

**Connecting Youth to Nature: Exploring the Plausibility of a Nation-
Wide Youth Conservation Program for Canada**

by

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ABSTRACT

CONNECTING YOUTH TO NATURE: EXPLORING THE PLAUSIBILITY OF A NATION-WIDE YOUTH CONSERVATION PROGRAM FOR CANADA

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Canada's national parks are faced with the dual-mandate of providing recreational opportunities without compromising ecological integrity. In an era of unprecedented global environmental change and excessive electronic attachment, today's youth are experiencing disconnect from nature. At the same time, parks are challenged with malefic financial constraints and limited human resources. Though independent issues, this study sought to find an integrated solution by exploring the plausibility of a sustainable conservation program that provides opportunity for both youth and Canadian parks through an untapped workforce. Strengths of the U.S. based Student Conservation Association were embraced to develop criteria to analyze additional youth engagement programs. Review of literature and key informant interviews framed programmatic recommendations that inform development of a nation-wide youth conservation program suitable for the Canadian context. Through hands-on service to the land, the experience could foster Canada's next generation of environmental stewards serving, and ultimately protecting, Canada's park system.

Keywords: landscape architecture, environmental stewardship, youth engagement, nature-deficit disorder, national parks

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Chapter One – Introduction

Overview

Despite previous commendation as being at the forefront of conservation, the ecological integrity of Canada's national parks has steadily been in decline (Woodley, 2015). And despite unsatisfactory progress reports, the country's public lands continue to lack the allocation of sufficient human and financial resources necessary to adequately manage these spaces now and for generations to come. Ironically, the future generations these wild spaces are meant to serve are the very ones who are disproportionately represented in its use (Parks Canada, 2012a). Youth's personal connection with the natural world is being eroded by urbanization, uneven access to green spaces, and increasingly sedentary lifestyles (Parks Canada, 2014). Issues such as obesity, attention deficit disorders, and lack of creativity are plaguing our youth (Louv, 2005).

A recent report compiled by the Canadian Parks Council stresses that personal connections with nature are important for human health and social-well being, and national parks can contribute to that platform (Church & Burger, 2011). However, the current state of the park system impedes the non-negotiable right of the next generation to experience and reap the benefits of the natural world (American Conservation Experience, 2016). There lies an opportunity to seek a unified solution by using service as a strategy. Through engaging youth in restoring and protecting the nation's most treasured lands, it provides land managers with a virtually untapped workforce and affords ecological consciousness in the next generation.

The values of land conservation and management, design for ecological integrity and quality user experience, the management of human impact, and skills in program facilitation and systems thinking provides a tremendous opportunity for landscape architects to use their knowledge and expertise of the relationship between humans and nature to develop a program to engage youth. Best practices in Parks' land management resonates with the comprehensive services landscape architecture can provide. In an era where there is a growing recognition of the association between natural spaces and human health, the future of the practice lies in integrating research and science with effective design.

This thesis explores the viability of a nation-wide youth conservation program that dually addresses the backlog of deferred maintenance projects and youth's disconnect from nature. If the knowledge acquired is properly understood and implemented, the program could foster the next generation of environmental stewards and provide land managers with the capacity to do work at a scale never before attempted in the Canadian context (American Conservation Experience, 2016).

Goals and Objectives

The goal of this research is:

- To explore the plausibility of a nation-wide youth conservation program suitable for the Canadian context that aims to reconnect youth with nature while providing the parks agency with an untapped workforce.

The objectives of this study are to:

- Explore the operational structure and the success of an existing U.S. model for youth engagement and determine if a similar initiative could yield comparable results in Canada.
- Develop a set of program element criteria to be used in selecting existing programs in North America for further evaluation;
- Identify common themes as well as opportunities for and barriers to program participation and implementation experienced by existing initiatives;
- Develop a programmatic framework for a youth conservation initiative that strengthens youth's affinity for our natural world while simultaneously providing the parks agency with an underutilized workforce;
- Consider the applicability of program implementation.

Research Design

This research project evolved through a series of phases. A preliminary literature review was conducted to determine whether or not there was a need for this research. After establishing the significance of this project, the next phase of research consisted of identifying and then thoroughly examining the success of an existing American-based youth conservation initiative, as well as a comparison between the Canadian and United States park systems. The second phase involved reviewing and grafting on to previous work conducted for the Canadian Parks Council Youth Engagement Working Group. With the information gained through the first two phases, a set of program-element selection criteria was established as a means to gauge existing youth engagement initiatives. In the next phase, key informant interviews were conducted with principal

members of selected youth organizations and park agency members. In the final phase, programmatic framework recommendations for a meaningful and sustainable Canadian-based youth conservation initiative were created and tested for program plausibility.

This research study is based on the assumption that involving youth in volunteer conservation initiatives could provide value for park agencies and a necessary solution to the resources constraints plaguing public lands. It also suggests that through youth engagement, participants could develop personal growth, affinity to nature, social responsibility, a conservation mindset, and skills required for the 21st century workforce (Svyertsen, Sullivan, & Wu, 2015). In an era where youth's connection with nature is dwindling, this sort of youth service project may offer a solution. A nation-wide youth conservation initiative presents an opportunity to improve the health of some of the country's most precious landscapes and foster the next generation of environmental stewards.

Methods

The general methodological process of this research, as shown in Figure 1.1, is explained in the proceeding sections: the Literature Review, Examination of the Precedent, Determination and Implementation of Selection Criteria, Key Informant Interviews, and Programmatic Framework Recommendations.

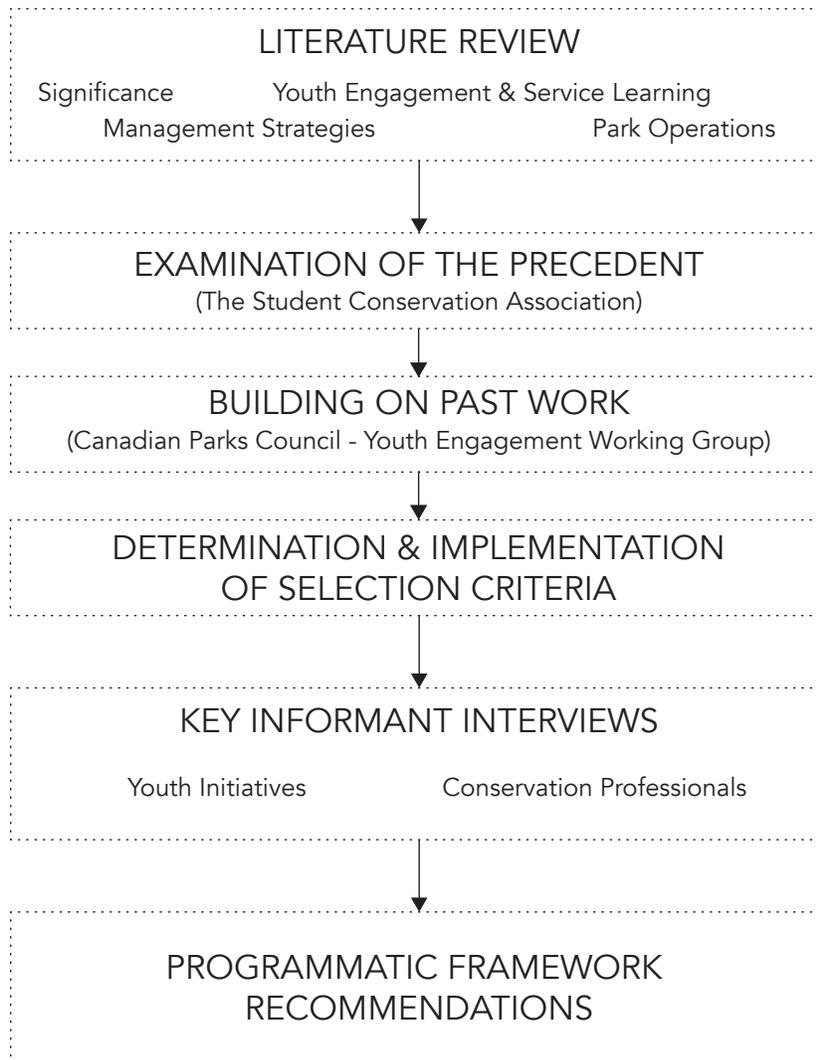


Figure 1.1 General Procedure of Methodology

Literature Review

Both a preliminary and informed literature review were conducted to serve the following 6 functions:

1. To establish the significance of the research (Cresswell, 1994).
2. To situate the current study in the context of prior research (Babbie, 1998), to identify gaps in existing literature while demonstrating how this project attempts to address them (Marshall & Rossman, 1989).
3. To exhibit the researcher's knowledge of related and existing studies (Marshall & Rossman, 1989).
4. To show understanding of government legislation and how it may affect or be affected by this study.
5. To provide information on youth engagement and service learning that can be used in program development.

Characteristics of the literature reviewed:

1. The state of the parks system, modern day youth, and the relationship between youth and nature were explored to establish the significance of this research.
2. Park operations relating to recent governmental goals, priorities, and resource allocations were identified to gain understanding of variables acting on the study.
3. Various park management strategies were explored to determine how the study best relates to present-day operations.

4. Literature on youth development and youth engagement was analyzed to determine best practices for youth participation and outcomes.
5. Service learning and the culture of engagement were reviewed to identify motivations for participation.

Examination of a Precedent

Based on preliminary literature and existing knowledge of the Student Conservation Association (SCA), this organization was chosen as a youth conservation initiative to be further examined in an extended capacity. This American-based organization was selected due to its perceived and apparent success in engaging youth in conservation initiatives, the value of its participant outcomes, and its current existence in full operational capacity. The following outlines the methods used to conduct a thorough examination of the structure of SCA:

1. A review of online resources.
2. An analysis of a recent study conducted by the Search Institute in collaboration with the SCA measuring participant outcomes resulting from program participation.
3. In-depth, semi-structured key informant interviews with principle members of the organization to gather further insight and knowledge on operations.

The results of the examination were summarized and the application to the remainder of the study is discussed further in Chapter 3.

Building on Past Work

Two previous research projects set the foundation for this study: both projects were commissioned by the Alberta Parks and the Canadian Parks Council (CPC) Youth Engagement Working Group (YEWG). The first was a document prepared by Cotter and Lavoie (2009) entitled the *Best Practices for Youth Engagement Report*. The report attempted to create a “youth engagement toolkit” comprised of best practice criteria to aid in the development of successful youth engagement initiatives. The second was a report entitled *Engaging Youth in Canada’s Parks* prepared by Church and Burger (2011) in collaboration with Apathy is Boring. This report built upon, further explored, and refined the CPC’s best practice criteria by conducting a national audit and gap analysis of existing Canadian park agency initiatives. The relevance of these two bodies of work to the current study is outlined below through the following:

1. A brief outline and summary of each report for a better understanding of the relevance to this research
2. Identification and application of the following findings as a resource for determination of program element criteria and program design:
 - a. Youth Engagement Tool Kit;
 - b. Best Practice for Youth Engagement
3. Use of the twenty-four programs identified between the two projects to be the first programs evaluated against selection criteria constructed in the following section.

Determination and Implementation of Program Element Selection Criteria

Determination of Program Element Criteria

After reviewing the existing research completed by the Canadian Parks Council, it was apparent that grafting on to their findings could advance prior research in this field. The elements of best practice for youth engagement refined through the previous research projects and the successful characteristics of the Student Conservation Association set a solid foundation for determining a set of program element criteria for this research project. The following program elements were considered:

1. Relevance
2. Population Served
3. Term of Service
4. Organization of Work
5. Types of Work
6. Participant Outcomes
7. Expanse of Work
8. Compensation
9. Enrollment Cost

Through a careful examination of literature, awareness of existing research and a successful precedent, the characteristics of the above nine criteria were selected that had the potential to effectively contribute to both youth engagement and contribution to Parks Canada conservation goals.

Implementation of Selection Criteria

The twenty-four programs identified in the Canada Parks Council studies served as the first group of existing initiatives to be tested against the selected program element criteria. Upon completion, a search using the following key words was conducted:

1. Youth conservation initiatives
2. Canadian youth conservation programs
3. Volunteer nationwide youth conservation organization

The goal was to identify other existing organizations that may have been missed by the previous two studies. The newly identified initiatives were also tested against the program element criteria. Programs most successful at satisfying the categories were pursued for key informant interview.

Key Informant Interviews

Six key informants representative of principal members of existing youth initiatives (4) and conservation professionals (2) in Canada and the United States were interviewed to examine themes, compare frameworks, explore barriers and limiting factors to success, and determine any gaps in programming that inhibit participation in regards to youth conservation initiatives. The following outlines the criteria used to select the key informants:

Youth Conservation Initiatives Characteristics:

1. The informants consisted of 4 principal members of existing youth engagement initiatives that met the program element criteria outlined in Chapter 4.

2. Key informant participation in this study was entirely voluntary.
3. Informants had to be current employees of the previously-identified youth programs.
4. The informants were required to have a minimum of 5 years experience working within the youth conservation service movement, whether that be with the selected organization or experience with other initiatives. Varied experience was encouraged.
5. The informants needed to possess knowledge of program operations in order to adequately answer the questions. If the original contacted authority was unable to answer the questions, they redirected the line of contact to personnel with appropriate expertise.
6. It was preferred that participants were geographically and organizationally diverse and possessed a wide-range of professional and personal experience in hopes of receiving a diversity of perspectives.

Conservation Professionals:

1. Key informants were selected from agencies or organizations that would have direct contact or invested interest in the framework proposed in this study.
2. Agency members were selected based on who may:
 - a. Benefit from the proposed project; or
 - b. Work with members of the proposed project; or
 - c. Provide monetary or other resources for the proposed project; or
 - d. Be a government body that would approve or disapprove such a project.

3. Prior experience working with or alongside youth conservation initiatives was an asset.
4. Be a principal member of an agency that repeatedly emerged in the literature.

Limitations of Key Informant Selection Process:

The following were limitations of the key informant selection processes:

1. It is possible that other initiatives exist that meet the selection criteria, but due to search algorithms were not identified. Therefore the key informants might not be indicative of a complete sample of their profession.
2. Key informants recommended other notable people worth contacting. This resulted in some similarities in geographic location and organizational involvement.
3. Sample area was limited to North America.
4. The limited number of key informants due to time and resource constraints.

Interview Procedure

Given the qualitative nature of this research, a semi-structured, in-depth, interviewing process was the selected mode of inquiry. The use of a semi-structured interview as a method of information gathering allowed for “a conversation with a purpose” (Kahn & Cannell, 1957, p. 149) to evolve. Through the exploration of a few general topics and selected questions, the remainder of the conversation enabled the respondent to freely discuss their experiences, perspectives, and knowledge on the topic (Marshall & Rossman, 1989). The use of elite interviewing meant that the respondents were well-informed experts and influential in the field of study (Marshall & Rossman, 1989). This was of

particular importance to this research because they were able to provide relevant responses to questions about organizational structure, policies, relationships to other organizations, and political frameworks (Marshall & Rossman, 1989). Through the interaction between the interviewer and respondent, the following criteria were achieved in the interview process.

1. Interview participants were made aware prior to the interview that the study was looking at the viability of youth conservation initiatives and their contribution to connecting youth with nature, as well as tapping into an under-utilized work force for park systems.
2. Broad themes intended for discussion (operational structure, barriers, successes, etc.) were mentioned to the participants at the initial point of contact to provide general idea of the intended conversation.
3. In the case where the initial contact was unsure of their ability to provide the researcher with adequate information, the researcher provided a more in-depth outline of the interview so that the questions could be directed to the most knowledgeable member of the organization.
4. During the interview the informants learned that a design of a program framework would be the end result of the study.
5. It was indicated that, while an academic paper, the intent or ultimate goal of this work is to create a programmatic framework to potentially aid program implementation.
6. To avoid the generalization of findings, questions were structured and often left open-ended to allow for the information to unfold from the perspective of the

participant, rather than being influenced by the researcher (Marshall & Rossman, 1989).

7. The number of questions was limited so as to complete the interviews in under an hour. Some interviews exceeded the estimated time frame due to participant enthusiasm.
8. The interview times were selected by the informant in order to decrease the chance of inconvenience.
9. Interviews were conducted over the telephone due to geographic restrictions.
10. Interviews were recorded with the permission of the key informant and were later transcribed by the researcher.
11. Each interview was compiled into a legible report representing the perspectives and knowledge of the professionals (Kvale, 1996).

Response Interpretation

The analysis of the interview material was conducted without following any standard analytic method. The diversity available through implementing *ad hoc* methods as a mode of interview analysis allows the researcher to gain an overall understanding (Kvale, 1996) of the large volumes of material often associated with qualitative interviews. This allows the researcher to gain information through an initial review of the transcribed material, followed by the ability to highlight significant themes, connections, and generate meaning from individual responses (Kvale, 1996). The answers gathered through, semi-structured, in-depth interviews were evaluated for the following:

1. The barriers to program participation and program implementation.

2. The informant's knowledge of organizational structures and frameworks of conservation programs.
3. Critical threats facing the sustainability youth conservation initiatives.
4. The informant's recommendations on program creation.
5. Similarities and differences between respondents.

Development of Programmatic Framework Recommendations

Programmatic framework recommendations for a nation-wide youth conservation program suitable for the Canadian context were developed based on information gathered from the literature review, an existing precedent, and key informant interviews. Research uncovered models for successful conservation frameworks as well as best practices for youth engagement. The key informant interviews and the literature reviewed also exposed important trends in the obstacles facing program participation and program implementation. Due to the multifaceted nature of this study, it was important to address the components necessary for successful conservation initiatives and youth involvement and look at them as interrelated entities. The framework recommendations were constructed to fulfill the following:

1. To synthesize the information gathered in the literature review and key informant interviews to create a youth conservation program applicable to the Canadian context.
2. To design a framework maximizing participant outcomes informed by information gained in the literature.

3. To suggest an adaptive management approach when dealing with interrelated variables.
4. To provide framework recommendations informed by the successes and critical threats facing existing youth conservation programs.

Limitations of Programmatic Framework Development:

1. The programmatic framework recommendations were reflective of information gathered in the literature and through key informant interviews. It is possible that other contributing factors or limitations may exist that were not identified in the scope of this research. The framework is designed to be applied to the Canadian context and therefore may not be universally applicable.

Chapter Two – Review of Literature

This chapter presents a comprehensive literature review divided into the following sections: Determining the Significance, Park Operations, Management Strategies, Youth Engagement and Service Learning.

Part One – Determining the Significance

Parks

Canada is considered to have one of the most extensive park systems in the world (Canadian Parks and Wilderness Society, 2016). Currently national parks, established under federal legislation, represent approximately three percent of Canada’s total area. These values do not include provincial and territorial parks – also protected from development pressures – that combined represent a total of 10% of the Canadian landscape (Canadian Parks and Wilderness Society, 2016). The IUCN defines a protected area as “a clearly defined geographic space recognized, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values” (International Union for Conservation of Nature, 2008, p. 2). For the purpose of this research all terrestrial parks and protected areas are of important consideration and of interest to this study. These areas, while protecting biodiversity and vital habitats, also provide places of inspiration, enjoyment, economic gains, and feelings of purpose and unity when engaged in conserving these nationally significant places.

Parks Canada, being the world’s first national park system, maintains that on behalf of Canadians their goal is “to protect and present nationally significant examples

of Canada's natural and cultural heritage and foster public understanding, appreciation and enjoyment in ways that ensure the ecological and commemorative integrity of these places for present and future generations" (Parks Canada Agency, 2016a, p. 6). Parks Canada and the Canadian government have an incredible opportunity to protect some of the largest, untouched natural expanses of wilderness left in the world. Canadians are guardians to 24% of the world's wetlands, 20% of its wild forests, and 30% of the Earth's land-stored carbon (Woodley, 2015). There is no shortage of land in need of protection and preservation, but there is also no shortage of land to be enjoyed and experienced by current and future generations. National Parks and protected areas hold the dual mandate of providing recreational opportunities for their users without compromising the natural and cultural resources in the area. This presents wilderness professionals with the perennial management challenge of providing outdoor recreation opportunities without negating user perceptions and the ecological health of the area (Cole & Fichtler, Campsite impact on three western Wilderness areas , 1983). Regardless of the dual mandate, the Canada National Park Act states that restoring and maintaining the ecological integrity of these protected areas shall be the first priority when it comes to park management (Office of the Auditor General of Canada, 2013).

State of the Park System

Despite evidence that suggests the scale of protection of national parks is a country's best chance at protecting nature and supporting human well being (Woodley, 2015), Canada continues to fall below its potential at protecting these lands. The agency is plagued with budget constraints, inadequate staffing, backlogs of maintenance projects, troubling changes to park legislation (Canadian Parks and Wilderness Society, 2014),

declining ecological integrity, pressures from commercial development, and difficulty quantifying the benefits provided by these areas.

Ecological Integrity

Although ecological integrity is supposedly fueling management decisions, scientific monitoring of these protected areas tends to say otherwise. Every year the Canadian Parks and Wilderness Society (Canadian Parks and Wilderness Society, 2016) a charitable organization which has worked collaboratively with the government for over 50 years as the country's voice for wilderness protection (Canadian Parks and Wilderness Society, 2016), publishes a *State of Canada's Parks Report* summarizing and celebrating progress as well as outlining and identifying existing and emerging problems. In recent years, there has been a consistent trend in the progress reports suggesting a decline in the ecological integrity of our parks and protected areas (Woodley, 2015). The 2015 State of Canada's Parks Report states that, of the National Parks that have had their ecological integrity assessed, greater than half of the ecosystems are in poor or fair condition, over a third were declining, and only 39% of ecosystems were considered to be in good health (Woodley, 2015).

In 2010 Canada joined a number of countries in the global community in its commitment to achieving 20 biodiversity targets – the Aichi Targets – by the year 2020 (Woodley, 2015). Specifically, Aichi Target 11 commits countries to protect at least 17% of land and inland waters by 2020 (Convention on Biological Diversity, 2016). It also commits countries to improve the quality of existing and future protected areas while ensuring they are well connected, effectively managed, and well integrated into their surrounding landscapes (Woodley, 2015). Now in 2016, over the halfway point in this

Strategic Plan, Canada is falling behind most other countries in their progress with just over 10% of the Canadian landscape currently protected in comparison to the current global average of approximately 15.4% (Woodley, 2015). Canada is not only making little to no progress in creating new protected areas, but the existing ones are also in dire condition.

Resource Constraints & Management Decisions

Given the concern surrounding the increasing threats to parks and protected areas, management decisions and allocation of resources do not seem to be reflective of a need for change. The 2014 State of Canada's Parks Report found a common trend in decision making and stated that "many governments are making short-sighted decisions to prioritize industrial and commercial interests over the long-term ecological, social and economic benefits that come from conserving nature in well-designed, well-protected parks" (Canadian Parks and Wilderness Society, 2014, p. 2).

The two biggest constraints to parks and protected areas - eroding budgets and inadequate staffing - continue to see negative trends in recent years (Canadian Parks and Wilderness Society, 2014). Between 2008 and 2013 funding for science-based conservation and park level monitoring was cut by close to two-thirds (Woodley, 2015), while spending on resource conservation at Parks Canada decreased by 15% (Office of the Auditor General of Canada, 2013). Parks Canada full-time staffing has decreased by 23% with the total number of scientific staffing positions declining by over 33% equaling 60 of 179 positions eliminated (Office of the Auditor General of Canada, 2013). There appears to be a correlation with these resource constraints and the ecological health of these areas. With no reversal in resource reductions, conservation science being ignored,

and a backlog of deferred maintenance projects, decision makers must begin to recognize the true value and benefits of parks in order to stop losing ground (Canadian Parks and Wilderness Society, 2014).

Quantification of Benefits

The list of benefits provided by parks and protected areas is long, but the problem is that many of the benefits are not quantifiable in a way that influences decision making and allocation of resources in its favour. Chapter 7 of the Report of the Commissioner of Environment and Sustainable Development gracefully summarizes and explains why National Parks and protect areas are so important by stating,

National parks provide many benefits. They serve as storehouses of biological diversity; they provide ecosystem services such as carbon sequestration, stormwater surge protection, freshwater filtration, and pollination; they protect wilderness and natural beauty so that current and future generations will be able to appreciate their natural heritage; they serve as ecological benchmarks for research into the effects of human activities on natural processes; and they contribute significant economic benefits to communities across the country as a result of the millions of tourists they attract each year from across Canada and around the world. Canada's national parks are an important component of a worldwide endeavor to protect significant natural areas. (Office of the Auditor General of Canada, 2013, p. 8)

It is undeniable that there are significant economic benefits to parks - it is present in the numbers. A recent 2015 study found that protected areas in North America average approximately 3.3 billion visitors per year, generating six dollars for every one dollar spent safeguarding Canada's parks (Woodley, 2015). These areas also provide the equivalent of 64,000 full-time jobs across the country. Often one's appreciation of park benefits fails to look beyond traditional economic gains to direct user and societal benefits. Issues arise because, despite being little economic engines, knowledge and measurement techniques of the indirect benefits of parks are difficult to monetize (The

Outspan Group, 2000). Until there is a way to fully identify and quantify non-consumptive benefits, the idea of industrial development will supersede the creation of new parks, management decisions will be ill-informed, and funding will continue to be inadequate.

Use

Although decision makers may fail to recognize the benefits and importance of national parks, public support is not lacking. These parks and protected areas saw an increase in visitation rates by 5% from 2014 to 2015, and that number is expected to rise (Parks Canada Agency, 2016a). This is good news for economic benefits, but it could be considered bad news for ecological health of these landscapes if the personnel and budgets are not available to monitor and manage visitor use.

Much like the wilderness romanticism that existed during the times of Thoreau and Emerson, there is an increased popularity and desire towards the emergence of ‘wilderness culture’ today. Through modern literature, film and social media, more and more people are being exposed to radiant images of pristine wilderness and high-definition videos of adventure travel. The excitement created through this new platform of story telling, inspires people to capture themselves in similar moments regardless of their skill, experience level, or awareness of minimum impact knowledge.

Additionally, the increased population residing in urban cores and the associated need to seek restorative capacity in wilderness areas also adds stress to these landscapes. Although urban areas offer many necessary amenities, they are far less effective than natural environments at providing the societal need for psychological restoration, which

has been a major incentive for the preservation of wild spaces all along (Cole & Hall, 2010). These areas are being used as outlets for physical activity, creativity, learning, risk-taking, and an escape from the pressures of everyday life (Neufeld, 2014). However, excessive visitation may alter soil composition, vegetation, wildlife resources, water, visitor perceptions and visitor facilities. This is threatening the area's upper limit of sustainable use (Farrell & Marion, 2002).

As development encroaches and recreational pressures increase (Price, 1985), the very motive for preserving parks and wilderness areas - preserving their ecological integrity for future generations - is becoming compromised. The issue however is two-fold. Not only are park ecosystems in declining health (020), but the upcoming generation's connection with the natural world is also declining.

Today's Youth

Youth are a demographic that have a lot to gain from their interactions with the natural world, but they are also the ones who are experiencing the biggest disconnect. There is no question that the youth of today are growing up during a remarkable time in human history where progress fuels economies, modern conveniences are available at the touch of a button, and personal communication relies heavily on technology. However, all these luxuries are coming at the price of unintentional disassociation from nature (Parks Canada, 2014). One's personal connection with the natural world is being compromised through urbanization, diminishing access to green spaces, and increasingly sedentary lifestyles (Parks Canada, 2014). 'Nature-deficit disorder' once a broad term coined by Richard Louv in 2005, has become a recognized concept in human-environmental literature. The term is used to describe how people today, especially

children, are spending less of their time outdoors which is resulting in an abundance of personal and societal problems (Louv, 2005). Issues such as obesity, attention deficit disorders, a culture of fear, and a lack of creativity are some of the adverse side effects plaguing our youth.

Not only is this bad news for our youth, it is bad news for the future and longevity of our natural spaces. With youth experiencing diminished connections with the natural world there is a heightened increase in the likelihood of generational environmental amnesia (Parks Canada, 2014). This is an occurrence where “each new generation uses their experience of nature as a child as a benchmark against which they measure environmental degradation in the future” (Kahn & S, 2002, p. 388). With a lack of exposure to, and awareness or ignorance of the current state of the park system, apathy to environmental destruction grows, the reference point in which youth view nature changes, and we are left with a generation lacking environmental advocates (Parks Canada, 2014).

The Opportunity

In the same era where modern technology has plugged children into electronics but disconnected them from the environment, one park ranger is left to tend to 20 provincial parks (Wilson, 2016). Canada’s parks and protected areas are facing the same issues that plagued the National Park Service in the 1950s, but this time the children of today are in a worse-off state. Although two seemingly separate issues, this research attempts to explore the opportunity for a potentially unified solution.

Parks Canada’s Conservation and Restoration Program – previously referred to as Action on the Ground – has laid out an approach to conservation that has gained

worldwide recognition from the International Union for Conservation of Nature (IUCN) – the world’s biggest and most influential conservation organization (Parks Canada Agency, 2016a).

The approach recognizes that successful conservation initiatives must achieve 3 key objectives laid out in Table 2.1.

Table 2.1 Internationally Recognized Principles for Successful Ecological Restoration (Adapted from Parks Canada, 2013).

EFFECTIVE	by re-establishing and maintaining natural and cultural values of protected areas;
EFFICIENT	by maximizing beneficial outcomes while minimizing costs in time, resources and efforts; and
ENGAGING	by ensuring collaboration with partners and stakeholders promoting participation and enhancing visitor experience

This conservation approach, while attempting to minimize the human and monetary recourses needed for effective protection, focuses a lot of its attention on encouraging citizens to deepen their attachment to protected areas, connect with nature, and having themselves be a part of tangible conservation initiatives (Parks Canada, 2013). Parks Canada recognizes the importance of youth in these outcomes and strives to “engage Canadians in these efforts and inspire new generations to connect with and take care of our natural world” (Parks Canada, 2013, p. 23). Today’s youth represent a population who, if properly supported and coordinated could form an incredible community of stewards with a lifelong connection to the land.

Regardless of whether or not the country is maximizing its ability to meet these goals, a nation-wide youth conservation initiative has yet to test its hand in a modern day

Canadian context. A proposed conservation program has the opportunity to combat the issues surrounding lack of adequate personnel in parks, intensive visitor use, and insufficient funds for suitable protection (Cushman, 1954). In an era where the conservation ethic is growing, where Canada has an opportunity to safeguard large expanses of intact wilderness (Canadian Parks and Wilderness Society, 2014), and where the health and well-being of our youth reflect that of our natural areas, our country should offer youth the opportunity to engage in the solution. In an era where environmental issues seem overwhelming, the next generation has the ability to lift the enormous burden on the park system, contribute to a better functioning system, and act as a source of hope for the future (Parks Canada, 2013).

Part Two – Park Operations

When attempting to prove the viability of a proposed program such as the one in this research paper, it is important to align the goals and objectives with those of the Parks Canada Agency to increase the likelihood of success. This is especially true when government support can be a valuable resource, but also the limiting factor to a program's success. In order to grasp an understanding of the most recent governmental goals, priorities and resource allocation, a number of publicly-available documents such as policies, legislation, reports, and plans were reviewed. Some of the guiding legislation that most limit or support this project are discussed in the section below.

Legislation

The Parks Canada Agency Act

The Government of Canada established the Parks Canada Agency in 1911 holding the purpose of “ensuring that Canada’s national parks, national historic sites and related heritage areas are protected and presented for this and future generations,” (Minister of Justice, 2015, p. 1) so that by “enhancing pride, encouraging stewardship and giving expression to our identity,” (Minister of Justice, 2015, p. 1) we can appreciate “their special role in the lives of Canadians and the fabric of our nation” (Minister of Justice, 2015, p. 1). Over a century later the mandate remains the same, but the social fabric of our nation has shifted. The youth of today are not experiencing nature in the same capacity as they once did in the past. Due to uneven access to greenspaces, an increasingly urban demographic, fast-paced culture and technology, the number of youth visiting these protected areas is disproportionately low in relation to their percentage of the Canadian population (Parks Canada, 2012a). Seeing as the average age of visitors to these nationally significant lands is over the age of 50 (Parks Canada, 2012a), the future generations these areas are meant to serve may no longer have an invested interest in their protection. Actions need to be taken to engage our youth in order to ensure future stewards of our land exist within our population.

Report on Plans and Priorities

The publication of the 2016-2017 Report on Plans and Priorities was a vital resource in identifying the priorities, risks, and planning strategies that today’s government deem significant. This recognition is especially important given the recent party change the Government of Canada has undergone. The project proposed in this

research paper seemingly complements the top priorities identified by the government. Below, some of the key priorities and plans for action relevant to the application of this project are discussed in further detail.

Heritage Places Establishment

As previously mentioned, Canada is falling behind the rest of the world in its commitment to Aichi Target 11 – to conserve at least 17% of its terrestrial land and inland waters by 2020. The country has committed making both conservation gains and restoring their reputation as a leader in environmental stewardship important priorities. Through restoration, infrastructure investments, and natural resource conservation it is a priority to expand the extent of the national park system (Parks Canada Agency, 2016b). This will help Canada get back on track to achieving its targets while increasing the ability of people to learn from, understand and appreciate these cherished places.

Heritage Places Conservation

The 2012 National Asset Review determined that more than 50% of the Parks Canada Agency's assets were in poor or very poor condition (Parks Canada, 2012b). For a country with a goal of conserving the ecological integrity of parks for future generations and for a nation previously commended for its conservation efforts (Woodley, 2015), this is an uncharacteristic statistic that the Agency is working to rectify.

In an attempt to safeguard these valuable places while improving their ecological integrity, Parks Canada has set quantifiable goals through active management targets. Notable goals include maintaining or improving conservation efforts and improving

100% of the assets currently in poor or very poor condition to fair or good condition by the year 2020 (Parks Canada Agency, 2016b).

Achieving these goals will involve active management, monitoring and reporting, and scientific understanding, especially in understanding the effects of climate change on these areas. The involvement of various stakeholders and the engagement of key audiences – including youth – will be imperative in improving the resilience and ecological integrity of national parks. Through best management practices and applied science, Parks Canada will undergo “the most diverse and progressive conservation and restoration program in the Agency’s history” ((Parks Canada Agency, 2016b, p. 31).

Heritage Places Promotion & Public Support

Often neglect and misuse of places comes from lack of awareness of best practices or the value of the spaces themselves. Therefore, promotion and the nurturing of a sense of pride and appreciation for these places are vital for their safeguarding. This, coupled with public support and the collaboration of stakeholders has the opportunity to revolutionize the way that citizens value and experience these areas.

With a changing demographic landscape fabric in Canada, the Agency must stay relevant and responsive to the needs of the target market they are attempting to reach. Parks Canada’s goal for promotion is to engage the population so that at least 75% of Canadians claim to appreciate the places administered by Parks Canada by March 2018 (Parks Canada Agency, 2016b). In order to achieve this target, the Agency has identified the importance of social science research, product development, and market intelligence (Parks Canada Agency, 2016b).

Equally as important as targeting individual interests is the participation of stakeholders and partners. This approach allows for collaborative activities and shared knowledge with stakeholders that include NGOs, private sector organizations, Indigenous people, and other governmental departments (Parks Canada Agency, 2016b). The Agency's goal for public support is to improved partner and stakeholder engagement so that the percentage of Parks Canada volunteers increases by 10%, while improving or maintaining at least 75% of collaborative initiatives with five national strategic partners by March 2018 (Parks Canada Agency, 2016b). These targets encourage partnerships with stakeholders whose goals and objectives coincide with the Agency's.

Visitor Experience

Parks Canada recognizes the importance of connecting Canadians and visitors to park and wilderness areas and has made it a priority to improve and reinvent their services and programming in attempts to attract more visitors. Efforts are being made through the implementation of a national outreach strategy, raising public awareness, enhancing engagement activities, and developing experiences to meet the unique needs and desires of its visitors (Parks Canada Agency, 2016b).

To be considered successful, the Agency hopes to increase visitor numbers by 2% annually, and achieve an 85% success rate in fostering meaningful experiences and connections with parks. What is equally as important as attracting users is the quality of visitor experience. Parks Canada hopes to achieve a 90% success rate in visitors enjoying their experiences annually, while having 100% of their assets that influence visitor experience in fair or good condition by March 2020. To achieve these goals, Parks

Canada will focus their efforts on enhancing opportunities for youth, expanding the range of available programs and improving infrastructure such as campsites, visitor centres and trails (Parks Canada Agency, 2016b). If properly executed these efforts could increase visitor experience while fostering an understanding, appreciation and connection with nature.

Additionally, the Agency is leveraging the upcoming 150th anniversary of Confederation in 2017 as a unique opportunity to connect Canadians with the country's parks and engage them in their natural and cultural heritage (Parks Canada Agency, 2016b). The Liberal government has announced that in celebration of this sesquicentennial, all park access in 2017 will be free for all users (Government of Canada, 2016).

Associated Risks

It is imperative to understand that as well thought-out as any plan may be, there are risks associated with taking action as well as with doing nothing. It is imperative to continually monitor and re-evaluate strategies in order to minimize the negative impacts of natural and human threats.

As important as the priority is to protect more naturally significant areas to reach the nation's conservation targets, it cannot be ignored that the majority of existing assets are in poor condition. Establishing new protected areas would only further stretch the inadequate financial and human resources that are already too thin to properly maintain the health of existing parklands, let alone new ones.

The intentions surrounding Canada's 150th anniversary strategies are admirable in their attempts to engage Canadians and foster appreciation for these spaces. They address the issues of the disproportionate representation of visitor demographics by providing free access for all, encouraging youth engagement activities and knocking down some of the barriers to accessibility (Parks Canada Agency, 2016b). However, without proper understanding of carrying capacity this plan may hinder the fourth priority of achieving satisfactory visitor experience. Over-crowding, misuse of spaces, and run-down infrastructure may instead create a disdain for these heritage sites.

Especially with the uncertainties surrounding the impacts of climate change, external development pressures, and resource extraction (Parks Canada Agency, 2016b), the agency must undertake adequate management strategies. When dealing with complex, integrative systems it is important to use best practices, active management, and restoration actions to continually work to minimize the risks of possible impacts.

Potential Opportunities

With the goals of increasing volunteer presence, evaluating and updating Parks Canada's partnering framework, and the creation of a national partnering strategy (Parks Canada Agency, 2016b) lie the opportunity for the establishment of a program with goals and objectives that complement those of the Agency. This study looks to engage youth in hands-on service and provide the Agency with an untapped workforce to more effectively achieve their plans and priorities. These youth while engaging in conservation efforts to improve the quality of the assets, allow Parks Canada employees the opportunity to focus the most critical threats facing these areas. The following chapters in this thesis discuss

how a proposed project could help Parks Canada achieve their priorities and minimize associated risks.

Funding

As previously acknowledged when describing the significance of this research, historically the amount of funding allocated for parks and protected areas has fallen short of the amount required to adequate management. The following section identifies current and future commitments and trends in funding in order to understand the application to this research.

2016 Federal Budget

With over 50% of the Agency's holdings in poor or very poor condition, the government has attempted to provide a solution through monetary support. In coordination with the Federal Infrastructure Plan, Parks Canada is in its second year of a five-year program to invest in the improvement of its assets. This involves the investment of nearly 3 billion dollars over the course of the program to address the backlog of deferred maintenance projects, improvements to infrastructure and highways, new park facilities, and town sites (Parks Canada Agency, 2016b). The intended result is for the planned enhancements to contribute to positive visitor experience and the protection and long-term sustainability of these places well into the future.

Federal Infrastructure Initiative

To ensure continual access and enjoyments of the nation's natural areas, the government is committed to investing \$191 million over two years for infrastructure investments (Government of Canada, 2016). These funds are available on a cash basis,

but have already been earmarked for specific highway and trail improvements in predetermined parks (Government of Canada, 2016).

Investing in National Parks

In order to preserve and expand Canada's national park system the 2016-2017 Federal Budget has offered new monetary investments to help develop additional protected areas and provide free admission for the 150th Anniversary of Confederation (Government of Canada, 2016). This investment also includes \$16.6 million dollars to further expand the Learn to Camp program as well as to develop new programming to engage visitors and increase the economic benefits associated with use (Government of Canada, 2016).

Youth Service

Although not a direct contribution to the Parks Canada Agency, the Liberal government is proposing to provide "\$105 million over five years, starting in 2016-2017, and \$25 million per year thereafter in support of youth service" (Government of Canada, 2016, p. 71). With this commitment to provide Canadian youth with the opportunity to engage in service while gaining valuable life experience, lies an opportunity to provide the Parks Agency with human resources where the budget falls short.

Funding Conclusion

In recent years, the budget allocated to parks has not been large enough to sufficiently maintain these areas, to preserve their ecological integrity, or to achieve proper levels of attractiveness, safety, and visitor experience. Park staff and managers

are doing what they can with the limited resources they are allocated but they are still falling short of what must be done (Cushman, 1954). With a build-up of deferred maintenance projects, and priorities in infrastructure improvement, there is an opportunity to use youth as an alternative labour force to aid where resources are thin.

Part Three – Management Strategies

Management strategies for parks and protected areas have continued to adapt and evolve over the years, often varying from country to country and between various scales. However, there are emerging themes that are beginning to drive the direction parks and wilderness management professionals are taking to ensure the landscape fabric of parks and wilderness areas can successfully endure human pressures and rapid environmental change. A 2009 review by Hobbs et al. explores the various conservation-related management strategies that have been employed over the years and in different geographic regions. The study identifies a shift away from the outdated concept of managing for naturalness and identifies and explores alternative approaches (Hobbs, et al., 2009). Hobbs et al. (2009), recommends that given this era of rapid environmental change, pluralistic approaches should be taken in regards to land management (Hobbs, et al., 2009). The shifting principles that guide park management strategies are outlined below for further understanding.

Naturalness

The concept of maintaining “naturalness” was something that drove stewardship of parks and protected areas for much of the 20th century, especially in the United States (Hobbs, et al., 2009). Naturalness, although having many definitions, is often associated with the absence of human interference – a pristine unaltered state that will persist over

time (Hobbs, et al., 2009). Sometimes overlooked, one of the most important decisions in regards to park management is whether or not to intervene, in what capacity, and under which circumstances (Hobbs, et al., 2009). In fact, the US Wilderness Act argues against intervention wherein the National Park Service (NPS) sees intervention as an exception, not a rule (Hobbs, et al., 2009).

Hobbs et al. (2009) makes the claim that managing for naturalness raises issues in regards to wilderness area management. It can be argued with substantial evidence that even the most remote parks and wilderness areas have and likely will continue to be modified to some extent by human activities (Hobbs, et al., 2009). This negates the idea that these areas currently exist in their natural condition unaffected by human intervention whether intentional or not. This, coupled with improved scientific knowledge, awareness of ecosystem dynamics, and rapid global change, requires a shift in management perspective (Hobbs, et al., 2009).

Ecological Integrity

As the importance of science-driven conservation has emerged, and as management goals have become better articulated and more measurable, ecological integrity has become a concept that drives park stewardship (Hobbs, et al., 2009). ‘Ecological Integrity’, legally defined as “a condition that is determined to be characteristic of its natural region and likely to persist, including abiotic components and the composition and abundance of native species and biological communities, rates of change, and supporting processes” (Minister of Justice (S.C. 2000, c.32), 2015, p. 1), replaced ‘naturalness’ as Canada’s management driver in 1988 (Hobbs, et al., 2009). This strategy requires careful monitoring, knowledge of thresholds, control ecosystems,

biological patterns, and a shift in thinking from causation to effect (Hobbs, et al., 2009). Parks Canada has committed to preparing State of the Parks reports for each national park to be submitted every five years. This encourages ongoing monitoring, setting of clear management objectives, dynamic targets, and the ability for intervention. Although a step forward from naturalness, more needs to be done in order to avoid management stagnation.

Adaptive Management

In an era of global environmental change, when naturalness is no longer a solely-appropriate objective for parks and protective area management, a more dynamic and pluralistic approach must be taken. The growing scientific understanding of systems thinking, the knowledge of linkages across scales, and the ambiguity surrounding the effects of climate change call for an active adaptive approach to management (Hobbs, et al., 2009). Adaptive management, developed by C.S. Holling and Carl Waters, “emphasizes the identification of critical uncertainties regarding natural resource dynamics and the design of diagnostic management experiments to reduce these uncertainties” (Rist, Felton, Samuelsson, Sandstrom, & Rosvall, 2013, p. 63). This strategy requires flexible operational objectives, participatory decision-making from outside management institutions, open dialogue across sectors, and evaluation at various stages (Hobbs, et al., 2009). Adaptive management acknowledges the diversity of the landscape fabric, its limitless boundaries, and the factors that act upon it. This management approach has received growing interest and implementation in the fields of conservation and natural resource management (Rist, Felton, Samuelsson, Sandstrom, & Rosvall, 2013).

The Conservation Measures Partnership (CMP) is a partnership of conservation organizations whose mission is “to advance the practice of conservation by developing, testing, and promoting principles and tools to credibly assess and improve the effectiveness of conservation actions” (The Conservation Measures Partnership, 2013, p. 1). The CMP uses collective knowledge from a consortium of members to increase the efficiency of monitoring and evaluating conservation efforts in order to improve project design and implementation (017). Over time the CMP has established best practices in adaptive management and developed the *Open Standards for the Practice of Conservation* – hereafter referred to as *Open Standards*. These standards, shown in Figure 2.1 have global application, can be implemented on any scale, and will inform the framework for the programmatic design recommendations resulting from this research.

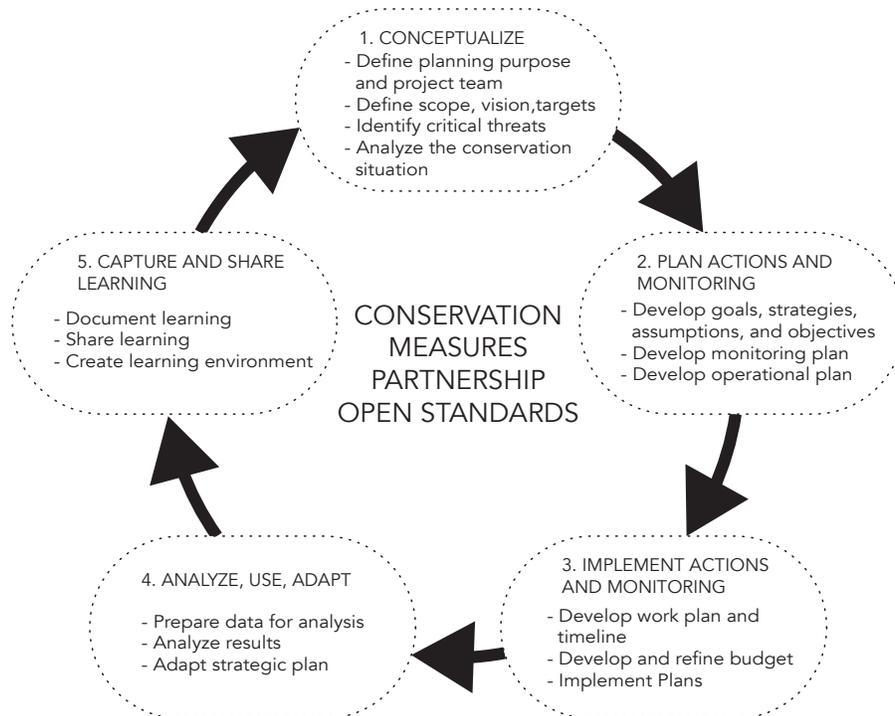


Figure 2.1 Conservation Measures Partnership Open Standards (Adapted from The Conservation Measures Partnership, 2013)

Part Four - Youth Engagement and Service Learning

Even with a growing body of evidence that suggests nature offers numerous social, economic, and health benefits, our present day society is running the risk of a phenomenon called generational environmental amnesia (018). Simply put, this means that “as people experience less contact with nature, their reference point changes, indifference to natural losses grows, and tomorrow’s stewards of our natural world fail to emerge” (018). As a step in finding the solution there must be an understanding that the benefits of nature extend through interrelated components of one’s life as represented in Figure 2.2.

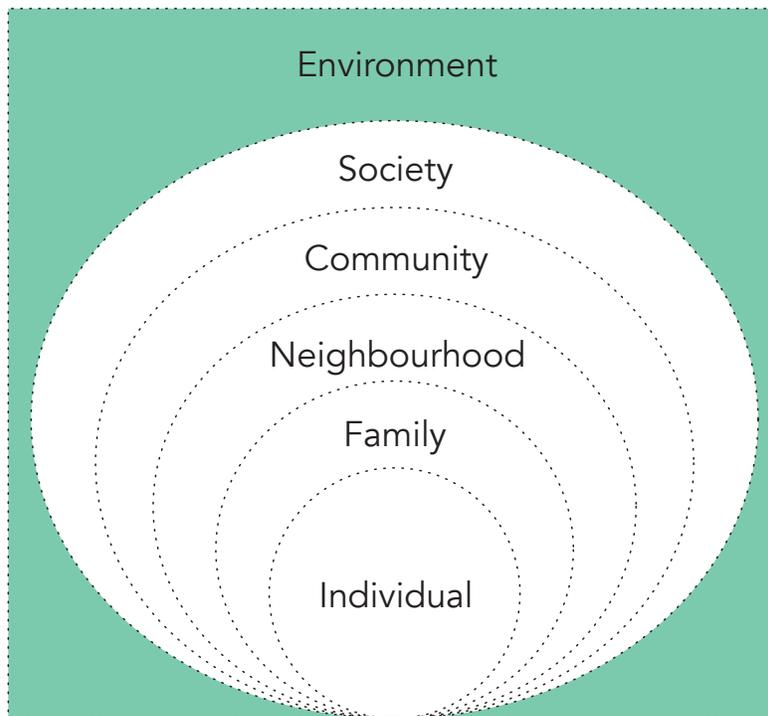


Figure 2.2 Spheres of Benefits (Adapted from Parks Canada, 2014)

Therefore humans must undergo a fundamental shift in the way we see our relationship with nature, and this starts at a young age with engaged citizens (Riemer, Lynes, & Hickman, 2013). In a study by Riemer, Lynes and Hickman (2013), it is suggested that a fundamental transition is needed to adequately mitigate anthropogenic causes of climate change and there is evidence that advocates that the youth of today are in a good position to generate such transformation (Riemer, Lynes, & Hickman, 2013).

Life Course Perspective

In an era where there is a growing recognition of the disconnect between youth and nature (Louv, 2005) and at time when our parks are being imperiled by a number of dynamics (American Conservation Experience, 2016), understanding the impacts of early interactions with the natural world is timely. Wells and Lekies (2006) attempted to explore whether childhood exposure to nature has an influence on adult environmental behaviour and ecological actions from a life course perspective (Wells & Lekies, 2006). The life course perspective is said to “examine individual lives as a set of interwoven pathways or trajectories that together tell a life story” (Wells & Lekies, 2006, p. 2).

Before conducting their study, Wells and Lekies (2006) completed a review of earlier research suggesting childhood experiences with the natural world are correlated with adult environmentalism. Studies by Tanner (1980), Corcoran (1999), Chawla (1999), and Sward (1999) focused research on environmental professionals and conservationists as the study group and concluded that “the single most important influence on individuals that emerged from these studies was many hours spent outdoors in natural habitats during childhood or adolescence – alone or with others” (Wells & Lekies, 2006, p. 5). The criticism of these prior studies recognizes that their focus on environmental activists and

those in environmental careers restricts the generalizability of their results (Wells & Lekies, 2006).

Wells and Lekies recognized the gap in the literature pertaining to the study group and sought to explore:

pathways to environmentalism by employing a long-term, life course perspective rather than focusing on short-term outcomes; using a large representative sample of urban-dwelling adults rather than a select group of environmentalists; and utilizing structural equation modeling to allow an examination of interrelated influences including engagement with both wild and domestic nature in childhood, participation in environmental education in one's youth, and nature experiences shared with other people during childhood (Wells & Lekies, 2006, p. 4).

Results were consistent with the hypothesis that childhood participation in nature had “significant direct effects on adult environmental attitudes,” (Wells & Lekies, 2006, p. 12) with the highest positive associate being with “wild nature” (Wells & Lekies, 2006). The findings suggest that when youth become immersed and engaged with nature at a relatively young age they will likely be on a path towards environmental behaviours and activism (Wells & Lekies, 2006). The conceptual model developed by Wells and Lekies is illustrated in Figure 2.3.

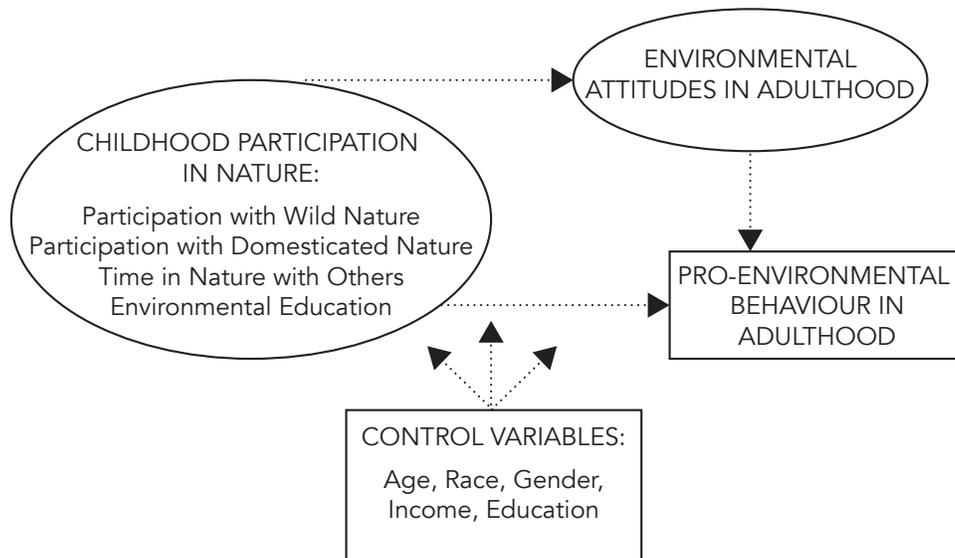


Figure 2.3 Conceptual Model: Childhood Participation with Nature and Adult Environmental Attitudes and Behaviours (Adapted from Wells and Lekies, 2006)

The limitation of Wells and Lekies' (2006) work when compared to the current research is their exploration of childhood experiences before the age of 11. However, an evaluation report for the Public Lands Service Coalition found youth under the age of 18 are the one's experiencing the most growth in environmental engagement from their environmental service experiences and exposure (Duerden, Edwards, & Lizzo, 2011). This suggests that Wells & Lekies study may yield similar results in youth up until the age of 18. In support of this, Riemer, Lynes and Hickman (2013) identify youth aged from 13 to 18 as an attractive target age group for civic engagement (Riemer, Lynes, & Hickman, 2013). Both studies and the previous literature they explored suggest that interaction with nature is important in fostering the next generation's ecological values and responsibility to the health of the environment (Wells & Lekies, 2006).

Civic Youth Engagement

The looming threats of environmental degradation and climate change hold the biggest threats to future generations therefore, the youth of today should be engaged stakeholders in effectively addressing environmental problems through social change (Riemer, Lynes, & Hickman, 2013). Literature suggests that by means of civic engagement, youth and young adults represent an important demographic that could lead and encourage the movement towards a culture of sustainability (099). Youth engagement is said to be “the meaningful and sustained involvement of young people in an activity. It is about being actively and authentically involved, motivated, and excited about an issue, process, even or program” (Alberta Emerald Foundation, 2008, p. 2).

Riemer, Lynes and Hickman (2013) used youth engagement literature to design a framework intended to be used for consideration when developing evidence-based youth engagement practices and to evaluate the effectiveness of existing programs (Parks Canada, 2013). Through their approach they recognize that the goal of environmental action should not be focused exclusively on youth development, nor on the environmental outcome; it must embody a systems approach through the integration of components (Riemer, Lynes, & Hickman, 2013).

While the study acknowledges the existence and benefits of youth engagement programs in the formal educational sector, it recognizes the need and benefit for more effective environmental engagement programs in non-formal educational settings (Riemer, Lynes, & Hickman, 2013). Additionally, the Canadian Parks Council identifies that a lack of non-formal, non-school programming is actually a barrier to youth

participation in such initiatives (Church & Burger, 2011). Their framework created by Riemer, Lynes, and Hickman (2013) for both assessing and developing programs is constructed into a five-part model detailed in table 2.2.

Table 2.2 Five Components of the Model for Engaging Youth in Environmental Change (Adapted from Reimer, Lynes, and Hickman 2013)

1) THE ENGAGEMENT ACTIVITY	Described across three dimensions: objectives, structure and quality
2) THE ENGAGEMENT PROCESS	The route by which the youth interact with the activity or program and can be described along three dimensions: intensity, breadth and duration
3) INITIATING AND SUSTAINING FACTORS	The motivation(s) to become engaged and remain engaged including individual, social and system levels.
4) MEDIATORS AND MODERATORS	Factors that facilitate, interfere with, or interact in some way with the engagement process and its outcomes; youth's emotionality, activity level, agreeableness, self-regulation and communication abilities
5) OUTCOMES	The potential outcomes are organized in regard to their impact on the individual, social, system and environmental levels

Riemer, Lynes, and Hickman (2013) suggest that researchers who are exploring the effects of youth engagement may find benefit in their work as well as practitioners who are trying to develop youth-based environmental engagement programs geared towards creating a culture of environmental awareness (Parks Canada, 2013). Therefore, their study provides a crucial foundation for the exploration and potential application of this study.

The 21st Century Conservation Movement

The 21st century conservation movement is one that has to balance the technological and industrial advances of modern society while still protecting the health and ecological integrity of our wild spaces for generations to come (Mazza, 2005). There is a large body of evidence that suggests that the best way to work towards this goal is through collaboration across many disciplines and especially through the inclusion of youth populations. It is important for youth to be engaged in a way that cultivates a sense of environmental stewardship and responsibility that will persist into adulthood (Riemer, Lynes, & Hickman, 2013).

Today's modern world affords an opportunity to bring conservation action to our public lands while fostering the ability of our youth to thrive in the 21st century. Service learning is "a teaching technique that engages young people in community-based problem solving" (Alberta Emerald Foundation, 2008, p. 9). In 2012 the 21st Century Conservation Service Corps (21CSC) was created in the United States as "a bold national effort to put young Americans [and veterans] to work protecting, restoring and enhancing America's great outdoors" (21CSC Federal Advisory Committee, 2012, p. 5). The 21CSC is a private-public partnership that aims to connect federal agencies involved in land management with private sector organizations that can provide a workforce tasked in completing conservation projects (21CSC Federal Advisory Committee, 2012). This partnership allows land managers to address the backlog of deferred maintenance projects, but it also provides invaluable experience for the participants. Through service, "the 21CSC will help develop a generation of skilled workers, educated and active citizens, future leaders, and stewards of natural and cultural resources, communities and the nation"

(21CSC Federal Advisory Committee, 2012). Through this mutual relationship lies the opportunity to tackle some of the biggest problems facing public lands today, engage youth in a lifetime of stewardship, and provide the next generation with the skills needed to thrive.

Chapter Three – Examination of A Precedent

The Student Conservation Association (SCA) was selected as a precedent to be examined in an extended capacity. Along with the organization's ability to engage youth in valuable work, the American-based non-profit, non-park agency organization has been successful at attaining contributions from both private and public sectors allowing them to leverage available support while maximizing their impact (The Student Conservation Association, 2016). SCA is also recognized due to its cross-border contribution, even if only on a small scale. Although strictly American-based, the program offers one international crew a year where four American and four Canadian high school students along with two crew leaders split their work partly in the United States and partly in Canada. The following section consists of a general overview of the organization, a summary of a recent study on participant outcomes, and the results from a key informant interview with the purpose of gaining a more comprehensive understanding of the precedent.

The Origin

In 1954 a revolutionary young woman, Elizabeth Titus Putnam (nee Cushman), wrote her Vassar College Master of Geology thesis proposing a modern day American Civilian Conservation Corps. Putnam recognized three major issues facing national parks during that era – insufficient appropriations, a rise in intensive visitor use, and inadequate personnel (Cushman, 1954). The thesis proposed that an organized group of youth volunteers could help alleviate these issues while allowing the park system to function better as a whole. The anticipated benefits were suggested to be tri-fold: providing value for the National Park Service, for the youth, and for the nation (Cushman, 1954). Upon

Putnam's graduation, and with the support of the National Park Service and the National Parks Association, the Student Conservation Association was created. The summer of 1957 saw the first SCA volunteers report to Olympic and Grand Teton National Parks. These students set out to monitor visitor use, lighten the workload imposed on park staff, and provide protection for the parks (Cushman, 1954).

Present Day

Founded on the simple notion that America's national parks were in need of help and student volunteers could make the difference, today, nearly 60 years later, SCA has provided the opportunity for over 70,000 volunteers to serve the country's wild spaces. SCA exists as a non-profit, nation-wide organization whose mission is "to build the next generation of conservation leaders and inspire lifelong stewardship of the environment and communities by engaging young people in hands-on service to the land" (The Student Conservation Association, 2016). The organization recognizes youth's desire to make a difference and empowers them to take action in some of America's most vulnerable natural areas. At the forefront of the conservation service movement, the work done by SCA volunteers contributes to the maintenance of thousands of structures, the restoration of millions of acres of habitat, the monitoring of species, and the maintenance of millions of feet of trails, all of which are tangible impacts (The Student Conservation Association, 2016). However, the benefits do not end there; they are two-fold: an untapped workforce for parks, and positive youth outcomes.

SCA Youth Program Outcomes and Critical Program Factors

Since 2012 the Student Conservation Association partnered with the Search Institute – a research-to-practice organization that specializes in positive youth development and knowing what youth need to thrive (Svyertsen, Sullivan, & Wu, 2015). Over a three-year period, the two organizations worked together to conduct a comprehensive qualitative investigation to determine whether SCA participants are transformed by their experiences. The research shows that “as SCA increases conservation awareness we also develop social responsibility, increase leadership skills and help fuel continuous growth, providing skills that make youth more successful in school, work and life” (Svyertsen, Sullivan, & Wu, 2015).

The purpose of the study was three-fold; to identify whether empirical evidence suggested that participants were transformed by their experiences, what aspects of the programs were the key drivers of change, and how best to use the data to inform a continues improvement processes (Svyertsen, Sullivan, & Wu, 2015). Figure 3.1 is a model that describes the theory of how SCA programs change young people. The left side of the model represents key aspects of SCA programs that acted as drivers of change including ones that are consistent and ones that are variable between their programs. The right side of the model represents the outcomes they expect to be seen in participants as a result of their experience in the program.

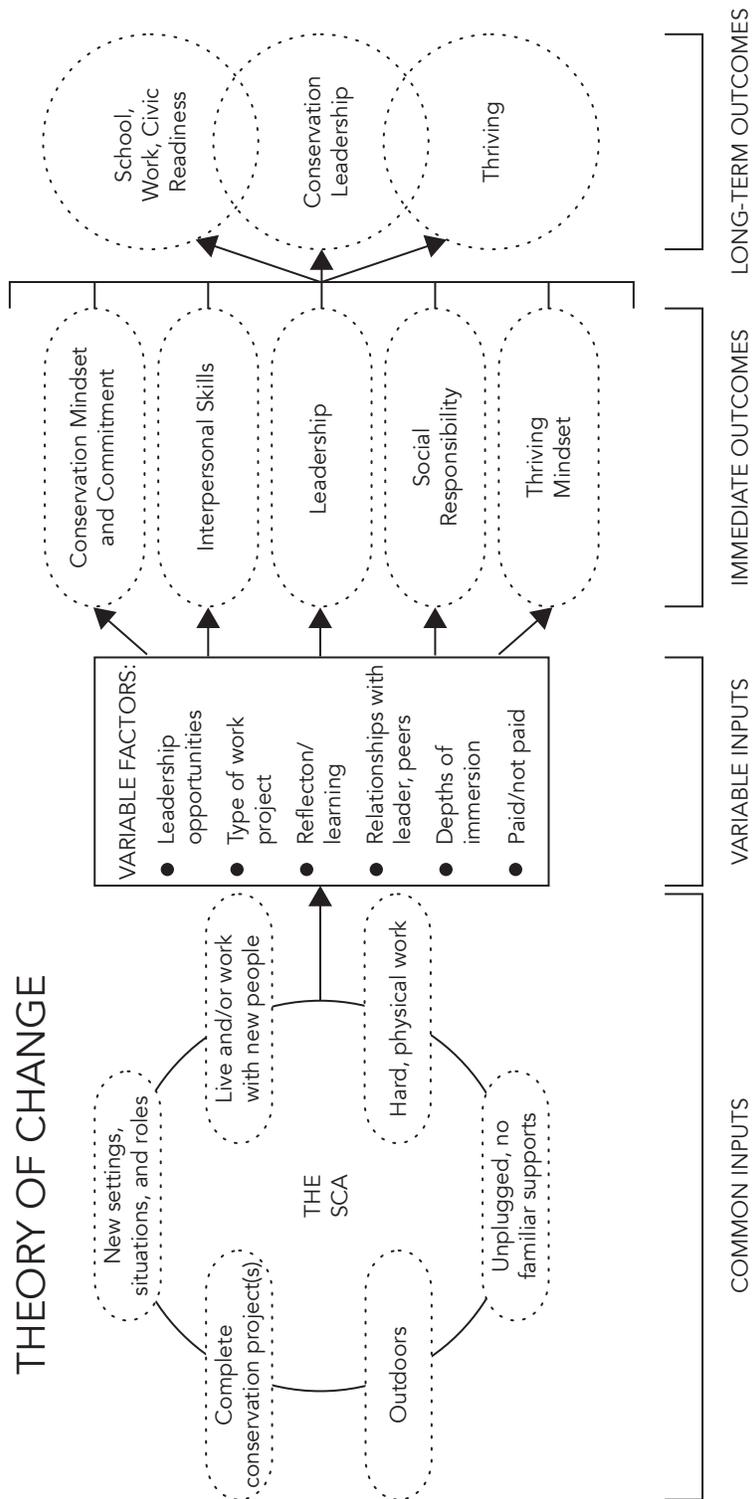


Figure 3.1 Theory of Change (Adapted from Svyertsen, Sullivan, and Wu 2015)

The research study aimed to test the theory of change by asking whether participants were transformed by their SCA experience (Svyertsen, Sullivan, & Wu, 2015). The theory of change “explains how activities are understood to produce a series of results that contribute to achieving the final intended impacts. It can be developed for any level of intervention – an event, a project, a programme, a policy, or an organization” (Rogers, 2014, p. 1). Using pre-test and post-test criteria from surveys taken by 693 national and community crewmembers prior to and after their SCA experience the results showed that participants were indeed transformed by their involvement (Svyertsen, Sullivan, & Wu, 2015). Results suggested that participants experienced stronger outcomes in every one of the areas that were measured (Svyertsen, Sullivan, & Wu, 2015). Participants showed noteworthy change in a number of indicators of conservation leadership, including having a sense of responsibility to the environment, connecting to nature, and exploring conservation careers (Svyertsen, Sullivan, & Wu, 2015). As an organization whose mission is “to build the next generation of conservation leaders” (The Student Conservation Association, 2016), this is a very important and relevant finding. The study also uncovered program levers, or program elements (Svyertsen, Sullivan, & Wu, 2015) that have an affect on the outcome including the individual:

- being challenged;
- having a quality experience;
- a supportive agency partner;
- feeling valued;
- finding the work interesting; and
- participating in reflection.

Theory of change can “help to design more realistic goals, clarify accountabilities and establish a common understanding of the strategies to be used to achieve the goals” (Rogers, 2014). Another important finding of the study is that national crew participants showed equal or larger gains than those who participated in community crews (Svyertsen, Sullivan, & Wu, 2015). Therefore, the structure of SCA’s national crews is of importance for this study.

National Crews

Over the years SCA has diversified their program offerings and conservation activities beyond the wilderness and into communities. The programs have had success with engaging diverse populations, impacting urban environments, establishing a more inclusive conservation community, and improving the places that their members call home. However, it is their National Crew Program that is of particular interest to this study.

Briefly, these national crews provide high school students with the opportunity to work and live in some of the most beautiful places that the United States has to offer. These national crews consist of 6 to 8 crew members typically aged 15 to 19, who are supervised by two experienced crew leaders. Together they engage in volunteer conservation initiatives including trail maintenance projects, protecting natural resources, and conserving vital habitats (The Student Conservation Association, 2016). The programs typically run between two to five weeks in length in the summer where crews are immersed in national, regional, or state parks. They live on site in tents, cook their own meals and learn practical outdoor skills while practicing Leave No Trace camping (The Student Conservation Association, 2016). Through their service projects, they

engage and learn from park agency members and land managers. It affords a unique opportunity providing an introduction to the outdoors, affirming experiences, empowering moments, and instilling a conservation ethic and a commitment to lifelong stewardship to the land.

Key Informant Interview

Kevin Hamilton
Vice President for Communications, The Student Conservation Association
Charleston, New Hampshire

Kevin Hamilton has been working with the Student Conservation Association since 1999 and currently holds the position of Vice President for Communications. On a day-to-day basis, he directs strategic communications, organizational branding, public relations and marketing. Hamilton agreed to share his knowledge and expertise regarding SCA's operations.

Hamilton explained that, although a national organization, up until recently SCA was also a centralized organization with the majority of their operations based out of Charlestown, New Hampshire. In 2010 the organization underwent a bit of a restructuring. They re-located their headquarters and some of their leadership personnel, including the CEO, to Arlington, Virginia. This allowed for them to be closer to DC area and all the federal agencies that comprise most of their partnerships.

Hamilton elaborated that during this move, they re-located some of their other functions including fundraising, business and partner development, and recruiting into their previously established regional offices that to date had been used primarily for running their local programs. By disbursing and empowering these specialized staff

members it allowed the SCA's operations to better understand and serve partners, regional needs, and prospective members. As a result the organization is now a more effective internal organization and an improved external service-provider.

When asked to discuss barriers facing program implementation and participation, Hamilton identified funding as a barrier to implementation. He went on to explain that the approximately 75% of their funding comes from resource management partners versus the 25% that comes from philanthropy, grants, and earnings. Therefore, if government budgets tighten, it has a direct impact on the capacity of the organization to provide service opportunities. This is an ongoing issue and the SCA has been proactive at seeking out new partnerships.

Hamilton described that from a participation point of view there have not really been any limitations. As an example he explained that SCA fields approximately 4,000 youth a year in their 'immersion' programs and receive roughly four to five applications for each position available. The desire of young Americans to serve far outpace the opportunities to serve and this, as Hamilton admits, is unsettling to the organization.

When discussing critical threats and strategies to overcome them, Hamilton stresses the importance of diversifying their revenue portfolio. They have already taken action to do this but it is their hope that, in the future, they will sit at a fifty-fifty funding balance from government and private sources. The results of the participant outcome study conducted by the Search Institute have also contributed to them being more attractive to funders to different types of funders. Still appealing to those focused on conservation, they now attract interest from those wanting to aid in youth development.

The remainder of the conversation was directed towards recommendations for creating a similar framework in a Canadian context. Hamilton explained that coincidentally the CEO of the Student Conservation Association, Jaime Matyas, recently presented the keynote address at the inaugural Canadian Parks Summit. She was asked to participate because Canadian park officials are equally as concerned about our youth experiencing ‘nature-deficit disorder’ as are officials in the United States. Hamilton suggests that creating an initiative like SCA requires commitment, focus, and investment. It is important to have a vision of where you want to go, but know that it will take time. Using Putnam’s thesis as an example, he re-iterated that it did not happen overnight, but six decades later the impact is undeniable. He concluded that it is important to start small, but think big.

Chapter Four – Building on Past Work

Two previous studies commissioned by Alberta Parks and the Canadian Parks Council laid the groundwork and provided a starting point for this research. The next section briefly outlines and summarizes each report for a better understanding of their importance in formulating this current project's program element criteria.

Best Practices for Youth Engagement Report

Based on information gathered from the CPC YEWG, this report designed a youth engagement toolkit as a resource to aide in the creation of successful and innovative youth programs (Cotter & Lavoie, 2009). The four main goals of the toolkit were:

- Connecting Youth with Outdoor Recreational Activities
- Connecting Youth with Their Natural and Cultural Heritage
- Fostering the Next Generation of Park Employees, and
- Fostering the Next Generation of Environmental Stewards

The study identified common themes, positive attributes and key values for best practices in engaging youth. The authors then selected nine examples of best practices from a wide range of contexts including NGOs, volunteer organizations, commercial operations, and educational programs (Cotter & Lavoie, 2009). In order to achieve the best diversity possible, the study nominated programs not run by park agencies so as not to be limited by conventional parks thinking. These nine examples serve as a starting point for the current projects investigation into youth initiatives.

Engaging Youth in Canada’s Parks Report

The second study takes information gathered from the *Best Practices for Youth Engagement Report* discussed above and further investigates and refines the key values, cravings that drive behaviour, and best practices of youth engagement (Church & Burger, 2011). Collectively, they are of importance to this research because previous studies, advisory panel respondents, and current literature suggest that these are common themes present in successful youth initiatives, or trends that contribute to youth participation. These elements were combined into a table for clarity, and are presented over the next few pages.

Elements of Best Practices for Youth Engagement: Best Practices

Table 4.1 draws on the insights of existing youth programs and identifies best practices for sustainable youth programs.

Table 4.1 Elements of Best Practice for Youth Engagement (Adapted from Church and Burger 2011)

PARTNERSHIPS	Partnerships may be technical, strategic, financial, etc.
MENTORSHIP	Mentorship may be peer-to-peer or intergenerational.
ENGAGING YOUTH BY ENGAGING FAMILIES	Especially important for youth under the age of 14, but not as vital for "older" youth.
SOCIAL	Provides youth with opportunities to share common experiences with other youth in a supportive environment, and in many cases also provides opportunities for youth to work collaboratively alongside adults and mentors.
STEWARDSHIP	Encourage stewardship by providing youth with opportunities to develop a sense of ownership or agency by making meaningful and valuable contributions in their communities.
STEWARDSHIP	Encourage youth with opportunities to interact with natural systems within the built environment so they can make connections with nature and the urban setting.
STEWARDSHIP	Engage youth by providing them mentorship and authentic career related experiences that can assist youth in considering future career options in an area of interest.
STEWARDSHIP	Project is viable, sustainable, and has solid partnerships, and has the capacity to adjust to meet the changing needs of youth and the diversity among youth.

Like the previous study, *Engaging Youth in Canada's Parks* selected youth engagement initiatives to be evaluated based on the CPC Youth Engagement Program evaluation. All thirteen of the initiatives audited met at least one of the four goals of the 'youth engagement toolkit', and were representative of several of the best practice criteria outlined above. Unlike the previous study that took a diverse look at programs, this study chose to only audit Parks Canada Agency youth engagement programs.

Between the two studies, the twenty-two programs that form the basis for the CPC Youth Engagement Program evaluation act as an important starting point for this research. Each program was nominated because they met the required criteria for 'best practice in

youth engagement' and were deemed to be successfully engaging youth in some capacity.

Therefore these programs will be the first to be evaluated against program criteria

construction in the following chapter.

Chapter Five – Determination and Implementation of Selection Criteria

Determination of Selection Criteria

With knowledge of the existing research done by the Canadian Parks Council, a comprehensive review of literature, and a thorough examination of the precedent, a set of program element criteria was created. The nine criteria represent program elements seen as valuable to youth conservation initiatives. Table 5.1 outlines the desired program elements.

Table 5.1 Program Element Criteria (Adapted from American Conservation Experience, 2016)

	CRITERIA	DETAIL
1	RELEVANT	Program currently exists in full operational capacity
2	POPULATION SERVED	Program serves young people primarily aged 14-19
3	TERM OF SERVICE	Program minimum term of service is 3 weeks of on-the-ground, hands-on direct service
4	ORGANIZATION OF WORK	Program a) Is crew-based where participants work collectively and intensely together directly supervised by trained and experienced crew leaders and/or conservation professionals b) Immerses participants for an extended period of time in the natural world
5	TYPES OF WORK	Projects include: a) Direct “hands-on” service/impacts contributing to improvement of the natural environment b) Significant outdoor activity that helps young people connect with the Canadian outdoors
6	PARTICIPANT OUTCOMES	Program: a) Connects youth with outdoor recreational activities; b) Connects youth with their natural and cultural environment; c) Fosters the next generation of park employees; d) Fosters the next generation of environmental stewards
7	EXPANSE OF WORK	Program is nation-wide
8	COMPENSATION	Program is on a volunteer basis (*or minimal stipend/credit-based)
9	ENROLLMENT COST	Program cost is none (*or minimal)

When selecting the criteria, careful consideration was taken to ensure that each element embodied what the literature and precedent identified as factors contributing to successful project outcomes. It was important for the scope of this research to identify and further explore programs that were relevant and currently in full operational capacity. This enabled contact to be made with existing programs thought to be successful to gain a more thorough understanding of their practices.

The desired target population was that of youth aged 14-19 years of age. Riemer, Lynes and Hickman (2013) identify youth (age 13-18) as an attractive target group for environmental engagement (Riemer, Lynes, & Hickman, 2013) because they are in their formative years, which determines their roles, responsibilities and the identities that may persist for the rest of their lives (Riemer, Lynes, & Hickman, 2013). These age groups, particularly youth, also have the flexibility of fewer time constraints, and the ability to take risks without compromising their livelihoods (Riemer, Lynes, & Hickman, 2013). This age demographic is also nearing a time when they have to make decisions regarding their education and career paths and therefore participant outcomes could have a large impact on establishing their direction. They are also at the age where their physical strength should be adequate enough to endure tasks and efficiently service projects.

The minimum term of service preferred is three weeks on the ground hands-on work allowing sufficient time to complete required tasks and provide meaningful participation. Longer terms of service are encouraged as it allows more time to achieve program goals and participant outcomes. Typically youth want to make a difference and feel engaged and empowered, and “organizations and programs that provide opportunities for short-term measurable impacts will likely be more successful in engaging the youth in

the long-term (Riemer, Lynes, & Hickman, 2013, p. 56). These relatively short but intense experiences can play a very vital role in youth development (Riemer, Lynes, & Hickman, 2013).

In terms of the organization of the work desired programs are crew-based where participants must work collectively and intensely with other individuals to achieve tangible outcomes (Riemer, Lynes, & Hickman, 2013). This forces crewmembers to build quality relationships and improve communication skills. Trained and experienced crew leaders also directly supervise the crews. These actors work to ensure safety, provide adequate training and foster experiences that promote learning and leadership development. These interactions will take place while immersed in the natural world, without technological distractions in hopes that human-environmental connections can be made. Crewmembers are encouraged to interact in knowledge-sharing and skill-building with land managers and conservation professionals. It provides a unique hands-on opportunity to learn more about best practices as well as to have exposure to various environmental professions.

Programs that operate on a nation-wide scale are of particular interest. This ensures that the organizations are not restricted by geography, and can provide service to areas in need: those that are highly desirable placement locations, and those places under stress of overuse and diminishing user experiences.

Despite the success that some U.S. organizations have had employing conservation corps, this research explored volunteer-based initiatives because of the limitations of funding available in the Canadian context. A 2012 Conservation Corps

Project Analysis conducted by the U.S. Department of the Interior sought to determine how the cost of engaging conservation corps compared to more conventional methods of using National Park Service workers or contracting out jobs. The study found that employing a conservation corps was the least expensive of all options, saving on average of 65% or over \$50,000 per project (Park Facility Management Division, 2012). With those values in mind, volunteer conservation crews tend to cost less money to operate and engage with because participants are not paid wages. These organizations cost far less to operate and satisfy the volunteer service movement. It is said that volunteering at a younger age is more likely to foster an ethic of civic engagement later in life (Riemer, Lynes, & Hickman, 2013). To encourage participation and reward volunteerism, having minimal to no enrollment fee was an attractive program element.

The participant outcomes stated in the selection criteria embody the elements identified by the Canadian Parks Council as goals of the youth engagement toolkit. Adopting these principles allowed the criteria to maintain relevancy to the Canadian context and existing research on the topic. Existing initiatives were measured against the criteria to determine programs relevant for further evaluation. These criteria, modified with input from key informants, also formed the basis for framework recommendations.

Implementation of Selection Criteria

In order to identify gaps in the literature and to determine whether any organizations fulfill the desired program elements already, existing organizations were tested against the program element criteria. The twenty-two programs identified by the Canadian Parks Council studies acted as a starting point in this investigation.

The non-park agency programs involved in the Canadian Parks Council *Best Practices for Youth Engagement* evaluation (Cotter & Lavoie, 2009) were tested against the program element criteria. These programs were diverse in nature and offered samples from Canada and the United States. The results are illustrated in Table 5.2. Solid blocks represent the initiative satisfying the criteria, an absence of fill represents the initiative not satisfying the criteria, and a triangular half block represents a partial fulfillment; which occurs when the program only satisfies part or a singular component of the selection criteria.

Table 5.2 Evaluation of Program Elements: Non-Park Agency Initiatives

Non-Park Agency Initiatives		Teton Science School	Whistler/Blackcomb Peak Experience	EEPSA (Environmental Educators of BC)	New York Urban Forestry (Onondaga Earth Corps)	FlyingWILD	California Centre for Civic Participation	Calgary Bridge Foundation for Youth	RCMP Youth Academy	Golden Gate National Conservancy
		Selection Criteria	Relevant	■	■	■	■	■	■	■
Population Served	■		■	■	■	■	■	■	■	■
Term of Service	■									■
Organization of Work	■									▲
Types of Work					■					■
Participant Outcomes	■		■	▲	■	▲	■	■	■	■
Expanse of Work										
Compensation	▲		▲				■		▲	
No Enrollment Cost			■		■		■	▲		■

■ Fulfillment of Criteria	▲ Partial Fulfillment of Criteria	⋯ Criteria Not Satisfied
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The Canadian park agency youth engagement programs that met the Canadian Parks Council *Best Practices for Youth Engagement* evaluation were tested against the program element criteria. The results are illustrated in Table 5.3.

Table 5.3 Evaluation of Program Elements: Non-Park Agency Initiatives

Selection Criteria	Park Agency Initiatives	Canada's Greatest Summer Job	Conservation Action Team	DEEP Students Program	Fish Creek Environmental Learning Centre	Ivavik Bio20 Youth Camp	Learning in Nature Adventure Program	My Parks Pass	Nunavut Jr. High Env'l Stewardship Camp	Palisades Stewardship Education Centre	Seasonal Interpretive Recruitment Program	SEPAQ Program	Watershed Internship Program	Yukon Youth Conservation Corps
	Relevant													
Population Served														
Term of Service														
Organization of Work														
Types of Work														
Participant Outcomes														
Expanse of Work														
Compensation														
No Enrollment Cost														

In the case that organizations may have been overlooked by the CPC and in attempts to ensure that a thorough evaluation was done of existing youth organizations, an additional search was conducted. Using the key words, “youth conservation initiatives”, “Canadian youth conservation programs”, “volunteer nationwide youth

conservation organization,” six additional organizations were identified and tested against the criteria; they appear in Table 5.4.

Table 5.4 Evaluation of Program Elements: Other Youth Initiatives

Selection Criteria	Other Youth Initiatives	The Student Conservation Association	Stewardship Youth Ranger Program	Youth Conservation Corps (YCC)	Nova Scotia Youth Conservation Corps	American Conservation Experience	Environmental Stewards	Katimavik
	Relevant		■	■	■	■	■	■
Population Served		■	■	■	■	▲		
Term of Service		■	■	■	■	■	■	■
Organization of Work		■	▲		■	■	■	▲
Types of Work		■	▲	▲	▲	■	■	▲
Participant Outcomes		■	■	■	■	■	■	■
Expanse of Work		■		■		■	■	
Compensation		■				▲		▲
No Enrollment Cost			■	■		■	■	■

Fulfillment of Criteria
 Partial Fulfillment of Criteria
 Criteria Not Satisfied

Discussion

When evaluated against the criteria, no organization successfully embodied all program elements, including the SCA who just recently announced a new program participation fee to be implemented in 2016. It was determined that there would be value in further exploration of programs that were highly successful in achieving the criteria. Therefore, this included only one of the twenty-two programs identified by the Canadian Parks Council studies. The secondary search yielded more successful results. The

selected programs were contacted for participation in key informant interviews to discuss topics pertaining to barriers to program participation and implementation, organizational structures, and common themes relating to youth conservation initiatives.

Chapter Six – Key Informant Interviews

Interviews were conducted with individuals having experience operating conservation initiatives, conservation professionals, and those who would stand to benefit from a relationship with such programs. The following chapter presents a summarized account of the information gathered through in-depth interviews. The interview outline conducted with the key informants can be located in the Appendix.

Youth Conservation Initiatives

Principal members at four conservation organizations identified in the previous chapter were contacted for interviews. These informants have over 80 years of combined experience working with various youth engagement initiatives, which formed the basis for the knowledge, information, and recommendations, they shared.

Michael Rendon
Program Director, Environmental Stewards (Conservation Legacy)
Durango, Colorado

Michael Rendon brought his diverse background in many interrelated fields to Conservation Legacy in 2012. Some of his prior experience includes over 1700 hours with Americorps National Civilian Community Corps, the role of Coordinator for the Fort Lewis College Environmental Center, Co-Chairing the President’s Advisory Council on Environmental Affairs, and one year as Mayor of the City of Durango, Colorado. Now he is the Program Director of Environmental Stewards working under the umbrella organization of Conservation Legacy.

Conservation Legacy is a national organization, previously known as Southwest Conservation Corps, committed to providing support to locally based conservation

programs. Through supporting these programs and the service opportunities they provide, they enable and encourage diverse groups of individuals to make positive impacts on their local communities and the world around them.

Environmental Stewards, a sub-program of Conservation Legacy, provides individual and group placements for young people who are interested in gaining hands-on experience in natural and cultural resource management. The program connects youth with local non-profit and federal organizations who have work that needs to be done. This affords participants the opportunity to gain valuable experience working for government agencies while making a difference in their local communities. The Environmental Stewards program supports the notion that if you grew up near a national park you should be able to work in that park to help make it a better place. Therefore, through coordination and cooperation with governmental bureaus, Environmental Stewards draws from and makes it easier for local pools of youth to get outside and engage in meaningful work.

When speaking of barriers to participation, Rendon acknowledges that the interest from youth is often in excess of the amount of positions available, resulting in the organization having to turn away applicants. He also noted that there are challenges when it comes to the ability to access information related to participation. For example, it is sometimes difficult for aboriginal youth to access job postings because of little to no Internet availability on the reservation. With diversity of engagement being important, this is a real barrier to participation.

Generally speaking, although interest is not an issue, sometimes restrictions occur when federal agencies target a specific demographic for their placements. For example, although youth are classified as anyone under the age of 35, some positions will only accept applicants under the age of 26 to avoid non-compete situations and to meet policy demands. Rendon identifies some barriers to implementation, including factors such as the participant's capacity to drive a government vehicle or the ability of an agency to provide housing for more remote locations. One of the critical threats identified for continued existence was funding. Given that funding is provided by government agencies, if the government shuts down there is a risk that these placements could disappear all together.

Joey Ruehrwein
Director of Partnerships, Environmental Stewards, BRIDGE Network
Director of Partnership and Development, The Student Conservation Association
(Past)
Vail, Colorado

Joey Ruehrwein holds a Master of Science in Recreation Resources Management from Utah State University. He has been working as a part of the conservation service movement for the last 13 years and has 20 years of experience working with youth and natural resources. During his 12 years with the Student Conservation Association he held various roles, but his last four years were spent as the Director of Partnership Service and Development. With extensive knowledge of non-profit leadership and state and federal partnerships, Ruehrwein now occupies the position of Director of Partnerships with Environmental Stewards.

Although diversity in key informants was preferred, it was recommended by Michael Rendon that I speak with Joey Ruehrwein because of his experience working

with both Environmental Stewards and the Student Conservation Association. Speaking with Ruehrwein provided a unique opportunity to compare and contrast the strengths, weaknesses, and operational structures between government entities and private organizations.

Ruehrwein identifies that an initial challenge to any youth program is educating the target youth that the experiences exist, and then engaging those young people. He admitted that the rate of pay or giving of one's self to volunteer can be a barrier to participation. Due to the cost of education, youth are under increasing pressure to make some of their own spending or college money during their time off in the summer. Since many internships pay very little, it can prove to be challenging.

The next barrier that came to mind was the challenge of transportation. This can be especially difficult if the opportunity is not within the local geography of where the participant lives. The inverse is also true in that if transportation is addressed providing housing may become the issue.

Like Rendon, Ruehrwein identified that additional barriers exist when it comes to engaging and accessing diverse populations. The issue of transportation might be amplified in that nearby and regional placements might be just as difficult to access as more remote places. When you are attempting to diversify your workforce you are also asking these young people to take the initial challenge of going places where not everyone looks like them or where there is no support system for them.

When asked to identify the most prominent barriers affecting program implementation, Ruehrwein admits that challenges vary depending on whether the

initiative is a government entity or a private organization. In the case of a government supported project or program like a youth conservation corps, it can be quite difficult to start a new program because of specific policies or procedures and the highly regulated nature of the government. On the other hand, one of the biggest barriers for private organizations is setting up a conduit to transfer funds from the government to the organization. That is typically done through either a contract or an agreement – an agreement being the more desirable and efficient approach.

Another important consideration that Ruerhwein acknowledges is basic organizational structure. Especially when dealing with partnerships; there has to be a clear understanding between the organization and the partner agency who is responsible for liability insurance, workers compensation, benefits, and providing monitoring and supervision. The elements of cost-sharing, recruitment, payroll, risk management, and policies and procedures are among some of the other factors that need to be considered when creating a program.

When asked about the differences between the organizational structure of the Student Conservation Association and other conservation programs, Ruerhwein identified that there are three primary models. The first model he explained was the individual corps' model, where the organization typically focuses on one style of programming often in a small geographic location. These local or regional corps essentially become experts on what they do and whom they serve, and participant outcomes tend to be the same for every member. These smaller models typically have one point of contact wherein their director might be in charge of overseeing all organizational components, from recruitment right down to finances. The depth of expertise in this type of program may be

less, but it is often more specific and tailored to the needs of the smaller geographic area they serve.

The second model Ruerhwein identified is essentially the opposite, and historically has been the one adopted by the Student Conservation Organization. An organization like SCA, as a national outreach organization, is generally managed through a national outreach system. They operate with a lot of shared resources in that they will have a member department, a finance department, and a program department. Each department will be involved in the operations of the wide variety of programs they offer including individual internships, community, and national crews. Typically organizations like this might not possess the breadth of expertise in each local geographic area that a smaller corps may have, but for example they will know everything about the park service and they will have the necessary contacts in Washington, D.C.

The third model identified is the one adopted by Conservation Legacy, which is a unique hybrid of the previously discussed models. They operate with a national support office that deals with human resources, insurance, benefits and liability, but they have four or five district brands that operate on a smaller scale. For example, the Environmental Stewards is one of their brands, but it receives support from the umbrella organization of Conservation Legacy. It provides a combination of what you would get from national and local programs.

Ruerhwein detailed that sometimes sources of funding and approaches to attaining it can vary between models. A locally-based program may tap into funding that has been generated from the ground up in a local area or from a top down initiative that attracts

them. If the latter is the case, they may hear that the Washington office has ‘X’ amount of funds to allocate to trail work; they could then partner with a local park that has trail work that needs to be done, and collectively lobby for funding.

SCA has spent a lot of time in reaching out to host sites and agencies, looking for ground-up money. However, they also spend a lot of time developing their expertise so they know what funding will be available and the steps needed to attain it. Ruerhwein admitted that sometimes it makes much more sense for a national program to work on a large-scale national initiative. It provides consistency for the partner organization in knowing that the same program will be completing all the required tasks. It removes the inconvenience of having to find five different local organizations and coordinate them to do the work that a larger body could have done. Funding can also be acquired through sponsorship or philanthropy from corporate entities, but organizations do have to carefully manage where this money comes from and how it is allocated. The bottom line is that money does provide more opportunities to engage youth and increases the ability to accomplish goals.

When asked if he had any recommendations for the creation of a nation-wide youth engagement program in Canada, Ruerhwein recommended that it is better to start small. There are a lot of advantages to individual placement models because the majority of the supervision and training is done by the host agency. With a national crew-based model, most of the responsibility lies within the organization. One must consider everything from quality assurance and quality control, the coordination of travel and remote training, and details such as staff member background checks and incident response plans. Ruerhwein suggests that it is possible, but it might have to be completed

in stages. It might be wise to start at a regional scale until the program has the capacity to further expand their scope and operate independently.

Christopher Baker
Founder, CEO and President - American Conservation Experience
Flagstaff, Arizona

Christopher Baker has over 18 years experience working in the field of conservation and youth development. His journey began in 1996 in a local conservation corps in Arizona. Within a few years, his role progressed to a crew leader position, and shortly after that was presented with an opportunity to take a position with Conservation Volunteers Australia – a very successful organization based on the Conservation Volunteer Model. During Christopher’s time in Australia he studied how their system worked and left determined to re-create their program in America. The result is the American Conservation Experience (ACE), a conservation volunteer program for both volunteers and paid Americans.

In 2003, Baker founded ACE as an independent non-profit organization that has evolved to become a national leader in engaging volunteers in meaningful environmental restoration projects in some of America’s most valuable public lands. Combined with a proper level of training and coordination, participants gain practical skills and develop confidence working with professional land managers and like-minded individuals. ACE offers a variety of programs from the original conservation corps model, to numerous volunteer service programs.

When asked about barriers to program participation Baker admits, that through his experience with ACE, recruitment has never been an issue essentially from day one. In fact, the opposite is true – there is a tremendous level of interest to participate resulting in

applicants being turned away every year. He acknowledges that there may come a day where the unemployment rate in America is so low, and the economy is so strong that everyone has jobs and therefore do not want to take the time off to volunteer, but so far that has not been the case.

Baker suggests it is attractive to both engage and work with conservation corps. The presence of conservation corps allows the federal government access to a labour force that is available as needed for the duration needed. It is a beneficial and symbiotic relationship that exists between agencies and conservation corps. In a sense, conservation corps supplement the hiring process and become a recruiting platform as alumni graduates of corps programs are often some of the first hired by the federal agencies.

Baker describes one of the biggest challenges facing program implementation is the assurance of quality of work. He recognizes that not all conservation organizations operate in the same way; some have varying levels of training, experience and standards. Issues arise when land management agencies feel as though they constantly have to monitor the crews due to factors such as lack of motivation, inadequate training, or failure to understand the task at hand. In some cases, agencies opt not to have the work done so as to avoid having to oversee an unfit crew. However, the inverse is also true. If a conservation organization can provide a crew who are responsible, have the required skillset and training, and are self-contained and motivated by enthusiastic crew leaders, agency partners welcome these opportunities and often dedicate more funding to such initiatives.

When making the comparison between conservation corps models and volunteer programs, Baker admits that in the case of the United States there is a large amount of federal support for the conservation corps movement. The Corps Network is the association's advocacy group who lobby in Washington D.C. for funding, educate about the benefits of the corps model, and offer conservation corps accreditation status. The funding made available cannot be used to fund a strictly volunteer program; rather it holds the definite distinction of being used on programs involving paid Americans. Baker admits that volunteer initiatives could essentially be considered a competitor to the conservation corps model. It costs almost twice as much to run a corps because you are paying your members regardless of how little the wage is. That being said, the Corps Network has lobbied so that much of the federal agency and park service funding is to be utilized for paid Americans. Therefore volunteer organizations cannot access some of those sources, but there are others sources available including much more diverse funding opportunities not available to corps due to more strict government regulations.

In terms of recommendations, Baker echoes the sentiments of other key informants in regards to starting small. He admits that there are very few organizations that can be founded purely on a national scale. Even ACE, a present day national leader in conservation started locally but was quick to build and expand over the years. He does think that Canada is a perfect place to grow and eventually implement a nation-wide youth program. He recognizes the value of the available open space, the lands to be conserved and the strong presence of park agencies. He suggests two approaches: (1) to do it alone as a sole founder dedicating one's self completely to forming this non-profit

organization, or (2) to incubate it while drawing from the resources of an already established organization.

When suggesting starting the organization incubated, Baker refers to doing it under the auspices of an existing organization or to become a branch of an existing entity. That way all the staff, payroll, audits and other systems that would have taken time and resources to develop are already established, in essence a security blanket in that you are able to tap into existing resources. Baker follows with the thought that there could be a parent organization to help launch the initiative whether the roots begin in Canada or the United States. He assumes that the resource management needs, attractiveness of the work, and the means for attracting volunteers would be similar between countries. Baker went as far as to say there is not anything stopping ACE from being that parent organization to help launch a Canadian branch. He supports the notion that any positive initiative begins with an idea, a general structure, funding and a bit of guidance and anything could be brought into fruition.

Morris Lamrock
Youth Programs Coordinator, Environment Yukon
Whitehorse, Yukon

Morris Lamrock is the Youth Programs Coordinator for the Department of Environment in the Yukon Territory. Before coming to Environment Yukon, and after completing his education at the University of Victoria, Lamrock founded Stewards of Irreplaceable Land (SOIL) in 1989, a non-profit society connecting Canadian organic farmers with interested apprentices. Since then, Lamrock has been sourcing out projects,

recruiting participants, and overseeing and successfully coordinating crews for the past 10 years.

The Yukon Youth Conservation Corps (Y2C2) is one of two primary youth programs offered by the Government of Yukon. Y2C2 is a summer employment opportunity fully funded by the territorial government with an emphasis on environmental education and enhancement. Now in the 26th year of existence, the program sends out two crews a summer, each comprised of four high-school-aged field workers and one crew leader typically aged 16-30 to work on projects all over the territory. Members are supplied with basic training, and equipped with all the tools, gear, and food they need to accomplish their assigned tasks. Although a conservation organization, the coordinator makes sure that every project they engage in has a strong education component. This ensures that field workers learn about the ecological or historical values of their work from project proponents, First Nations people and agency members. The overarching goals of Y2C2 revolve around conservation, training and job creation, building relationships – with others, the environment, and one’s self – and assisting groups in getting work done.

Lamrock details that on average there are roughly 20-30 applicants for the 8 high school field worker positions, and a similar number of applicants for the 8 senior staff positions. He admits this is a less than ideal ratio, but recognizes that if this were a larger city in Canada there would be thousands of applicants. Because the Yukon Territory has a smaller population, they are fortunate in that way. Although there is a great deal of general interest. Lamrock identifies that a quarter of the population in the Yukon is First Nations and he would love for a quarter of the staff and students to be as well. Typically

this has not been achieved as it is challenging to reach out to the First Nations communities and get them to participate in the programs due to a variety of cultural reasons.

Lamrock revealed that because they are governmentally funded, financial support has never been an issue for the organization over the entire duration of its existence. This includes monetary funds as well as resources such as access to trucks, tools and other supplies. He does not see this being an issue in the foreseeable future especially as the world becomes more ecologically aware. However, nothing is ever certain, government funding gets cut, jobs become scarce, and people become concerned about their future and financial security.

In terms of barriers to implementation, Lamrock suggests one problem that may arise is the scarcity of projects. They have been around for so many years that they have addressed much of the 'low hanging fruit' in terms of work assignments that they may soon have to work a little harder to find projects that are not obvious. The positive takeaway is that progress has been made so far and a lot has been cleaned up and restored; but he suggests there will always be more that can be done to make the human interaction with the natural world a much more balanced one.

When asked to identify one thing that he would consider the most critical threat to the organization he responded with human consciousness. He fears the day where either the government or a large population decide that conservation is not important anymore, that jobs for students are not important. He stresses that it is imperative that we include

youth in decision-making. He believes that adults often see too much out of the same lens while youth offer a different and valuable perspective.

Lamrock strongly supports the notion of a nation-wide youth engagement program and suggests that it should address three primary foci. He used the analogy of a three-legged stool in that there should be an ecological stewardship component, a social responsibility component that involves First Nations and traditional knowledge, and an economic component for it to be successful; without all three legs the program is challenged. He believes there is a tremendous opportunity to create a program that has this three-pillared approach to engage young people in valuable work. He supports the notion of this being proposed as a volunteer initiative so that it does not cost a lot, but work can be done in exchange for labour and enthusiasm. Lamrock suggests that program like this could truly change lives and change the way we live on this planet.

Park Agency Members and Conservation Professionals

Conservation professionals with prior experience or those who would have direct contact or invested interest in the proposed framework were interviewed to gain their perspective. Their expertise in the field of conservation formed the basis of their responses.

Robert Wilson
Senior Park Ranger and Area Supervisor, BC Parks
Cultus Lake, British Columbia

Robert Wilson has been a Senior Park Ranger at BC Parks since 2001. Rob was selected for a key informant interview because of his direct contact with the Student

Conservation Association's sole international crew that splits its time between Washington and British Columbia. This year marks the 31st year of the existence of this unique crew and cross-border relationship.

Rob was able to provide a bit of information on the history and current status of BC Parks in order to gain a perspective on their growing needs. Wilson admits that the agency has gone through a period of transition. In the 1980s they were at their largest size as a government agency. They were well equipped with resources and their staff was responsible for every activity that occurred within the park system including collecting fees, conservation work, cleaning sites, and addressing compliance and enforcement. In 1991 BC Parks represented 6% of the province; in 2016, they manage over 14% of the province. This is an incredible feat for conservation, but not when the agency has become leaner in regards to the physical and financial resources available to manage the land. Because of the large area they are responsible for and a budget that has not increased in over 10 years, they have to be more efficient with the delivery of their services. They now outsource most front country maintenance to park facility officers so that their rangers can deal strictly with compliance enforcement, backcountry work, and engaging volunteers. As an example, Wilson is responsible for managing over 20 provincial parks by himself, and is allotted two seasonal ranger staff in the summer.

Especially with the limited human resources available, Wilson stresses the importance of stakeholder and volunteer engagement in achieving a number of objectives. Through involving these actors in the management of the park system they are able to instill a sense of stewardship and increase the likelihood that they will want to protect those areas from that point on. By fostering a sense of pride regarding the condition of the

park and engaging volunteers, they are able to increase the capacity level of the staff to get work done.

When asked to speak of his experience working with the Student Conservation Association, Wilson remarked that they are “an absolutely amazing group and I am really pleased to have been a part of it for so many years”(Wilson, 2016). He acknowledges that administratively working with SCA is pretty seamless. Apart from some lead-up time to prepare a project for the crew they are self-sufficient in the field and work independently although Wilson does like to send a ranger every few days to check up and provide guidance.

Logistically speaking, Wilson admits that BC Parks would not have access to the SCA crews if it were not for outside funding. The Skagit Environmental Endowment Commission (SEEC) has access to a substantial budget as part of an International Treaty between the province of British Columbia and the City of Seattle over the High Ross Dam Proposal (Skagit Environmental Endowment Commission, 2016). It is their contribution that allows the SCA to split their time working in both the Skagit Valley Provincial Park and in the North Cascades National Park. Without this external support it is highly unlikely that alternative funding sources would be attainable.

When asked to identify any challenges presented with working with the SCA, Wilson acknowledged that due to the limited time the crew leaders have between their arrival and the time the students arrive in the park it can be difficult for them to wrap their heads around the project and understand it fully. Often, the crew leaders fly into Seattle and do not get to visit the Canadian location prior to the first day of work with the

students. Therefore, all communication about the project and the tools and supplies needed to undertake the task in the protected area is done electronically.

Wilson identifies that as far as he is aware there is no program that exists in Canada that mirrors the SCA. There have been some in British Columbia over the years that are similar, but often they come and go as the government changes hands. That is the issue with government funding, when governments change – which can happen every four years – the new government decides which programs to fund and whether they want to put their own stamp on a program, and sometimes when budgets are small it is those programs that are taken away. Sustainable funding is the limiting factor for the continued existence of these programs. Wilson suggests that in order for these initiatives to be successful they have to find a way to be self-sustaining and not reliant on government funding.

Although BC Parks has renewed their volunteer program over the last few years it does not specifically target youth or focus on the immersion aspects that are offered through SCA experiences. They would love to see SCA expand into Canada or for a program similar to SCA to operate in the same capacity. It was suggested that if there were a way to make such a program self-sustaining it would be highly desirable by many land managers. BC Parks recognizes the importance of engaging youth and helping them understand the importance of preserving protected areas. The very youth that are targeted by programs such as SCA, target become our future leaders and our future park managers.

Harry Bruell
CEO & President, Conservation Legacy
Appointed Chair, 21st Century Conservation Service Corps Advisory Committee
Co-Chair, Partnership for the 21st Century Conservation Service Corps (21CSC)
Durango, Colorado

Harry Bruell is a national leader in the conservation corps movement with over 22 years of experience in leadership positions at the local, regional, and national scale. Bruell is the current President and CEO of Conservation Legacy – the previously mentioned national umbrella organization that supports locally-based conservation programs. In 2011 Bruell was appointed by the Secretary of the Interior, Ken Salazar, as the Chair of the 21st Century Conservation Service Corps Federal Advisory Committee. The result was the creation of a group called the Partnership for the 21st Century Conservation Services Corps (21CSC) of which Bruell is one of the co-chairs.

“The 21CSC is a public-private partnership between federal agencies responsible for resource conservation and the management of public lands and the private sector that increases civilian national service positions and encourages those agencies to use conservation corps to meet their mission at no additional cost to the taxpayer” (The 21st Century Conservation Service Corps, 2016).

Although Bruell has experience working with numerous conservation initiatives the focus of our conversation revolved primarily around the 21CSC. Bruell explained that 21CSC was created by recognizing that there were a lot of existing conservation programs across the country and rather than creating another federally run program it would be more efficient to build off the existing infrastructure. Therefore the 21CSC was created as a federal support network to raise resources for existing programs that are operated by federal and non-federal partners. This collectively engages like-minded organizations in achieving the goals of providing young people and veterans the opportunity to engage in work that aides communities in becoming more resilient, and

helps address the backlog of maintenance work that exists in most national parks and public lands.

Essentially programs can become certified as being part of 21CSC, which gives them the opportunity to access resources allocated by federal, non-federal, and corporate agencies. For example, the federal government will look at the body of work they complete every year and determine which part of their maintenance and operations could be accomplished by a conservation organization. Currently the National Park Service engages with this the most. Because not every project or intended use of funding is applicable to all organizations under the 21CSC, programs will apply for the funding in a way that is essentially market driven.

When asked if Bruell could identify a consistent barrier to youth participation in conservation programs he answered that the biggest one was a lack of positions. Using Conservation Legacy as an example, he elaborated that they typically received over 3000 extra applicants a year. Similarly the Park Service offers a program with less than 100 positions and received 700 applicants this year. Bruell identified funding as the biggest barrier to program implementation, as with more funding comes the ability to increase the capacity to operate and to offer more positions.

Bruell discussed various factors that need to be considered when putting a program together. Some of the components include identifying whom the program services, the target demographic, whether or not it is a government run program or a not-for-profit, and whether or not it is crew-based or an individual program. He identifies that the first step is walking through a list of similar questions and deciding what the program

looks like. Buell admits that conservations corps are a lot more expensive than volunteer programs because participants are getting a paycheque. He also speculates that government-run programs are likely to be more expensive to operate. He concludes that it might be worth engaging with US partners such as the SCA, ACE, or Conservation legacy to come in and help operate the program.

Summary

Along with confirming and supporting many of the trends identified in the literature, the key informants provided valuable insight in regards to the barriers facing program participation and implementation, important organizational components, and critical threats to the sustainability of the operations. Their hands-on experience running programs offered unique insights into program design, outcomes, and organizational structures.

Barriers to Participation

The most commonly identified barrier to youth participation is the number of participant positions available in any given organization. Every key informant who identified this as a barrier supported it by saying that every year they are forced to turn away eager applicants. It was suggested that more positions could be offered if the organization was able to increase their capacity to operate. This would involve more external support and monetary funding and a higher level of logistical organization.

Although interest and the desire to serve are not an issue facing youth participation, the majority of sources suggest that fully diversifying the population has proven to be difficult. The key informants identified that this could be attributed to a

number of reasons – the inability to access information, difficulty of transportation, and various cultural reasons. Every informant that identified underrepresented populations as a barrier admitted that they would like to see more diversity in their crewmembers.

When comparing the key informants’ responses in regards to barriers of youth participation to those identified as barriers by the CPC YEWG, there emerge some similarities and differences. Figure 6.1 shows the relationship between the two proponents. The barriers identified by the CPC YEWG (032) are illustrated in white, while the barriers identified by the key informants are illustrated in green. When more than one person identified the same barrier their responses are represented by additional rings.

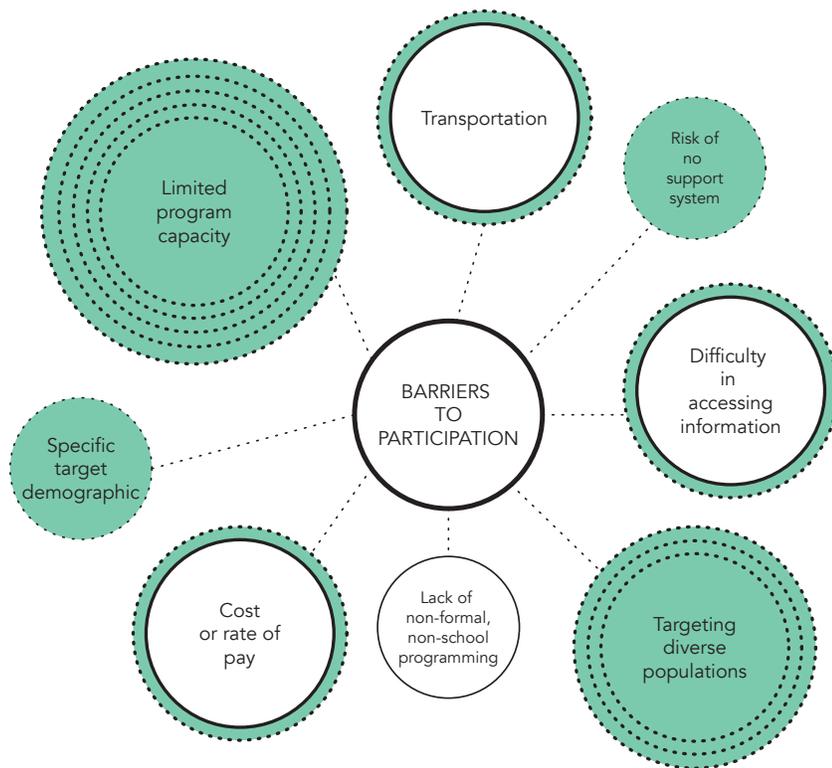


Figure 6.1 Barriers to Participation: A comparison of responses of the CPC YEWG (Church and Burger, 2011) and key informants

Barriers to Program Implementation

Very few key informants identified funding as being a barrier to program implementation or participation. This could be attributed to the numbers of corps organizations represented within the informants, as sometimes the governments allot money only to those who employ paid participants. However, when asked to identify critical threats, no matter how reliable their monetary support was, they admitted that if funding was not available it would compromise their ability to operate.

Although only identified twice, a barrier to implementation worth noting is participant capabilities and the assurance of quality of work. Often overlooked, this should be an important consideration and component of a program's design. Baker stressed that "almost every activity within the realm of hands-on conservation management is very skill intensive and very deceptively so" (Baker, 2016). It was suggested that once initial funds are secured, they should be allotted to training and paying skilled technicians before attempting to get a crew out on the ground. This is an important variable for quality of work and a successful continuous partnership with agency sponsors.

The relationship between the key informant's responses in regards to barriers to program implementation and those identified as barriers by the CPC's discussion with park agencies (Church & Burger, 2011) is illustrated in Figure 6.2.

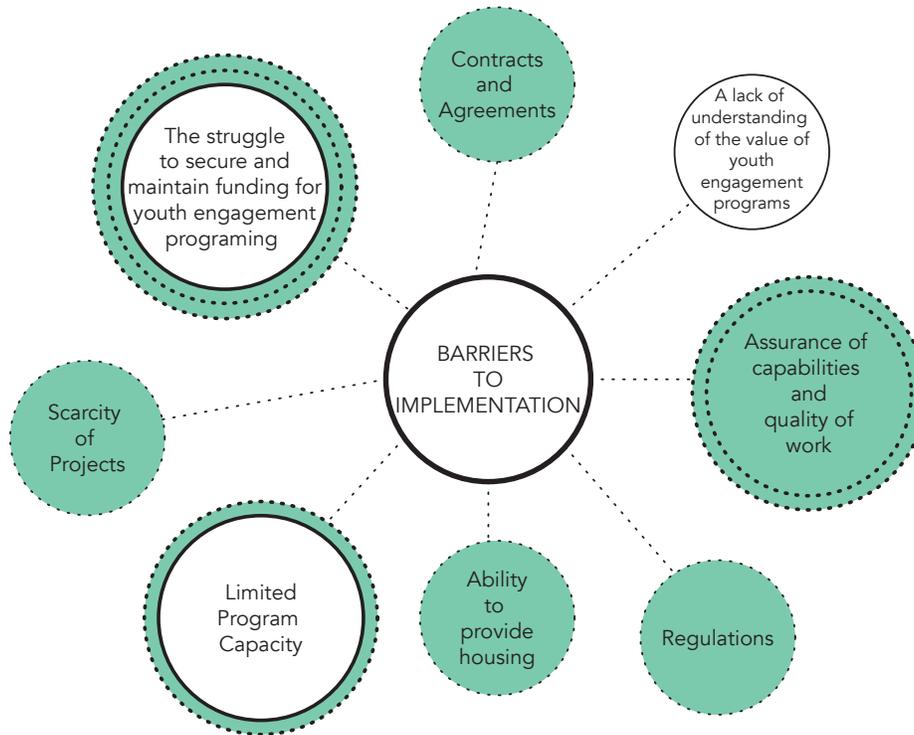


Figure 6.2 Barriers to Implementation: A comparison of responses of the CPC YEWG (Church and Burger, 2011) and key informants

When fully informed on the nature of this research, all the key informants were supportive of the idea of implementation of the program. Some key informants suggested that their organizations would be willing to provide funding and parent a nation-wide youth conservation program in the Canadian context.

Chapter Seven – Programmatic Framework Recommendations

In this chapter, information collected from the review of literature, examination of the precedent, and key informant interviews are synthesized to develop a programmatic framework for a Canadian youth conservation program with potential for in-field application. Earlier stages of this research exposed trends and themes consistent with successful youth conservation initiatives. The findings were not one-dimensional; a 21st century approach to developing a relevant framework for a Canadian youth conservation program involves consideration of factors that contribute to youth engagement, active management strategies, and program elements consistent with conventional conservation programs.

Program Elements

Youth conservation initiatives require systems thinking to manage their interrelated elements. The core elements of these programs involve the organizational structure and operation, participant development and outcomes, as well as intended service projects. Figure 7.1 illustrates these elements and the proceeding sections outline themes relevant to these elements.



Figure 7.1 Youth Conservation Program Elements (Adapted from the Corps Network, 2016)

Youth Engagement Theme

The literature has suggested that when attempting to engage youth in program design it is important to have an understanding of and acknowledge all the inputs, factors, and inhibitors acting on youth participation and outcomes. Riemer, Lynes, and Hickman (2013) recognized the need for recommendations and tools for effectively engaging youth in non-formal environmental engagement programs. They developed a framework with five interrelated elements: (1) the activity/program; (2) initiative factors; (3) the engagement; (4) sustaining factors, and (5) outcomes. An adapted model of this framework is illustrated in Figure 7.2

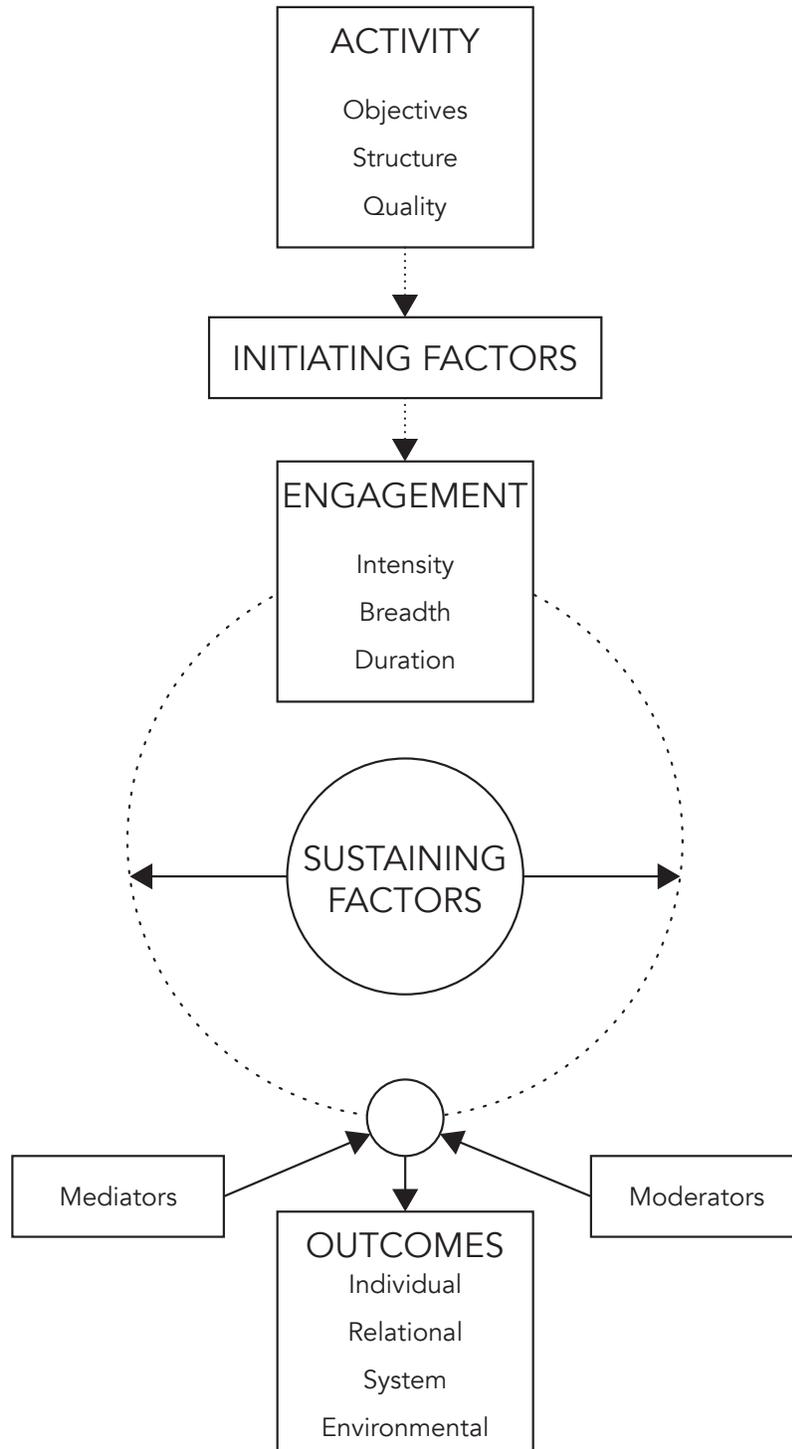


Figure 7.2 A Model for Engaging Youth in Environmental Change (Adapted from Riemer, Lynes, and Hickman 2013)

A more detailed breakdown of the model for engaging youth in environmental programs is summarized in Table 7.1. The right-hand column identifies how the proposed framework in this project meets each consideration.

Table 7.1 Considerations for Program Development with Application to Design Framework (Adapted from Riemer, Lynes, and Hickman 2013)

FRAMEWORK COMPONENT	DESCRIPTION	PROPOSED FRAMEWORK
1. ENGAGEMENT ACTIVITY/PROGRAM		
Objectives	Programs' primary focus can be on the participants themselves (e.g. learn about nature) or engage the participants to focus on activities that are targeting changes in the participants' social context (e.g. organize community events)	To directly engage youth in conservation of the land while fostering a connection between the participant and the natural world
Structure	Programs can be organized to be short and intensive (e.g. a conference or youth summit) or can be spread over time Also, youth involvement in leadership and decision making can range from being primarily a participant to full ownership of the program	Short-term, high-density engagement that can act as a shift in an individuals' trajectory Shared leadership and high levels of youth participation
Quality	Programs differ in regards to the degree to which they incorporate best practices such as power sharing, setting short-term measurable goals, providing positive social support and role models, and opportunities for growth and personal development	Meaningful participation with short-term measurable impacts through careful service project selection Careful consideration of relationship building to provide opportunities for learning and feelings of safety
2. ENGAGEMENT PROCESS		
Intensity	Youth might be engaged quite frequently in a program, sporadically or even just once Different strategies can be used to engage youth at an affective, cognitive, spiritual or behavioural level. Some programs cover all of these areas while some focus only on one or two	High intensity engagement over a considerable length of time Attempts to foster a sense of purpose, knowledge sharing, and affords conservation leadership
Breadth	Programs can have just one type of activity (e.g. structure learning sessions) or many different kinds of activities	Opportunity to explore a wide range of skills and interests
Duration	Some youth stay involved with a program or organization for a long time while others come to only one event. Also, there can be significant differences in regard to how much time youth devote to being involved	Duration of > 3 weeks to allow for full immersion and adequate time to see tangible results in service projects

Table 7.1 (Continued)

FRAMEWORK COMPONENT	DESCRIPTION	PROPOSED FRAMEWORK
3. INITIATING AND SUSTAINING FACTORS		
Individual	Youth become and stay engaged for many different reasons including individual factors such as religious and moral beliefs, prior experiences, perceived instrumentality	Many possible motivations: job applications, to meet new friends, passion Barriers: low income
Social	There are also social factors that play a role in the motivation to become and stay engaged. Family and peer role models, for example, can be highly influential. Positive relationships within the program are often critical in keeping youth engaged over time	Encouraged by parents or peers Crew leaders close in age to participants for relatability. Hired through a careful process. Adequately trained.
System	Factors in the larger context of the program are also linked to motivation. This includes integration of the program into school activities or requirements and to what degree the youth perceive the activity as being relevant and being connected to a larger purpose including fighting environmental degradation	Informed outreach and participant recruitment through schools, social media, and government postings Motivation driven by the desire to make a difference and do something important with their lives
4. OUTCOMES OF ENGAGEMENT		
Individual	Participating in youth programs can have a positive impact on individuals such as better success in school, improved self-confidence and reduction of alcohol and drug use	Intended significant improvements on sense of purpose, self-awareness and perseverance
Social	Programs can also help participants to develop important social skills and provide positive social relationships and support	Improved ability to work with and help others
System	Outcomes can also be related to the broader social context such as increased civic engagement and creating a culture of conservation	Commitment to conservation and exploration of conservation careers

A Canadian Youth Conservation Initiative Framework

Building on the findings from the literature and key informant interviews, the *Starting a Corps Manual* (The Corps Network, 2016) has been adapted into a youth conservation initiative framework suitable for the Canadian context.

Purpose:

To synthesize the information collected through the literature review and key informant interviews to develop a framework for a sustainable youth conservation program applicable in Canada.

Goal & Objectives:

To provide programmatic framework recommendations that:

- speak to the needs of modern society by recognizing issues plaguing our natural world and our youth
 - find a unified solution by targeting a gap in existing programs
- use existing programs with apparent success as a precedent for best practice program elements
- inform based on the barriers and critical threats facing existing youth conservation programs.
- maximize participant outcomes through informed and intentional design
- suggest an adaptive management approach when dealing with interrelated variables

Stage One: Planning & Feasibility Assessment

The first stage involves assessing the feasibility of a youth conservation initiative and ensuring that proper planning is in place to proceed towards implementation. This is achieved through a thorough exploration as to whether or not there is a need for a program, if there is adequate stakeholder interest, and what outcomes are desired. In order to secure the involvement of the right individuals, to conduct appropriate research and to develop a systematic program plan, an estimated timeframe of three months is recommended (The Corps Network, 2016) Stage one is illustrated in Figure 7.3 below.

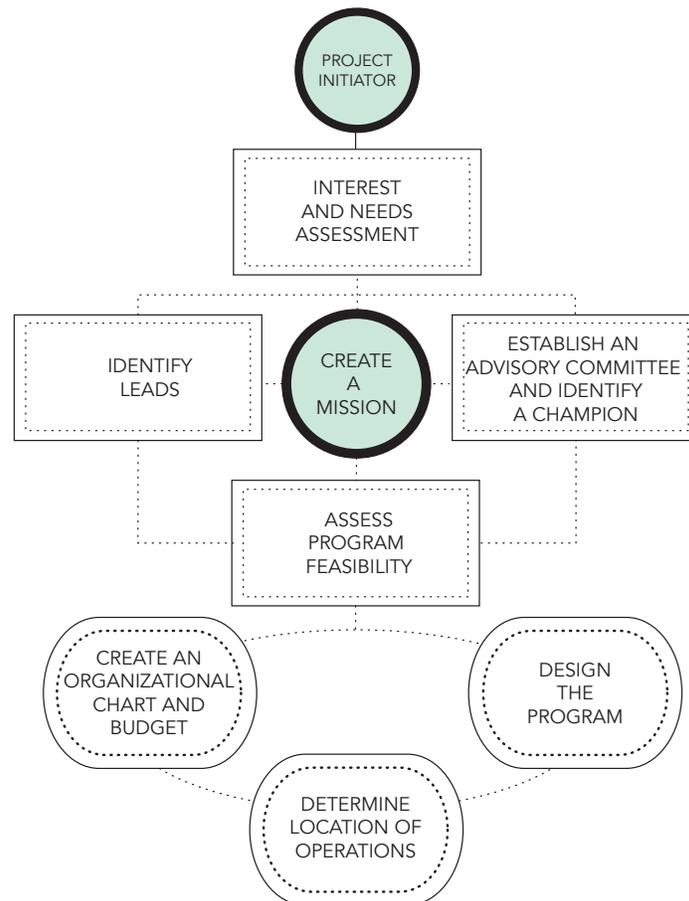


Figure 7.3 A Youth Conservation Framework - Stage One: Planning & Feasibility Assessment (Adapted from The Corps Network, 2016)

Table 7.2 provides a more detail explanation of the elements involved in Stage One as well as recommendations for the Canadian context.

Table 7.2 A Youth Conservation Framework - Stage One: Planning and Feasibility Assessment (Adapted from The Corps Network, 2016)

STAGE ONE: PLANNING AND FEASIBILITY ASSESSMENT
<p>I. INTEREST & NEEDS ASSESSMENT</p> <ul style="list-style-type: none"> • Approach organizations and individuals <ul style="list-style-type: none"> ○ Experts in the fields relating to the intended audience, target geographic, and scope of work ○ Government bodies (typically involved in youth engagement initiatives, environmental education, NGOs, conservation and land management) • Identify assets, needs and interests <ul style="list-style-type: none"> ○ Typically projects related to maintenance, nature deficit disorder, ecological integrity of parks, etc.
<p>2. IDENTIFY LEADS</p> <ul style="list-style-type: none"> • Hire a program director <ul style="list-style-type: none"> ○ This person is responsible for spearheading the process towards implementation
<p>3. ESTABLISH AN ADVISORY COMMITTEE AND IDENTIFY A CHAMPION</p> <ul style="list-style-type: none"> • Committee members should be representative of the key elements of the program, ensuring knowledgeable expertise informs decision-making • The champion will be an individual with pull – they can connect the program to resources, help build support, and afford credibility
<p>4. ASSES PROGRAM FEASIBILITY</p> <ul style="list-style-type: none"> • Further explore the local needs and assets to determine what gaps your program can fill • Determine the program’s organizational structure <ul style="list-style-type: none"> ○ It is recommended that an organization like this take the form of an independent non-profit organization • Begin exploring likely funding sources
<p>5. CREATE A MISSION</p> <ul style="list-style-type: none"> • Clearly articulate the program’s purpose, goals, and values <ul style="list-style-type: none"> ○ Consider impacts of participant outcomes and service projects ○ Does it inspire?

Table 7.2 (Continued)

STAGE ONE: PLANNING AND FEASIBILITY ASSESSMENT
<p>6. DESIGN THE PROGRAM</p> <ul style="list-style-type: none">• Decide what the program is going to do and how to go about doing it<ul style="list-style-type: none">○ Determine the participant population, the type of projects, the size of crews, the term of service, participant outcomes, training provided, etc.• Determine where funding will come from<ul style="list-style-type: none">○ Potential funding sources include (1) Program-based funding, (2) Work-Based Funding, and (3) Participant based-funding<ul style="list-style-type: none">• It is recommended that apart from preliminary funding that could come from the government, that the majority of funds be sought through non-governmental sources. It is not sustainable to operate an initiative on government funding
<p>7. DETERMINE THE LOCATION OF OPERATIONS</p> <ul style="list-style-type: none">• Identify a home base<ul style="list-style-type: none">○ This may be close to committee members heavily involved in program operations as well as close to where the program intends to operate• Determine where the program will operate<ul style="list-style-type: none">○ It is recommended to start the program in an area that may be highly desired, suffering from resource constraints, has vulnerable ecosystems, and experiences over-use issues
<p>8. CREATE AN ORGANIZATIONAL CHART AND BUDGET</p> <ul style="list-style-type: none">• Create an organizational chart<ul style="list-style-type: none">○ Some components to consider include: Program Director, Administrators, Crew Leaders, Skill Trainers, and Crew Members• Draft a budget<ul style="list-style-type: none">○ Develop an estimated budget for the first year of operation

Stage Two: Defining Systems and Program Structure

The second stage involves defining the systems and structure of a youth conservation initiative. During this stage, staff are hired and trained, crewmembers are recruited, projects are negotiated and contracts are created. With these in place, evaluation system should be designed to measure project, member, and organizational outcomes. This stage prepares the program for full operation. Stage Two is illustrated in Figure 7.4 below.

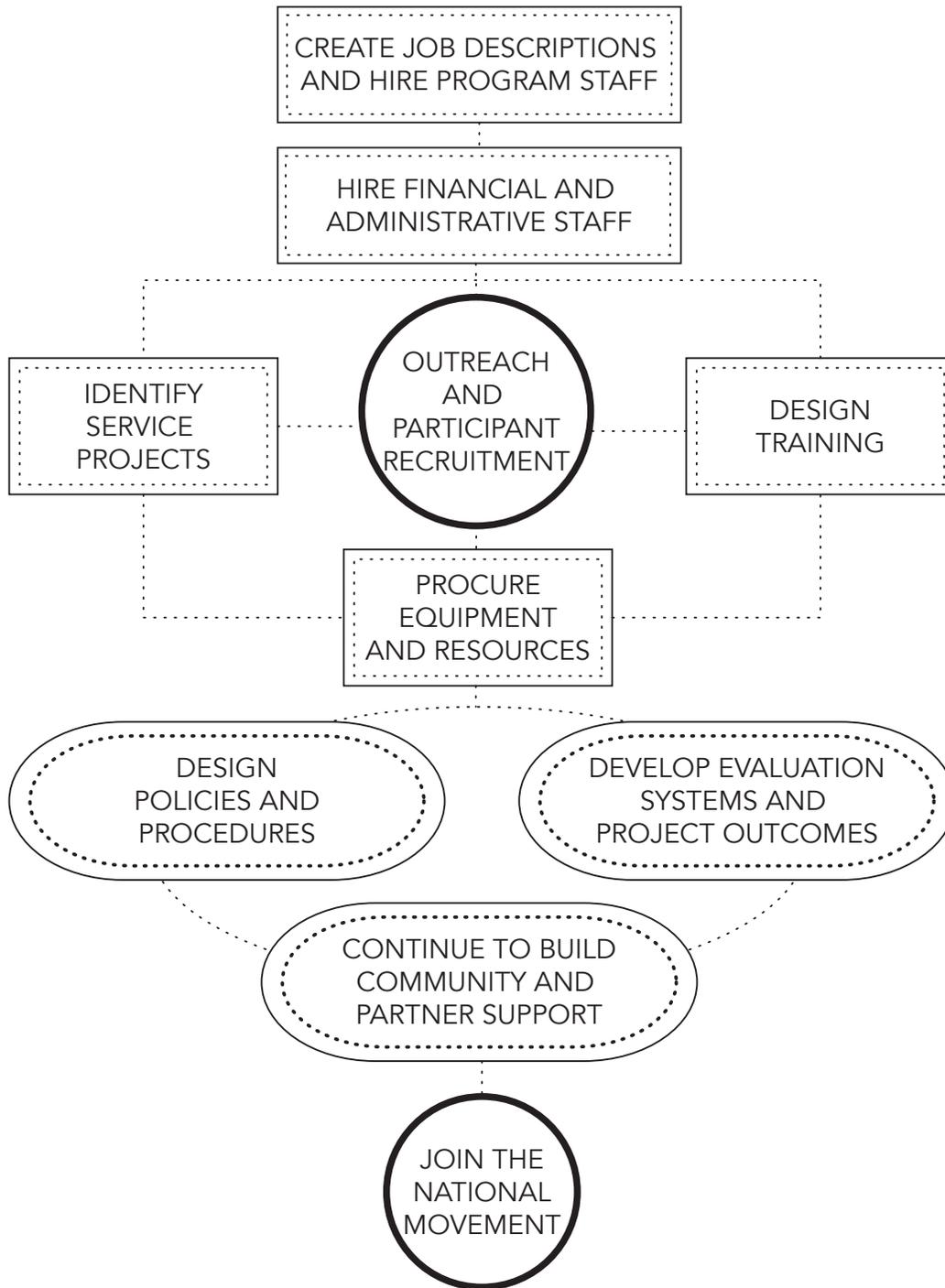


Figure 7.4 A Youth Conservation Framework - Stage Two: Defining Systems and Program Structure (Adapted from The Corps Network, 2016)

Table 7.3 provides a more detail explanation of the elements involved in Stage Two as well as recommendations for the Canadian context.

Table 7.3 A Youth Conservation Framework - Stage Two: Defining Systems and Program (Adapted from The Corps Network, 2016)

STAGE TWO: DEFINING SYSTEMS AND PROGRAM STRUCTURE
<p>I. CREATE JOB DESCRIPTIONS AND HIRE PROGRAM STAFF</p> <ul style="list-style-type: none"> • Based on the organizational chart create job descriptions and roles for all members identified
<p>2. HIRE FINANCIAL AND ADMINISTRATIVE STAFF</p> <ul style="list-style-type: none"> • Determine who will cover liability <ul style="list-style-type: none"> o This can be taken on by the agency or by the program depending on the organizational structure o In the case where the program has crew leaders, it will be the responsibility of the program • Create necessary policies and procedures and set up basic organizational systems <ul style="list-style-type: none"> o These include human resources, risk management, payroll, etc.
<p>3. IDENTIFY SERVICE PROJECTS</p> <ul style="list-style-type: none"> • Connect with partners and sponsors to identify potential service projects • Outline the project details <ul style="list-style-type: none"> o Points of consideration include levels of supervision and training, tools, financial support, and timelines • Establish contracts and partnership agreements <ul style="list-style-type: none"> o Details include project outcomes and conduits for the transfer of funds • Provide feedback and build rapport <ul style="list-style-type: none"> o Invite the project sponsor or partner to observe work o Ask for partner satisfaction feedback at completion of project o Supply them with project reports with participant testimonials
<p>4. DO OUTREACH AND PARTICIPANT RECRUITMENT</p> <ul style="list-style-type: none"> • Develop youth-friendly and generation relevant outreach strategies • Ensure there is a strategy in place to engage and connect with diverse populations • Create standard application and interview protocol • Set outreach targets and track success

Table 7.3 (Continued)

STAGE TWO: DEFINING SYSTEMS AND PROGRAM STRUCTURE
<p>5. DESIGN TRAINING</p> <ul style="list-style-type: none">• Provide training for Crew Leaders<ul style="list-style-type: none">○ Provide advanced training for all crew leaders to learn best practices in conservation, first-aid, working with youth, and Leave No Trace ethics○ Professional land managers should provide expertise○ Crew Leaders should arrive at the work site a week prior to crew member arrival for further training and to adequately understand project requirements• Sufficiently train crew members prior to engaging in any project<ul style="list-style-type: none">○ This includes safety measures, proper use of tools, etc.
<p>6. PROCURE EQUIPMENT AND RESOURCES</p> <ul style="list-style-type: none">• Determine the sources of hard assets<ul style="list-style-type: none">○ If start-up funds are available the purchase in new tools, vehicles, and other equipment might be a worthwhile investment○ An alternative is the use of partner resources• Write grants on an ongoing basis to provide funding for the procurement of such assets<ul style="list-style-type: none">○ Keep in mind maintenance and lifespans
<p>7. DESIGN EVALUATION SYSTEMS AND PROJECT OUTCOMES</p> <ul style="list-style-type: none">• Establish a way to evaluate participant and project outcomes<ul style="list-style-type: none">○ This could be feedback forms, or pre- and post- evaluations• Use results to actively make changes and improvements• Communicate results to participants and the community<ul style="list-style-type: none">○ This will help build rapport and may bring in further funding
<p>8. DESIGN POLICIES AND PROCEDURES</p> <ul style="list-style-type: none">• Ensure all program elements and organizational components are in writing to ensure credibility and consistency

Table 7.3 (Continued)

STAGE TWO: DEFINING SYSTEMS AND PROGRAM STRUCTURE
9. CONTINUE TO BUILD COMMUNITY AND PARTNER SUPPORT
<ul style="list-style-type: none">• Raising funds and building the organizations reputation is an ongoing process<ul style="list-style-type: none">○ Approach donors○ Promoting program outcomes has the potential to attract unlikely sources of funding○ Success stories sell• Be involved in the community<ul style="list-style-type: none">○ Participate in conferences, forums, and local events and media outlets• Have a strong social media presence• Create visually appealing and effective publications
10. JOIN THE NATIONAL MOVEMENT
<ul style="list-style-type: none">• Join networks and build relationships with like-minded organizations with similar goals• Approach umbrella organizations to tap into their resources and funding opportunities• Establish a voice with the government

Stage Three: In Operation

The third stage of the framework involves the implementation of the youth conservation program. This phase will see the inaugural crewmembers being sent out in the field to begin meaningful service projects. Equally as important as putting participants in the field is the continual monitoring, refinement, and assessment applied to program operations and project outcomes. At this stage it is recommended to re-evaluate the three basic areas of operations – crewmember development, service projects and administration, and to continually work to make the program more sustainable. Stage Three is illustrated in Figure 7.5 below.

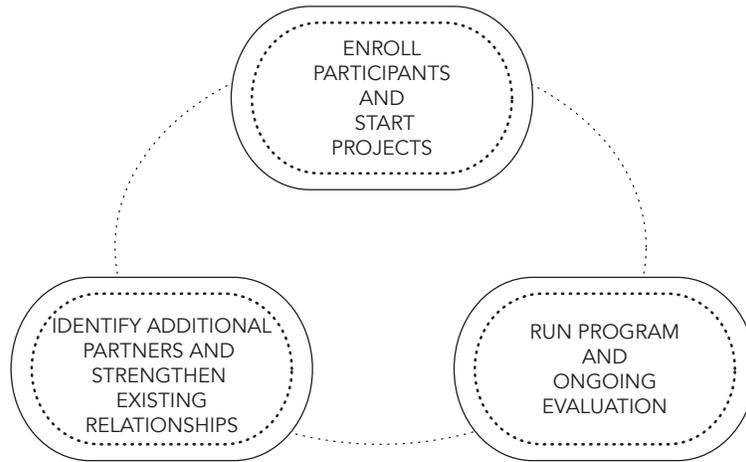


Figure 7.5 A Youth Conservation Framework - Stage Three: In Operation (Adapted from The Corps Network, 2016)

Table 7.4 provides a more detailed explanation of the elements involved in Stage Three as well as recommendations for the Canadian context.

Table 7.4 A Youth Conservation Framework - Stage Three: In Operation (Adapted from The Corps Network, 2016)

STAGE THREE: IN OPERATION
<p>1. ENROLL PARTICIPANTS AND START PROJECTS</p> <ul style="list-style-type: none"> • Get crew leaders and corps members into action <ul style="list-style-type: none"> ◦ Check in • Keep partners up-to-date on progress • Document everything and learn from it
<p>2. RUN PROGRAM AND ONGOING EVALUATION</p> <ul style="list-style-type: none"> • The organization and day-to-day operations are an ongoing process <ul style="list-style-type: none"> ◦ Ensure active management approaches are implemented for continues evaluation and improvement
<p>3. IDENTIFY ADDITIONAL PARTNERS AND STRENGTHEN EXISTING RELATIONSHIPS</p> <ul style="list-style-type: none"> • Continually build support • Keep looking for potential partners • Once making impacts, further market the program

These programmatic framework recommendations, combined with information gained from the literature and key informant interviews, are discussed in the following chapter in regards to the viability of a nation-wide youth conservation program in Canada.

Chapter Eight – Discussion

This chapter provides discussion on information attained through the review of literature and examination of a youth conservation program, investigation of previous youth engagement studies and results of key informant interviews.

The Need

Through an initial exploration, the significance of a nation-wide youth conservation program emerged through the literature and key informant interviews. Through further exploration, this research attempted to identify and understand what the critical needs and assets were in relation to the scope of this project, the issues facing them and what can be done to improve these variables (The Corps Network, 2016). Figure 8.1 shows the relationship between ‘what is’ and ‘what should be’ and the gap, or ‘need’ in between (Beaulieu, 2002).



Figure 8.1 Establishing a Need (Adapted from Beaulieu 2002)

This research identifies issues such as budget restraints, over-use of park spaces, declining ecological integrity, and nature-deficit disorder as current issues facing the ‘what is’. This research identifies a nation-wide youth conservation program in the

Canadian context as the ‘need’ that aims to reconnect youth with nature while providing the parks agency with an untapped workforce, as ‘what should be’.

Engaging Stakeholders

Interactions with stakeholders offer insights into a community’s needs, problems and solutions. The key informant interviews represented a sufficient sampling of potential planning partners that one would engage in the implementation of this process. Other notable stakeholders to engage include NGOs, government entities, concerned citizens, and private sectors. These individuals and organizations can prove to be invaluable throughout every stage of the framework.

Increasing Capacity

The most critical barrier facing program participation is the inadequate capacity of existing programs to meet the unprecedented wave of youth wanting to participate. Every principal member interviewed identified that they receive more applicants annually than they have positions for. Youth are eager to give of their time and service, and it is unacceptable that they have to be turned away.

Diversifying Revenue

The most limiting factor to program implementation and subsequently program participation, is inadequate funding. Certain conservation corps models can secure government funding for paid participants, but some non-federal organizations have a difficult time securing funding despite their reduced operating costs. A common theme in the literature and through key informant interviews is to diversify the revenue source. Governments can change hands frequently and are too unstable to rely on for a constant

flow of funding. Government funding, if available, is certainly encouraged to contribute to start up revenue, but day-to-day operations should rely as little as possible on government funding.

Program Outcomes & Attractiveness

Another important element to consider when looking at operational structures is the measurement and publication of participant outcomes. Not only does this contribute to research in the fields of environmental education, youth engagement and service learning, but positive participant outcomes also make an organization more attractive to other sources of funding outside the conventional agency funding.

Starting Small

In regards in-field implementation, informed by recommendations from the key informants, there was an evident theme to start small, but think big. Although a nation-wide youth conservation program reaps the many benefits identified in this project, it might take a few years before such an initiative can reach full operational capacity. Therefore it is recommended to build this program in phases. It is suggested to start regionally by identifying a few target areas that have a proven need and are in close proximity to each other. This allows for more efficient operations, ease of transportation, and sharing of resources. Some attractive characteristics of start-up locations would be areas with high visitor use, desired destinations, ecologically sensitive areas, and those with limited resources. Once a solid foundation is set and the program has become sufficient and sustainable, the next step would be for slow expansion across the country.

Incubation

Key informants also recommended grafting onto an existing parent organization. This would involve being under the auspices of an already successful organization creating the opportunity to draw on their resources and structure. This could take the form of a Canadian organization, perhaps Katimivik, that is looking to re-establish their presence, or an American organization that is looking to expand internationally. Grafting on to the Student Conservation Association would be one option because of their experience working in Canada in a limited capacity. However, after 60 years of existence, and little success with full expansion, it might be worthwhile to look at other alternatives. American Conservation Experience has also expressed interest in parenting this Canadian initiative expressing that they are looking to expand internationally and have the funding and motivation to do so.

An Umbrella Organization

A final recommendation that emerged from key informant interviews was to create a Canadian version of something similar to the 21CSC rather than creating a new conservation initiative and starving the resources of ones currently in existence. This would take the form of a public-private umbrella organization whose purpose is to aid existing initiatives by connecting federal agencies with organizations seeking to take action. This entity would gather funding, resources and support and make it available to current programs. This would eliminate some of the more onerous organizational elements, such as the procurement of funding, plaguing existing programs.

Viability

This research uncovered barriers to participation and program implementation, and critical factors that need careful consideration when exploring the viability of such programs. However, through key informant interviews and the review of literature, alternatives strategies were uncovered that provide solutions to those barriers or alternative ways of overcoming them. The key informants were very receptive and open to this proposed framework. While providing valuable recommendations for programmatic framework design, more than half of the key informants suggested that this research project be taken past the research stage and into real world implementation.

Chapter Nine – Conclusions

Summary of Research

The primary goal of this thesis was to explore the plausibility of a nation-wide youth conservation initiative applicable to the Canadian context. In doing so the research aimed to establish and suggest the positive contributions such a program could have on participant outcomes as well as addressing the resourcing facing the country's parks. Information on park management operations, youth engagement, and service learning was collected through the review of literature to gain an understanding of how the components could work together to achieve multiple goals. This information, combined with shared advice, themes and experiences of conservation professionals gathered through key informant interviews were synthesized to develop a program framework for a Canadian youth conservation initiative. The intent of this framework was to provide recommendations for a successful youth initiative and the first steps towards implementation.

Applicability of Guidelines

The developed framework is a synthesis of literature and expert opinions on program elements that make up a successful youth conservation program. While the elements comprising each stage of the framework are flexible and universally applicable, they have been developed with application specifically to the Canadian context. This flexibility enables the guidelines to be applied at any scale, whether local, regional or national; and if implemented properly, they should yield successful results.

Although the framework was created using a U.S. model and information from a representation of both Canadian and American key informants, there are many similarities between the countries in regards to elements on the model. Many parallels exist in both countries in regards to the needs and issues facing youth and park systems, offering a unique opportunity to share successes and resources.

Limitations of the Study

A longer timeframe may have provided the opportunity to explore additional organizations and conduct more key informant interviews. A larger sample size, especially of Canadian organizations, could have provided additional insight on the applicability of youth conservation initiatives. While there may be similar programs in Canada, many are administered by the government and points of contact were less evident, appeared anonymous and were less accessible than U.S. counterparts. While some bias or information not applicable to the Canadian context might have emerged, the two countries share similar natural resources, demographics, and management strategies, so connections were still feasible.

It is possible that some valuable organizations, hence information, were not identified and contacted due to the spectrum of the search criteria developed. Less effective promotion and limited Internet presence from the organizations could have contributed to them not being accessed. If additional time and resources allowed, it would have been interesting to conduct key informant interviews with organizations that have had failed operations with youth initiatives. This would have provided a perspective on what not to do and the critical factors that caused program ineffectiveness and failure.

There are also limitations of the framework itself. Some components, namely the in-field application, were out of the scope of this research. In order to fully understand the framework's effectiveness it would have merit in application and evaluation through a pilot program; this was beyond the scope of this study. It is possible that there may be other factors that have prevented implementation of such an initiative that were not revealed through the research

General considerations are offered in the framework and, where applicable, information related to the framework's application is made. It should be noted that the suggestions regarding variables, such as ideal locations, point of contact and budgets, may not be applicable to every situation or may, over time outdate themselves. However, recommendations were suggested generally to provide longevity for the relevance of this study.

Future Research

This research recommends a three-stage framework for a nation-wide youth conservation initiative. The scope of this research focused primarily on information from the literature and key informant interviews to test its plausibility. It is recommended that for future research a pilot project be implemented to test the framework. This may take the form of implementing one crew over the course of the summer, identifying operational needs and participant outcomes, and the scope and extent of work accomplished. A program evaluation should be prepared at the outset to monitor and assess whether the inputs were worth the outcomes.

An additional area for further research would be to conduct more studies on the long-term effects of participation in youth conservation initiatives. The Theory of Change study conducted by the Student Conservation Association and the Search Institute focused primarily on pre- and post-questionnaires. Their results, although very valuable, were primarily indicative of short-term outcomes. It is suggested that further research be conducted to determine how the effects of participation persist over time.

Through exploration of the literature, it was determined that there was substantial research on the benefits, effects, and approaches to programming of formal environmental education programs. However, very little research was relevant to informal non-education environmental conservation programs. The Canadian Parks Council identified that lack of non-formal programming in general was a barrier to implementation (Church & Burger, 2011). Therefore further research should be conducted to better understand non-formal program design and evaluation to provide opportunities to engage youth in different capacities.

Advice to Landscape Architects

Landscape architects are land managers or land-use professionals who have the tools to understand the crucial relationship between people, the environment, place and experience. This knowledge is especially crucial when the very interaction of those components can have detrimental impacts on fragile landscapes. As more evidence emerges to support the importance of nature for human health and well being, landscape architects need to participate in parks and open space management decisions. Landscape architects possess a profound knowledge of creating and guiding experiences; and when positive visitor experience is one of the important elements contributing to one's

perceived affinity and conservation ethic, it is necessary to share this knowledge.

Through engaging youth who are partaking in conservation service initiatives, landscape architects can ensure that these future environmental stewards and landscape professionals are learning from those who should be experts in these complex landscapes.

Closing Remarks

Based on the literature and key informant interviews it was made apparent that a program such as the one proposed could provide many benefits in Canada. The outcomes would address many of the issues and needs surrounding today's youth and the health of our public lands. In conclusion, the project is believed to be a plausible initiative and proper steps should be taken to put this into action. In an era when environmental issues may seem insurmountable (Cushman, 1954), there exists a remarkable opportunity to engage young Canadians in hands-on service to the land while fostering a lifelong connection to the natural world.

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