that youth volunteered for environmental stewardship organizations for reasons captured in the VFI and for additional reasons specific to environmental volunteering. However, I found it more complex to disentangle the differences between youth and adult motives for environmental volunteering.

Is having fun unique to the experiences of youth environmental volunteers? Youth emphasized the role that fun plays in their experiences of volunteering, and if volunteering had not been experienced as fun, particularly initially, youth may not have

kept volunteering. While volunteers at each case study site had fun volunteering, they derived it from different sources (see Table 5-2), and “fun” appeared to be emphasized in the experiences of wildlife monitors. There was a sense of playfulness, even competitiveness in young people’s experiences of wildlife monitoring, sometimes a silliness and a sense of humour was conveyed through the facts they described learning about wildlife species, and a sense of adventure surfaced in their stories of volunteering. Volunteering at parks and protected areas as wildlife monitors was an adventure and participants described the experience as fun and exciting, thrilling, and entertaining.

Adult volunteers, particularly those volunteering in environmental restoration and wildlife monitoring contexts, also seek fun from their experiences. In Kromplak’s (2009) study of ecological monitoring volunteers at Fish Creek Provincial Park, adult volunteers, like the youth in my study, found much enjoyment in “catching snakes”, and suggested that environmental volunteering provided an opportunity to interact with the landscape in ways that were similar to the way they had experienced interacting with the environment in their childhood. In Schroeder’s (2000) study of environmental restoration volunteers, adults, like the youth in my study, enjoyed being surprised by new, unexpected, or unusual things and they felt excited and thrilled when they witnessed events such as prescribed prairie burns, and had fun interacting with other living things and people as volunteers. In Halpenny and Cassie’s (2003) study of nature conservation volunteers, adults anticipated that the experience would be fun, and the authors found that all participants expressed the importance of having fun as volunteers.

While play is an activity done by people of all ages (Harker, 2005), playfulness and fun may take on more emphasis in the experiences of younger youth, particularly

when they first begin volunteering and before their experiences expand to include additional functions. Further, youth may be more willing and eager to talk about the role fun plays in their experiences than adults. Environmental volunteering may grant some adults the structure they need to allow themselves opportunities for outdoor play. Previous studies indicate that environmental volunteering offered adults a chance to watch birds without feeling guilty about spending the time doing so (Hobbs & White, 2012).

Exploring young people's experiences of environmental volunteering led me to attend to the 'fun' in my own experiences of environmental volunteering, and to look for it in past studies of adults' experiences of environmental volunteering. I think there is space for a 'youthful' geography that engages with the fun, exuberance, and excitement of environmental volunteer opportunities. In advocating for a youthful geography, Bethan Evans (2008) writes:

This is not to essentialise young people, or reinforce constructions of young people along those lines, but I wonder whether the value of these qualities has been lost in the deconstruction of youth and childhood. Possibly, due to young people's geographies beginning from a shared commitment to challenge the marginalisation of young people, and/or the 'youthfulness' of the subdiscipline – and therefore a desire to 'be taken seriously' – geographies of young people are often focussed on 'weighty contemporary issues', and begin from a point of exclusion which must be challenged (p.1675).

Compared to youth, adults may have a tendency to seek out the calmer functions of spending time outdoors as environmental volunteers. Adults volunteering at Fish Creek Provincial Park in Kromplak's study (2009) enjoyed their direct interactions with wildlife, they seemed to appreciate environmental volunteering as a way to escape, relax, and restore more often than they expressed it as a way to channel excitement. Youth

participants in my study who volunteered at Fish Creek Provincial Park never linked environmental volunteering to a way to relax or to escape from their everyday lives.

Previous research emphasizes the importance of career motives and other extrinsic forces in sustaining young people's experiences of volunteering. Although 'career' emerged as one of the most important functions served by volunteering for some of the older teenaged youth, it did not surface frequently as a motivator. Further, career motives emerged with different qualities than I read in previous findings. Authors of past studies, suggest that youth need a "carrot" such as a reference letter to sustain their interest in volunteering (Isakson et al., 2013). Although some youth appreciated environmental volunteering as a way to develop a resume, this was but one benefit of volunteering and 'having fun' and 'helping others' seemed more important.

The career benefits offered through volunteering did not seem to be viewed by young people in my study as a "carrot", or an external reward which youth strived to achieve. Rather, environmental volunteering was seen as a door that had opened up a future with new opportunities and possibilities to explore future career and study paths. In discussing environmental volunteering opportunities such as citizen science activities with youth who were not currently volunteers, the author of one study writes: "The appeal of citizen science may lie in its ability to "kill two birds with one stone" for millennials-that is, to experience nature while accumulating course credit or building one's resume" (Barton, 2012, p. 221). The external rewards that young people can earn through volunteering may be particularly important in attracting new and older youth to volunteer for environmental stewardship organizations. However, for younger youth, career benefits are likely to be less important (Shannon, 2009), and findings from my study

suggest that for youth who have been involved as volunteers for a number of years, the importance of career benefits may manifest in different ways.

Youth participants did not begin volunteering in anticipation that they would gain career experience and benefits from volunteering. However, the volunteer experience had expanded to include such functions, and it offered youth an opportunity to find something they felt they were “good” at, or cared about. Although volunteering offered extrinsic rewards, career as a motivational category materialized as an intrinsic motivational force because it enhanced self-esteem and provided internal satisfaction.

Having “special experiences” surfaced as another feature of the environmental volunteer experience that seemed to be important to youth across my case study sites. Environmental volunteering took youth to new places, and introduced them to important people, and special species. Youth felt that those outside of the volunteer experience could not access the places, people, and species they interacted with as volunteers. In addition to gaining a “back-stage” pass to the places they volunteered, volunteering provided youth with an “insider” understanding of how the host organization worked. This insider experience produced feelings of pride, it made youth feel special, and it helped sustain their interest in volunteering.

The importance of “special perks” emerged as a strong motivational force for the youth in my study, indicating its potential as a ‘youth’ or ‘youthful’ function of environmental volunteering. This motivator is shared by the adults in Halpenny and Cassie’s study (2003) who enjoyed the special benefits that volunteering offered, including an opportunity to work in unique ecosystems and to gain exclusive access to special natural areas.

Social interaction and relationships with peers is one of the most important features of youths' experiences of volunteering (Do Something, 2012; Haski-Leventhal et.al., 2008). In comparing the experiences of adult volunteers with that of youth volunteers, the authors of one study observed that adults were typically motivated to volunteer because they wanted to serve other people and express altruistic values, while youth participated to nurture or develop relationships with other people (Haski-Leventhal et al., 2008). While the social functions of volunteering materialized as an important function of volunteering for youth at two case study sites, youth volunteering as wildlife monitors at one park case study location did not have the opportunity to interact with non-family member volunteers. For these youth, volunteering emerged as a family experience they enjoyed despite the fact that their peers were neither involved nor appeared interested in participating.

One social function that may distinguish youth experiences from adult experiences is the role of "important others". Some youth had the opportunity to interact with park biologists as wildlife monitors, and youth seemed to look up to these biologists as role models. If volunteering provided youth with a "back-stage" pass to the park, then the park biologists were the "rock-stars" of the volunteer experience for youth. Biologists made volunteering feel like an exciting adventure, but their presence also communicated the importance of the work that youth were engaged in, making the experience special and particularly meaningful for youth. Biologists drew young people's attention the details of the natural environment that they might have overlooked and they were able to communicate enthusiasm for a wide range of typically non-exciting species such as

lichen. The relationships between youth and biologists helped youth develop values for other living things. Chawla (2009) suggests:

When a child and other significant people in its life notice elements of nature together, with appreciation for other things' own way of being rather than fear or destructiveness, it lays a foundation for finding intrinsic value in nature. Noticing something in this way implies that it is something worth noticing (p.14).

It is important not to essentialize the differences between youth and adults, though certain functions emerged as particularly important to youth, no broad category of functions emerged as unique to young people's experiences. The role of adults as gatekeepers and role models is one way that the experiences of youth volunteers are differentiated from the experience of adults. Youth rely on the direct or indirect support of adults to help them access and negotiate this "public space", and adults can either facilitate or inhibit young people's experiences of environmental volunteering.

In researching and managing youth volunteers, caution should be taken in essentializing the differences between different age groups of volunteers, or in underestimating the abilities and contributions of youth. For example, while youth emphasize a desire to want to have fun while volunteering, many of them also cared deeply about the cause they were serving. Youth may have difficulty articulating some of the other reasons they volunteer, particularly younger youth, and their motivations for volunteering may be less accessible through interviews than the motivations of adults.

7.6 Outcomes from Engaging Youth in Environmental Volunteering

Youth environmental volunteers in my study benefited from their experiences in many ways, as did the organizations engaging youth. Environmental volunteering provided youth with new ways to interact with their local community and the environment. At a time when numerous studies report that young people's experiences of

the natural environment are contracting (Charles & Wheeler, 2012; Clements, 2004; Muñoz, 2009; Pyle, 2003), the natural world seemed to expand for youth environmental volunteers, particularly those involved in wildlife monitoring. Volunteering expanded the geography of childhood for participants, introducing youth to new species, taking them to new places, and modifying the way some youth interacted with familiar places like parks.

When some say that young people's knowledge about the natural environment seems to be diminishing (Adams, 1987; Balmford et.al. , 2002; Lindemann-Matthies & Bose, 2008), I found that environmental volunteering provided an opportunity for youth to expand their environmental knowledge, and created opportunities for youth to think about and see the environment differently. Every participant in my study shared something new they had learned about a plant or animal species, or an ecosystem. Participants not only developed more knowledge about the environment, they also saw it differently. A turtle was no longer simply a turtle, it was a Blanding's, painted, or snapping turtle and each type of turtle had different physiological features, habitat preferences, and pressures being placed on it that contributed to different risk profiles. Familiar landscapes now revealed amphibians, turtles, snakes, and other species, where before youth had seen none. While these species had always been there, participants had not known how to read the environment for clues about their whereabouts.

Volunteering seemed to give youth a new lens through which to view the natural world around them. Findings from my study demonstrate that volunteering brings youth in close contact with other living things and offers youth an opportunity to develop and express feelings of care and concern for the environment. This challenges views that youth have increasingly limited interactions with other living things (Charles & Wheeler,

2012; Pyle, 2003), and their concern for the environment is said to be diminishing (Wray-Lake et.al. , 2010).

Proximity may help youth volunteers develop a sense of responsibility for other living things. Shultz's (2000) work on empathy and perspective taking indicates that individuals who are able to see similarities between themselves and other living things are more likely to demonstrate concern for the welfare of other animals, and in turn may be more likely to act on that concern. In addition, in a study on environmental volunteers, Abell (2012) observed that:

Constructing similarities between humans and animals implies a moral duty of care for them. Sharing space with them provides an opportunity to anthropomorphise the animals and creates perceived reciprocal relationships. Participants expressed psychological belonging and responsibility to these animals, which is a highly attractive feature of these placements (p.168).

Interdependent and relational understandings of the environmental are often an objective that environmental education programs strive towards (Falk et.al., 2009; Loughland et.al., 2003). Volunteering connected parts of the environment that had previously seemed unconnected to youth, and some participants seemed more aware of how humans were connected in both negative and positive ways. Youth seemed to become more aware of the negative impacts humans could have on other living things - humans disrupt turtle's nests, step on snakes, pollute waterways and impact amphibians, for example. However, youth also seemed to be growing more aware of the role that they, as youth, could have in positively shaping the environment; protecting turtle nests, and monitoring amphibian populations for change. Environmental volunteering offers youth an opportunity to move beyond environmental consumerism, and be producers of positive environmental change.

Wildlife monitoring situated youth in authentic science learning opportunities, and the experience seemed to broaden young people's understandings of how science could be applied outside of the classroom, enhanced their confidence to use and study it, and motivated them to try master it within the classroom. In addition, the process appeared to cultivate curiosity about the environment in some youth. Some participants developed their own questions about the environment through volunteering, and had become motivated to seek out the information needed to help answer their questions.

Research has identified the unique social-ecological learning environment that civic ecology projects offer for youth to develop understandings about the environment and science. Such contexts offer "heterogeneous learning environments which, because of their variable cultural, bio-physical, and social environments, offer multiple opportunities for learning not available in classrooms" (Krasny & Tidball, 2009, p. 12). In addition, such learning contexts "provide opportunities for learning that addresses multiple societal goals, including creating a populace that is scientifically literate, that practices resource stewardship, and that is engaged in civic life" (Krasny & Tidball, 2009, p. 13). Youth appreciated the learning opportunity offered through volunteering because it provided them with access to skills they felt young people did not normally have access to, and they believed the learning environment was distinctly different from school. Learning as an environmental volunteer was active, hands-on, and fun.

Participating in environmental education activities changed the way some youth felt about interacting with the public. At the Aquarium, youth who began volunteering hesitant and shy to engage the public gained the skills and confidence needed to speak with people they did not know in conversations about marine life. They also developed

the skill to interact with people of different ages and deal with difficult people. These skills transferred into the rest of their lives, and youth volunteering as environmental educators reported feeling more confident and capable at giving classroom presentations. Past research with youth volunteer interpreters has suggested the link between this mode of environmental volunteering and the development of self confidence in social interaction skills (Matiasek et al., 2013; Owen et.al., 2009).

For some youth, volunteering as wildlife monitors provided them with access to membership in a conservation community. At one park case study site, youth described feelings of belonging to a community of volunteers and park scientists who shared values, experiences, and interests with youth; many of their volunteering stories began with “we”. Youth seemed to derive self-esteem based on the collective accomplishments of the conservation community, and when members of the group achieved a goal youth felt good because of their associated membership. Previous research highlights the importance of collective identity in the experience of environmental volunteers (Abell, 2012). Collective identity elevates self-esteem (Crocker & Luhtanen, 1990), cultivates environmental advocacy and action outside of volunteering (Fraser et al., 2009), and contributes to the development of empathy, and further engagement in prosocial behaviours (Penner et al., 2005).

Youth volunteering for parks engaged in a number of helping actions, including: becoming advocates for environmental volunteering and for endangered species in their communities, successfully engaging others in environmental volunteering, teaching others about endangered species, raising awareness and funds in their community for environmental causes, seeking out environmental volunteering opportunities elsewhere,

taking personal initiatives to clean-up a local park that they both visited and volunteered at, thinking more closely about their impact on the environment at home, and indicating a future intent to be an environmental volunteer, or obtain a career with an environmental stewardship focus. Working outdoors within the natural environment, and in close contact to wildlife was an important impetus moving youth to action; a feature not present in the experiences of environmental educators at the Aquarium.

Youth working as wildlife monitors at KNP developed confidence as they mastered tasks as individual volunteers, but also as they accomplished wildlife monitoring goals as part of a group. Past research suggests that both a sense of self-efficacy (belief in one's own abilities to solve problems) and collective-efficacy (belief in members of a groups unified ability to solve problems) play an important role in the development of pro-environmental behaviour (Chawla, 2009). Chawla (2009) states:

The two forms of efficacy are not unrelated. The capacities of a group depend on the skill and commitment of individual members, and individuals in a group draw strength from confidence that they belong to a well-functioning group. To address environmental issues, this combination of personal and collective efficacy is often required (p.18).

Previous research speaks to a connection between the formation of a collective environmental identity developed through volunteering and advocacy behaviour outside of volunteering. Findings from one study suggest that a shared environmental identity with other volunteers helps develop the confidence people need to go out into their personal communities to become advocates for the environment (Fraser et al., 2009). Youth who had the opportunity to work as a team of environmental volunteers, and who felt like they belonged to a conservation community, seemed the most inspired to work in a related field, to study the environment in university, to create art and science based on

their experiences, and to advocate for endangered species in their home communities. The wildlife monitors in my study showed evidence of developing “generative skills” (i.e., raising money for a dishwasher to reduce paper plate use, raising funds and awareness for endangered species in the community).

What led some youth environmental volunteers to participate in more complex pro-environmental initiatives outside of volunteering, while others did not? As discussed earlier, findings from my study and past research suggest that both social and environmental influences may play an important role in stimulating further pro-environmental and prosocial behaviour in volunteers (Abell, 2012; Chawla & Cushing, 2007; Chawla, 2009; Fraser et al., 2009; Schultz, 2000). However, it would be interesting to explore if and how these findings could be used to enhance pro-environmental behaviour at locations where youth are not engaging in any form of environmental helping actions outside of volunteering. Community, role models (i.e., important adults such as biologist and other key “socializers”), and close contact with nature seemed to deeply impact the experience of wildlife monitors at one case study site. Could these features be facilitated at other locations? What impact would they have on young people’s experiences and the outcomes of volunteering?

Although youth benefited from their participation in environmental volunteering, organizations also benefit when they make space for young volunteers. The benefits that youth bring to community-based organizations is something that has gone largely underreported in past research on youth volunteerism (Parker, 2000). Given the findings from my study regarding the concern with risk and liability of youth participation, and the past research findings on negative attitudes about youth capabilities as volunteers,

illustrating the findings on the benefits that organizations experience from involving youth takes on enhanced importance. Involving younger youth as volunteers has the potential benefit of building a long relationship between individuals and organizations, as well as fostering life-long stewards for the environment and the community (Chawla, 1999; Sebba, 1991; Wells & Lekies, 2006). Some of the youth in my study began volunteering in early childhood, and had continued to volunteer throughout their teenage years. In addition, a number of youth indicated that they would like to volunteer throughout young adulthood if they were able to attend university close to the volunteer setting. However, the benefits of youth participation should not be viewed only as a future investment. Findings from my study suggest that youth eighteen years of age and younger can be, and are, depended on as volunteers today in the ‘here and now’.

When youth are discussed in relation to environmental stewardship it is often through a future lens: youth are seen as the leaders and stewards of tomorrow, rather than the stewards of today⁸. However, through interviews with volunteer coordinators and youth volunteers, I learned that youth can make passionate, committed volunteers. Some young participants had contributed multiple years and hundreds of hours of service, indicating that it is not only older volunteers that can serve as highly dedicated or “uber” volunteers.

Youth enjoy volunteering, they find it fun and exciting, but they also recognize when and how to take their work seriously. Some participants emphasized how important it was to be “loyal” and “dedicated” to the species they monitored and the biologists they

⁸ In a speech delivered by Alan Latourelle, CEO of the Parks Canada Agency, at the George Wright Society Conference on Parks, Protected Areas, and Cultural Sites, in New Orleans on March 17, 2011, he refers to youth as the “leaders of tomorrow”. In addition researchers have focused on youth as the future of the environment, and stewardship, rather than on youth as leaders of today (Hood et.al., 2011; White, 2004).

helped collect data for. Youth in my study expressed enthusiasm for their volunteer experiences, and injected energy into the volunteer setting. Youth worked hard, and seemed to want to perform well and to please others. Previous research supports my findings that youth can inject new ideas and fresh energy into the volunteer setting (Gregor & Geale, 2010). In addition, Oates (2004) suggests that:

The propensity of youth to connect with their peers and the ease with which they adapt to new technologies, combined with their energy, ideas, knowledge, skills and commitment to causes they believe in, makes young people a valuable resource for voluntary sector organizations (p.6).

Another benefit that organizations may realize from engaging youth is that young volunteers can be effective at reaching a wide audience and can help environmental stewardship organizations enhance the public's understanding of their guiding purpose. Volunteering as wildlife monitors transformed some young people's conception of parks as places of leisure to places where people work hard to protect and care for other living things. Some youth wanted to work or volunteer for the park as an adult, indicating that the volunteering program is a training ground for future park employees.

Youth volunteers seem to serve both as a receptive audience for environmental information, and as effective agents to reach others with information about ecosystems and endangered species. Findings from my study and past research suggest that youth may be particularly effective at serving their peers as clients (Haski-Leventhal et al., 2008). However, youth may also be effective at engaging a wide audience in conversations about the environment. Youth in my study reported that senior visitors to the aquarium where youth worked as environmental educators appeared to enjoy listening to youth share their knowledge about marine life, and youth enjoyed sharing information with them because they seemed interested in what youth had to say. In addition, youth

wildlife monitors had been effective at sharing their experiences with their communities and bringing in new recruits to help monitor endangered species.

Findings from my study suggest that one advantage organizations can realize from engaging younger youth is that they are less likely to have part time jobs and may not feel the pressure and pull from outside commitments and interests that their older counterparts commonly experience. Although some younger youth may require the assistance of their parents to volunteer in certain situations, youth as young as ten and eleven years old seemed competent and confident in carrying out many of the same tasks as older volunteers. Further, as Shannon (2009) suggests, involving younger youth in volunteering provides them with an opportunity to gain experience and an opportunity to develop an interest in taking on more responsibility as they get older.

Past research indicates that voluntary service can play an important role in building inter-generational learning and cooperation, and can help youth develop values for community (Torney-Purta et al., 2007). Youth in my study enjoyed the company of older volunteers, and some evidence emerged that older people enjoyed interacting with youth volunteers. Volunteering can offer an opportunity to reduce stereotypes that youth may hold of older citizens, and that adults may hold towards younger citizens (Kaplan, 1997). Providing places where youth and adults can volunteer together provides an opportunity to reduce perceived gaps between youth and adult, demystifies the differences between different life-stages, and creates a more inclusive society (Camino & Zeldin, 2002; Zeldin et al., 2013). This may in turn serve as an important foundation for continuing to develop youth engagement in environmental volunteering, as adults have an

opportunity to see the positive contributions that youth can make and in turn they may be more likely to engage youth in the future. Camino and Zeldin (2002) suggest that:

Segregation between groups is a powerful generator of stereotypes and negative attitudes. Adult perceptions of, and attitudes toward young people are critical because they provide a foundation for public discourse about adolescents, and a cultural blueprint for policy formation (p.214).

Contradicting previous research indicating that the public perception of the civic abilities of youth is low (Camino & Zeldin, 2002), the adults who worked closely with youth in my study viewed youth as individuals who have the motivation and skill to contribute as environmental volunteers.

Providing a platform for intergenerational interaction is just one way that youth engagement in environmental volunteering provides benefit to communities. Youniss and Yates (1999) suggest that when youth are able to participate in and reflect on voluntary activities within their communities, they develop a sense of responsibility for the well-being of that community. Youth in my study reported that participating in environmental volunteering had helped them develop values for working at hard at something they felt passionate about, and for helping other people and other living things. Furthermore, volunteering provided some youth participants with a sense of community, motivated them to achieve better results in school, elevated feelings of self-esteem, confidence, and efficacy, and provided youth something meaningful to fill their discretionary time with.

Through volunteering, youth had direct interactions with other living things, and the experience seemed to foster cognitive, emotional, and psychological connections between youth and the environment; connections which have been suggested to be important for the health and wellbeing of the environment (Kellert, 2002; Miller, 2005; Pyle, 2003). Wildlife monitoring provided families with something positive to do

together outdoors, and brought youth to new parks and new places within parks, and introduced them to species they had never interacted with before. Through wildlife monitoring, youth had an opportunity to work collectively with their parents, grandparents, siblings, and non-related youth, adults, and seniors to help protect the environment, and they had a chance to be part of a collective solution to environmental problems.

The next, and final, chapter of this thesis presents my conclusions, implications for practice and suggestions for future research on youth engagement in environmental volunteering.

Chapter Eight: **Conclusions**

In this final chapter of my thesis, I return to the central research question of how and why youth are engaged as environmental volunteers and present my conclusions. Based on my research experiences and my findings, I elucidate implications for practice that may be useful to organizations engaging youth in their volunteer programs and I suggest areas for future research.

8.1 Key Research Themes

In analyzing interview transcripts, I attempted to identify key themes that emerged to be significant in initiating, supporting, and challenging youth engagement in environmental volunteering, as well as the short and longer-term outcomes from youth participation. I have summarized the key themes that emerged from my findings in figure 8-1. This figure describes the processes by which youth first become involved in environmental volunteering, the functions youth seek from the volunteer context (i.e., ongoing motives for volunteering), the conditions that support and challenge the engagement of youth volunteers, and some of the benefits or outcomes that had been realized from their participation.

Teenaged youth and younger youth appear to be a resource yet to be fully utilized by environmental stewardship organizations. Findings from my study speak to the potential of youth, eighteen years of age and younger, as environmental volunteers, and identify ways in which youth are similar and different from youth volunteers in other contexts, and from adult environmental volunteers. Importantly, youth emphasized fun, adventure, exploration, and discovery, and expressed a need to feel special and to have special experiences as environmental volunteers.

Figure 8-1 Youth Environmental Volunteering: Summary of Key Findings from a Cross-Case Analysis

Initiating Forces	Supporting Conditions	On-going Motives	Constraining Factors	Outcomes
<p>Invitation from: parent, grandparent, non-related adult, or peer</p>	<p>Welcoming, youth-friendly atmosphere</p>	<p>Social interactions</p>	<p>Challenges encountered by staff: intrapersonal (traits of volunteer), interpersonal (person-to-person dynamics, and/or structural (policy))</p>	<p>Connects youth with nature & expands geography of childhood</p>
<p>Relationship or influence of a peer; witnessing other youth volunteer</p>	<p>Supportive, mentoring adults</p>	<p>Ecological interactions</p>		<p>Broad & place specific understandings of environment; applied skill development</p>
<p>Interest or attraction to nature: desire to connect with animals, a particular species, or ecosystem</p>	<p>Attitude of patience and flexibility demonstrated toward youth</p>	<p>Values: altruistic, biospheric, and scientific</p>	<p>Challenges encountered by youth: internal conditions (boredom, fieldwork conditions, difficulty with new skills, and external conditions (time, transport, other commitments & interests))</p>	<p>Fosters intellectual curiosity for environment</p>
	<p>Diversity in program offering: flexible and structured options</p>	<p>Fun: social/ecological interactions; competing, adventure, humour, VIP experiences</p>		<p>Builds values for other people/other living things</p>
	<p>Authentic engagement: volunteers serve a legitimate ecological purpose</p>	<p>Enhancement: feeling special; self-esteem; personal growth; connection to nature (emotional/psychological)</p>		<p>Develops pro-environmental behaviour & volunteer identity</p>
	<p>Youth inclusion programming: same training, projects, tasks, and roles as adult volunteers</p>	<p>Learning: environmental knowledge; applied skills; differentiated from school</p>		<p>Intergenerational interactions</p>
	<p>Volunteer Recognition and Appreciation</p>	<p>Protective: reduced feelings of guilt</p>		<p>Adds source of dependable volunteers</p>
	<p></p>	<p>Tangible short-term results/feedback</p>		<p>Cultivates future employees/volunteers</p>
	<p></p>	<p>Expanded horizons: new career/study paths</p>		
	<p></p>	<p></p>		

Youth engagement in environmental volunteering is an important pathway to future environmental stewardship. However, findings from my study indicate that the possibilities of youth engagement should not be thought of only in future tense. Youth eighteen years of age and younger can, and are, a source of dependable, passionate, and committed volunteers from which organizations can draw to help reach their environmental protection objectives today. Although youth and adults differ in important ways, youth are “different than”, not “less than” adults. If given the opportunity and the support they need, youth of all ages can make valuable contributions to environmental stewardship organizations.

The arrangement of youth participation matters. The structure of youth involvement can impact the experiences youth have as volunteers and the outcomes that can be realized from their participation. Providing youth with opportunities to interact with the host organization, staff members, a volunteer community, and other living things creates diversity in their experiences and offers a chance for bonds to grow between youth, other people, and other living things. These social and ecological interactions create a rewarding environment for youth to work in, and foster rich learning experiences. The bonds youth form with others help sustain them in their volunteer experiences, and can help fuel their ongoing commitment to volunteering throughout childhood and their teenaged years. The social and ecological connections youth make as volunteers can become fertile ground for cultivating youth participation in environmental action beyond volunteering (i.e., ecological stewardship behaviour).

In light of recent widespread concern for young people’s relationships with the natural environment, my findings show that volunteering provides a rich opportunity to

connect youth emotionally, intellectually, and psychologically with the environment. Environmental volunteering can, and is, expanding the geography of childhood for participants by introducing youth to new places and species, and cultivating care and concern in youth for other living things.

8.2 Implications for Practice

The following section provides a summary of some of the component parts that connected and supported youth participation in environmental volunteer projects at the three different locations in my study. A “one-size” fits all approach is unlikely to work and organizations need to explore different component parts and discover what features work in their communities and volunteer contexts.

8.2.1 Connection

- If you want youth to volunteer, ask them: Invitations from adults to youth emerged as a dominant pathway that youth take to volunteering in my study and in past research.
- Make youth visible: Youth engagement can cultivate youth engagement. Make youth and families visible on program websites, brochures, at the volunteer setting, and at special event days.
- Encourage youth to start volunteering with a friend: Some youth, particularly youth who volunteer indoors, enjoyed the companionship of their peers, especially when they are first starting out as volunteers. Make it easy for youth to bring a friend along when they first volunteer, and create a buddy system sign-up sheet for volunteer shifts.
- Invite youth to meet a new species: Some youth might be drawn to volunteering because it provides them with an opportunity to get to know a local species that they

have not been able to see on their own. Advertise that youth can get to know their wildlife neighbours through volunteering. Hold special events in the community where youth can come and meet a particular species, and then invite youth to help that species by volunteering. Hold wildlife monitoring information days or practice events, and provide youth with an opportunity to shadow other volunteers for a day so youth can “try out” volunteering.

- Invite your youth volunteers to invite other youth.
- Emphasize adventure, exploration, discovery, and a sense of fun in volunteer marketing materials directed at youth.
- Offer a diversity of projects to attract a diverse volunteer audience: Some youth and families may prefer structured projects, that require volunteers sign up for specific shifts and that provide opportunities to interact with other volunteers and the organization on a regular basis. While others may enjoy flexible and more autonomous ways to participate.
- Develop a policy framework for youth engagement: If organizations think that youth or families might be drawn to volunteering with them, being proactive and developing a policy for youth participation will provide volunteer coordinators with a framework that they can work confidently within. Creating a youth volunteer policy will provide organizations with an opportunity to conduct a risk management assessment and put the tools in place to safely and effectively engage young volunteers. Staff members should be consulted about any concerns they might have about working with youth prior to bringing on youth volunteers, as this will help to

create a comfortable environment for youth and staff members when youth begin to volunteer.

8.2.2 Support

- Cultivate an atmosphere of fun: Get to know youth volunteers and find out what makes volunteering fun for them. Interaction with other people and/or other living things might be important to environmental volunteers. Find ways to make volunteering a game, and add an element of competition to the experience. Find humour in the experience: Provide youth with amusing or surprising facts about the species they work with. Communicate enthusiasm and excitement for the volunteer experience, and help youth feel like they are on an adventure that includes the process of exploration and discovery.
- Be prepared to battle boredom. In the absence of fun boredom can creep in, and this can reduce young people's satisfaction with the volunteer experience. Be aware of volunteer shifts or experiences that require periods of waiting and find ways inject movement, activity, and social or ecological interaction into periods of time youth might experience as "boring". In addition, emphasizing how important the work youth do as volunteers is, and how important it is for youth to sometimes wait through the boredom to achieve certain environmental objectives as this might help guide youth through boring or difficult times.
- Provide meaningful perks: Think beyond traditional incentives such as reference letters and create meaningful experiences and rewards for youth volunteers. Youth enjoy feeling like the experiences they have as volunteers are special experiences. Give youth a "back-stage pass" to the volunteer experience. Remind

youth that the places, species, and people they interact with as volunteers are not experiences that most members of the public get an opportunity to have.

Biologists and other important figures are the ‘rock stars’ of the environmental volunteer world for youth. Provide youth with opportunities to get to know scientists, aquarists, and other important organizational figures. As a bonus, when youth meet the people they serve as volunteers, they may be more inclined to take care, responsibility, and ownership for their work.

- Help build a conservation community around volunteering: Youth can benefit greatly from having an opportunity to work within a community of volunteers and working professionals. Communities provide opportunities for mentorship, social interaction, fun, and build a collective sense of self-esteem that may serve as a platform for youth to engage in other proenvironmental behaviours outside of volunteering. Offer opportunities for volunteers to work together on projects, facilitate social gatherings and events, create a team atmosphere by having volunteer shirts or hats for volunteer projects. Recognize and celebrate individual and collective efforts of volunteers.
- Reinforce the importance of volunteering to youth volunteers: Ensure youth understand the purpose of their work, and find ways to reinforce that purpose. Youth will take the work seriously and be empowered to work hard if they understand how the work they do is making a difference and to whom. The more tangible, direct, and instant the feedback is, the more impactful it will be for youth. Have important people thank youth. When biologists or other important

figures take the time to thank youth for their contributions it makes them feel proud and special.

- Devise youth friendly communication strategies: Although programs may rely on email to maintain contact with adult volunteers, email may not be an effective strategy to keep in touch with younger volunteers. Social media sites and group texts may be important communication tools for youth volunteers.
- Do not overlook younger youth: Although younger youth may need to co-volunteer with a parent in the beginning, younger youth have contributions to make as volunteers and may surprise coordinators with their growth as volunteers within in a short-time frame. While children and teenagers are different than adults, their abilities as volunteers should not be underestimated, even the youngest volunteers have something valuable to contribute, and with mentorship and guidance they may be able to make significant contributions to organizations even though they are young.
- Counting youth may help further youth participation in environmental volunteerism: Many organizations do not appear to record demographic information on youth volunteers. Numbers provide a powerful snapshot on the impact that youth can have on environmental volunteerism (i.e., how many youth, contribute how many hours, and help to protect and monitor how many turtle nests/wetlands/snake traps). Recording and communicating the findings on the numbers of youth participation can help make youth visible as volunteers, and can help cultivate further youth participation in environmental volunteer activities.

- Youth and adult volunteers are different, but not that different: Avoid essentializing the differences between youth and adult volunteers. Youth may be seeking volunteer work because they are looking to enter the job market or get accepted into post secondary school, but youth, like adults, are individuals and will have many and diverse reasons for wanting to volunteer. Many of the reasons youth want to volunteer overlap with the reasons that adults want to volunteer. When planning for youth involvement, remember that “youth” can encompass a wide range of ages and different life stages.
- Support and mentorship are key to youth engagement: Provide opportunities for youth to shadow other volunteers until they feel comfortable and confident to take on full responsibility of the volunteer tasks on their own. Youth learn by doing, and enjoy working alongside others. Youth prefer hands-on training over exercises that remind them of school.
- Practice patience and flexibility with youth, and remember to look at volunteering through a youth lens: Elect someone in the organization (i.e., a staff member or a volunteer) to be an internal champion for youth engagement. Have someone who enjoys working with youth, work with youth. This person should be patient, and understand that youth are individuals who are different than, not “less than”, adults. Be willing to modify tasks until youth gain the confidence and skills needed to carry out the full set of tasks.
- Develop relationships with parents: Parents play a key role in directly or indirectly supporting youth as environmental volunteers. Find ways to celebrate

youths' accomplishments with parents and provide parents with positive feedback on their child's contributions to volunteering.

- **Involve families:** Family engagement is a safe place to start with youth engagement, particularly if an organization does not have the resources to supervise younger youth, and there are concerns about risk and liability issues, or uncertainty over how youth engagement will function. Parents can provide a safety net to watch over their children, and provide the guidance and mentorship youth, particularly younger youth, might need to carry out their tasks effectively.
- **Share success stories and tools to negotiate challenges widely:** Negative perceptions about youth engagement may constrain young people's abilities to participate in environmental volunteer activities. By sharing stories of success, others can gain a better understanding of why they might want to take on youth volunteers, and sharing challenges encountered and negotiation techniques can help sustain youth engagement in environmental volunteering.

8.3 Future Research

Findings from my study open up an interesting research space and several avenues for future study. Past research suggests that organizations that are highly effective at engaging youth as volunteers create projects, positions, training, and tasks specifically for youth volunteers. My study provides preliminary evidence that specificity is not necessary for youth engagement to be "highly effective". This raises questions for further examination: Do youth "need" different support, training, positions, and recognition than adults? How do the needs of volunteers differ based on their life-

stage? What are the costs and benefits of different arrangements of youth environmental volunteerism (e.g., youth inclusion versus youth tailored projects)?

Previous research has suggested that environmental volunteers differ in important ways from volunteers in other contexts, a common language or framework for understanding and assessing environmental volunteer motivation has yet to be developed. Such findings suggest the need for an Environmental Volunteer Functions Inventory (EVFI). Using findings from my study and past research, there is an opportunity to create an inventory tool and test it across a variety of age groups, contexts, and modes of environmental volunteering. Developing an EVFI would help to build a more comprehensive understanding of, and ability to assess, environmental volunteer motivation.

As youth engagement is tightly coupled with the involvement of their parents, it would be worthwhile exploring the motives and interests that parents have for their children to volunteer. What motivates parents to participate with their child as volunteers, or to support their children in volunteering? How valuable do parents feel environmental volunteering is for their child? What do they value about the experience, if it is a family experience? How can other parents and youth be encouraged to try volunteering?

Some youth that I interviewed seemed to lack the understanding or motivation to take pro-environmental actions outside of volunteering. It is worth following up on this response by asking: How can youth better connect their environmental volunteer experiences to their experiences at home in a way that would enhance environmental stewardship outcomes? A number of youth, on their own initiative, asked questions about the environment and undertook research to try and answer those questions. How can

other youth be stimulated and supported in asking/researching questions about the environment? Some youth demonstrated an interest in creating art from their experiences as volunteers, or in creating school presentations. How does this creativity and advocacy emerge? And, how can it be cultivated? What opportunities exist to foster social science research amongst youth wildlife monitors? A pilot project that has youth interview people in their communities could help build a better understanding of what the community knows about wildlife species that live in and around their homes, and how to care and protect them, for example. Such a project could explore the potential for youth engagement in citizen social science.

The majority of participants in my study were highly positive about their experiences as environmental volunteers. There is likely much to be learned from those that have had less positive experiences. In addition, exploring the perceptions of organizations not already engaging youth would provide further insight into perceptions about the risks, rewards, and liabilities of youth engagement. How receptive would organizations that are not currently involving youth be to the idea of youth participation? What would prevent organizations from engaging youth in environmental volunteering? How could those constraints be negotiated? How would environmental stewardship organizations incorporate young volunteers if youth showed an interest?

There is space in environmental volunteer research to highlight the fun, exuberance, and the excitement of new opportunities and possibilities that environmental volunteering holds for people of all ages.

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Appendix 1



Nicole Puckett
MA Candidate, Geography
Faculty of Social Sciences

Supervisor:

Dr. Dianne Draper, Department of Geography

SAMPLE CONSENT FORM FOR YOUTH VOLUNTEER INTERVIEW

Study Working Title: Young People, Parks & Nature: Exploring the Experiences and Perceptions of Young Citizen Scientists and other Ecological Volunteers.

I would like to invite you to be part of a research project that I am conducting - Young People, Parks & Nature: Exploring the Experiences and Perceptions of Young Citizen Scientists and other Ecological Volunteers. This project is part of the requirement for a Master's of Arts Degree in Geography at the University of Calgary. My name is Nicole Puckett and my credentials with the University of Calgary can be established by contacting Dr. Dianne Draper of the University of Calgary. Please find contact information for myself and Dr. Draper at the end of this letter⁹.

The purpose of this research project is to:

- learn more about youth citizen science and other youth ecologically focused volunteer programs;
- explore the young person's volunteer experience;
- gain insight into what young people learn from volunteer experiences;
- understand the role that volunteering might play in connecting young people with local ecosystems; and

⁹ Contact information redacted

- learn how young people would best like to be involved in ecological volunteering projects.

My research project will consist of interviews that will last approximately 30 minutes. The questions asked during the interviews will assist me in understanding the young person's experience as a volunteer and their relationship with nature.

Participation in this research is voluntary and you may withdraw at anytime. At any point during the interview you may choose to stop or leave without any consequences. If you choose to withdraw from the study all information collected up until that point will be used towards the study. However, all information you have provided will remain confidential, no further information will be collected, and no further contact with you will be made.

Interviews will be audio-recorded and transcribed to a computer and, where appropriate, summarized, and presented confidentially (**no names of youth will appear**) **in the body of the final report**. All data will be kept solely on my personal computer with password protection; only I, and my supervisors, will have access to the raw data. Participant's names will be kept confidential by having a code assigned to them for data collection. At no time will any specific comments be attributed to any individual.

In recognition of the value of the information provided by the participants, and the time provided by participants, after the completion of the Master's Degree project, all data acquired for this study will be maintained for potential future use. However, all data will remain confidential and securely stored by the researcher and will only be utilized by the researcher.

In addition to submitting my final report to the University of Calgary in partial fulfillment for a Masters of Arts in Geography, I will also be sharing my research findings with University of Calgary colleagues, Shaw Ocean Discovery Centre, Parks Canada, Canadian citizen science and other volunteer projects, and with other researchers at events such as conferences. A copy of the final report will be kept at the University of

Calgary and may be made available online through Proquest and Theses Canada portal. If made available on-line through academic portals, the report will become publicly accessible with access and distribution of the final report unrestricted.

This research project has been approved by the University of Calgary Conjoint Faculties Research Ethics Board (CFREB), *File No. 6962* and Parks Canada, research permit number **BAN-2011-9854**. If you have a comment about the ethical practices of this research or wish to file a complaint please contact CFREB Officer Russell Burrows.

Please feel free to contact me at any time by email should you have questions regarding the project and its outcomes. After the interview, youth volunteers will have two weeks from the date of the interview to review the audio-recording or the typed transcript (if available) and provide feedback. After this two week review period, if you have not contacted the researcher it will be assumed that you are satisfied with the interview material. Following the completion of the research you are welcome to contact me for more information on the results or for a debriefing session.

Please sign this letter below and have it signed by a parent or guardian if you are under the age of 18. Please bring this signed letter with you to the interview.
By signing this letter you give free and informed consent to participate in this project as stated in the above invitation notice.

Please circle your answer below and sign your name:

I would like to participate in an interview: YES NO

I give permission for this interview to be audio-recorded: YES NO

Participant Name (Please Print): _____

Signature: -----

Date: -----

Parent/Guardian Name (Please Print): _____

Parent/Guardian Signature: _____

Date: -----

I look forward to talking with you about your experience as a volunteer!

If you have any further questions about my research project, please contact me at:

Name: Nicole Puckett

Sincerely,
Nicole Puckett
MA Student, University of Calgary

Supervisor:
Dr. Dianne Draper, Professor, University of Calgary

Appendix 2



Nicole Puckett
MA Candidate, Geography
Faculty of Social Sciences

Supervisor:
Dr. Dianne Draper, Department of Geography

SAMPLE INVITATION AND CONSENT FORM FOR VOLUNTEER COORDINATOR INTERVIEW

Study Working Title: Young People, Parks & Nature: Exploring the Experiences and Perceptions of Young Citizen Scientists and other Ecological Volunteers.

I would like to invite you to be part of a research project that I am conducting - Young People, Parks & Nature: Exploring the Experiences and Perceptions of Young Citizen Scientists and other Ecological Volunteers. This project is part of the requirement for a Master's of Arts Degree in Geography at the University of Calgary. My name is Nicole Puckett and my credentials with the University of Calgary can be established by contacting Dr. Dianne Draper of the University of Calgary. Please find the contact information for myself and Dr. Draper at the end of this letter¹⁰.

The purpose of this research project is to: explore the young volunteer's experience; learn more about existing youth environmental volunteer programs; and the role that such experiences play in connecting young people with nature. I am also interested in learning more about how young people would best like to be involved in environmental volunteering and monitoring activities.

¹⁰ Contact information redacted

Youth who have participated in ecological volunteering activities will be the primary focus of my research. However, I would also like to interview those who have worked with youth environmental volunteers. My research project will consist of one 30 minute interview with the program staff member responsible for administering the volunteer program. The purpose of the interview is not to evaluate the program but to gain background information regarding the program and learn about some of the challenges and benefits of engaging youth in volunteering activities. The questions asked during the interview will assist me in understanding the context of the youth's volunteer experience.

Participation in this research is absolutely voluntary and you may withdraw at anytime. At any point during the interview you may choose to stop without any consequences. Data collected up until the point of withdraw may be used in the study. However, no further contact with you will be made and no further information collected.

Interviews will be audio-recorded and transcribed to a computer and, where appropriate, summarized, and presented in the body of the final report. No administrator names or organization names will appear in the final report unless specifically given permission to do so. **Administrator anonymity or public citation is offered only on the basis of participant unanimity. If even one such individual does not wish to be identified, then no administrators will be identified in the reporting of results.** If administrator's request to remain anonymous all administrator participants' names and/or agencies will be kept confidential and will be referred to with a numerical identifier in the published work.

All data will be kept solely on my personal computer with password protection; only I, and my supervisors, will have access to the raw data. In recognition of the value of the information provided, and the time provided by participants, after the completion of the Master's Degree project, all data acquired for this study will be maintained for potential future use. However, all data will remain confidential and securely stored by the researcher and will only be utilized by the researcher.

In addition to submitting my final report to the University of Calgary in partial fulfillment for a Masters of Arts in Geography, I will also be sharing my research findings with University of Calgary colleagues, Parks Canada and Canadian citizen science projects as well as other researchers at events such as conferences. A copy of the final report will be kept at the University of Calgary and may be made available online through Proquest and Theses Canada portal and will be publicly accessible. If available on-line through an academic portal, access and distribution of the final report will be unrestricted.

This research project has been approved by the University of Calgary Conjoint Faculties Research Ethics Board (CFREB). If you would like to make a comment or file a complaint please contact CFREB Officer Russell Burrows.

Please feel free to contact me should you have questions regarding the project and its outcomes. After the interview, you will have two weeks from the date of the interview to review the audio-recording of your interview or the typed transcript (if available) and provide feedback. After this two week review period, if you have not contacted the researcher it will be assumed that you are satisfied with the interview material. Following the completion of the research you are welcome to contact me for more information on the results or for a debriefing session.

As you are a program staff member that works with young environmental volunteers or administers youth citizen science projects, you have been selected to participate in my research. If you would like to participate in this research project please **sign the consent portion of this letter below and bring it with you to the interview.**

Please circle the appropriate answer. By circling yes you agree to have your name publicly cited. By circling no you choose to remain anonymous in the published report.

I give permission for my name to be published in the written report: **YES NO**

I give permission for my organizations name to be published in the written report:
YES NO

I give permission for this interview to be audio-recorded: **YES NO**

Signature: _____ Date: _____

By signing this letter you give free and informed consent to participate in this project as stated in the above invitation notice.

Thank you for sharing your time with me and participating in my research project. I look forward to learning about your experiences working with young volunteers.

Sincerely,

Nicole Puckett
MA Student, University of Calgary

Supervisor:
Dr. Dianne Draper, Professor, University of Calgary

Appendix 3

Interview Guide: Volunteer Coordinators

1. When and how did the volunteer program form?
2. Has the volunteer program had young people volunteering since it was developed?
3. Does the program actively recruit youth and/or families?
4. What is the average age group that the program attracts?
5. How many youth 18 years of age and younger are involved in volunteering here?
6. What is the age range of your volunteers?
7. Do you have a minimum commitment that you expect of youth?
8. Do youth participate in a training session prior to volunteering?
9. Can you tell me a little bit about what youth do as volunteers?
10. Could you talk a little bit about the goals of creating the volunteer program and youth involvement in the volunteer program?
11. Is volunteering a school requirement in the local school district?
12. Can you talk about some of the successes that the program has had in regards to working with youth volunteers?
13. What do you think are some of the characteristics of the volunteer setting that have facilitated youth engagement in volunteering?
14. Can you talk about any challenges you have encountered in regards to youth participation? How have you negotiated those challenges?
15. Do you have any advice to offer to others that might be interested in engaging youth in environmental volunteering activities?

Appendix 4

Interview Guide for Youth Environmental Volunteer Participants

Part I:

Questions designed to capture basic background information:

1. How old are you?
2. What grade are you in?
3. What community do you live in?

Part II:

Questions designed to capture basic details of being a volunteer:

4. How long have you been a volunteer for?
5. Tell me how you decided to start volunteering
6. Do you volunteer for any other projects (at the park)? (If no) have you ever thought about it?
7. Do you usually volunteer by yourself? Or with other people? Friends or family?
8. Can you tell me about what you do as a volunteer?

Part III:

Questions designed to capture information about the youth environmental volunteer experience:

9. What have you liked most about being a volunteer?
10. What have you disliked about being a volunteer? What have you found challenging/difficult about being a volunteer?
11. What do you think is the most important reason for volunteering?
12. Have you told any of your friends about being a volunteer?
 - (b) What did you tell them?
 - OR (if they have not told their friends) Why not?
 - (c) If you were to tell them about being a volunteer what would you say?

Part V:

Questions designed to capture information about what youth have learned from being a citizen scientist:

13. What do you think are two of the most important things you have learned from volunteering?

14. Can you tell me something that about the species you work with that you were surprised to learn?
15. Can you tell me something about the place where you volunteer that you were surprised to learn?

Part IV:

Questions designed to capture information about preferred activities (park volunteers):

16. I'm going to describe 4 different volunteer activities and then I am going to ask you to decide which one you would like best and which one you would like least, okay?
 - a) **Option 1:** Hike around the park and record observations of a particular species, say toads or snakes for example, on a data collection sheet;
 - b) **Option 2:** Hike in the park and record observations of toads using a smart phone application;
 - c) **Option 3:** Hike in the park and photograph each different toad species that you come across using a digital camera; or
 - d) **Option 4:** In the park office enter the toad observations collected by other citizen scientists into the computer.
- If you were given the choice between each of the following activities, which would be your favourite? Why?
- Which would be your least favourite? Why?

Part VI:

Questions designed to capture feelings and thoughts towards parks and nature:

17. When you think of 'Parks' what are the first 3 words that come into your mind?
18. Tell me about a favourite experience or memory that you have had at the park while you were NOT volunteering. Do you remember how you felt that day?
19. Tell me about a favourite park experience or memory you have had while volunteering. Do you remember how you felt that day?
20. Do you have a favourite place at the park? What makes it your favourite place? How do you feel when you are there?
21. When you think of 'Nature' what are the first 3 words that come into your mind?
22. Tell me about a favourite experience or memory you have had while in nature. Can you remember how you felt that day?

Part VII:

Questions designed to capture feelings toward volunteering and the volunteer setting:

23. If you were told that part of the park/ecosystem that you work with were to undergo a major change such as a forest fire/water pollution event, how would you feel?
24. How would you feel if you found out that the environmental change was caused by humans?
- 25.

Part VIII:

Questions designed to capture environmentally responsible behaviour/feelings toward the environment:

26. Can you tell me about some of the things that you do that might be helpful to the environment outside of volunteering? When did you start doing this and what made you start?
27. When you finish school, what do you want to do? When did you decide you wanted to do this?