

EXPLORING ENVIRONMENTAL VOLUNTEER  
MOTIVATIONS: TWO CASE STUDIES IN  
THURSTON COUNTY

By

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## ABSTRACT

### Environmental Volunteer Motivations: Two Case Studies in Thurston County

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Environmental volunteers offer important contributions to communities, organizations, and agencies. They play a vital role in educating the public on local environmental concerns as well as provide necessary support to agencies, such as land management agencies, and to organizations that work towards environmental preservation, conservation, and education. Some agencies rely solely on environmental volunteers to accomplish their goals. Thus, we need to understand volunteer motivations in efforts to recruit new volunteers and retain current volunteer involvement. This study surveyed a total of 136 volunteers of two environmental organizations in Thurston County: Stream Team and Nisqually Reach Nature Center. Using a functional approach, I applied a volunteer function inventory to assess volunteer motivations. I found that the strongest motivator for most participants was a desire to help the environment. Other strongly ranked motivators included learning (this can refer a desire to learn various different things such as local flora and fauna or one may want to gain knowledge about data collection) and contributing to or connecting with the community. In addition, sociodemographic data was collected to look for associations between demographics and motivations. Because a majority of the volunteers were white, educated, and not affiliated with military, those demographics could not be investigated. However, associations were tested between age and motivational responses as well as gender and motivational; responses. It was found that volunteers in their 40's or below or significantly more likely to choose career advancement motivations to volunteer over older volunteers ( $X^2 = 4.15, p < 0.05$ ). It was also found that women are more likely to choose learning as a motivator ( $X^2 = 4.15, p < 0.05$ ). These findings, along with other trends identified and information collected, can equip these two organizations with information about their volunteer population that can be used to create programs to target specific populations or motivators of their volunteers. In addition, these results contribute to the overall study of environmental volunteer motivations by showing consistency among trends as well as providing new insight about environmental volunteers.

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## **Chapter 1: Introduction**

### **1.1 Volunteer History**

Volunteerism has been a part of the history of the United States since pioneers started their westward migrations (Warta, 2009). Many historians believe that volunteerism began during these journeys because colonists needed to develop support systems to promote success as they faced many challenges including crop production and building homes and structures; most noted are volunteer armies who fought against British soldiers (Rosenburg, 2013; “History of British Colonial America,” n.d.). Another example of the development of volunteerism during the 18<sup>th</sup> century is one of the first volunteer firehouses, founded by Benjamin Franklin in Philadelphia in 1736 (Cohen, 2012).

The 19<sup>th</sup> century proved to be a time of great development for volunteerism and charitable organizations; many volunteers were motivated through church and religious activities as part of the Great Awakening (a religious transformation and revival in America during the 18<sup>th</sup> and 19<sup>th</sup> centuries). The development of volunteerism during this century built the foundation for many new organizations that developed during the 20<sup>th</sup> century, such as environmental volunteering (but also including Rotary Club, Lions Club, and volunteer organizations supporting servicemen and civilians during World War II) (Rosenburg, 2013). It did so by providing a precedent for establishing and structuring formal volunteer organizations. The Young Male Christian Association (YMCA) is a notable example of a formal association established during the mid-19<sup>th</sup> century; the YMCA currently reports having 600,000 active volunteers (“Organizational Profile,” 2015).

Environmental volunteerism, which took root in the 19<sup>th</sup> century, experienced much growth during the 20<sup>th</sup> century, including involvements such as the increase of conservation volunteer initiatives. For example, the Appalachian Trail, a wilderness trail along the Appalachian Ridge to be built and maintained by volunteers, was first proposed in 1921 (Chapman, n.d.). The growth of volunteerism coincided with a conservation movement that took place during the late 19<sup>th</sup> century and early 20<sup>th</sup> century resulting in the creation of the Forest Reserve Act (allowed for the President to set aside forested area that was on public domain), and the Sierra Club (a club founded by John Muir devoted to protecting our wilderness and wildlife), as well as the United States Forest Service and the National Park Service. The environmental movement of the 1960's and 70's also contributed to the growth of various environmental volunteer initiatives ("All About Environmental Movements," 2012). Earth day, for example, began on April 22<sup>nd</sup>, 1970 and involves volunteer commitment to demonstrate and work towards a healthy and sustainable environment; Earth Day is now a global event celebrated in over 180 countries ("Earth Day: The History of a Movement, n.d.). In 2013, it was reported that 62.6 million adults volunteered for some type of organization ("Volunteering in America," 2013). The topics in this thesis that explore volunteerism will primarily focus on environmental volunteerism as my research explores environmental volunteer motivations which will be further explored in subsequent sections.

## 1.2 Importance of Environmental Volunteerism

It is important to understand environmental volunteerism as it plays an important role in our communities and with various agencies to which many of us benefit from, use, or associate with in some way. Environmental volunteers provide benefits to many

including personal benefits gained by volunteers, benefits to our communities, and benefits to those organizations just mentioned that rely on the work and dedication of the volunteers to accomplish their missions. The environment has certainly benefited from the work of environmental volunteers through restoration and conservation efforts, trail maintenance, invasive plant species removal, and other similar efforts.

Volunteers themselves often benefit from volunteering, whether it's having fun, getting outdoors in nature, developing personal growth, obtaining personal satisfaction, or meeting new people. For example, one study suggests that volunteer work from students has beneficial effects on their academic development as well as personal development both during their schooling and after (Cress and Sax; 1998). In addition, communities often benefit from environmental volunteer involvement. Land managers and conservation organizations, for example, have volunteers who educate the public on management and conservation issues and decisions (Bruyere & Rappe, 2007).

Environmental volunteers often educate the public on local issues and expand public awareness of local environmental concerns. Incorporating the help of volunteers is a vital strategy in educating the public. A more informed public can make more environmentally friendly decisions; likewise, volunteers themselves may learn more environmentally friendly behavior as a result of their involvement. In addition, some organizations provide family-friendly events and give community members an opportunity to establish a connection with and play a contributing role towards their community.

Environmental volunteers also contribute to scientific research and have allowed for environmental improvements to be made that may have otherwise not have happened.

“The environmental movement would not exist without the help of thousands of dedicated volunteers. “Both public and private environmental organizations rely on unpaid volunteers to further the cause of protecting and helping the imperiled natural environment” (Ryan, Kaplan, & Grese, 2001, p. 629). According to Bruyere & Rappe, limited budgets of land management agencies such as the United States Department of Agriculture (USDA) Forest Service and the Bureau of Land Management (BLM), coupled with increasing uses of their resources by visitors, contribute to an increasing dependence on volunteers (2007). Trends have continued to show that federal land management agencies experience declining budgets and this trend is expected to continue (Bruyere & Rappe, 2007; Propst, 2003; Cordell & Betz, 2000). Participation in outdoor recreation places greater demands on our natural environments (Betz, 1999; Cole, 1996). These circumstances create a heavier reliance on volunteers to support natural resource and land management agencies.

The work of environmental volunteers is very important as is the understanding of volunteer motivations in efforts to improve an organization’s ability to recruit and retain volunteers. However, there is a lack of study concerning environmental volunteer motivations (Bruyere & Rappe, 2007; Ryan et al., 2001). Managers need to be mindful of volunteer motivations when developing programs and activities so they can offer opportunities for volunteers to satisfy their motivations and maintain their role volunteers (Bruyere & Rappe, 2007).

### 1.3 My Research

I have conducted a case study of two organizations in Thurston County that rely on volunteers to carry out their mission and work: Stream Team and Nisqually Reach

Nature Center. Both of these organizations are active in conservation and outdoor-based activities, and as Bruyere & Rappe note, “minimal research exists concerning the motivations, recruitment and retention of volunteers specifically for conservation and outdoor-based organizations” (Bruyere & Rappe, 2007, p. 503). This research will contribute towards filling that research gap.

Indeed, the purpose of this research is to further identify and evaluate the motivations of those who volunteer with these two out-door based, educational and conservation oriented organizations in Thurston County, Washington. This study will provide a better understanding of the volunteers involved and identify ways to support volunteer recruitment and retention.

Following this introduction will be a review of the literature relevant to this research. After a review of the pertinent literature, my methodology for this study will be discussed. Then I present my results along with an integrated discussion of them. Finally, I will conclude this thesis with a brief summary of key findings as well as closing remarks.

## **Chapter 2: Literature Review**

### **2.1 Introduction**

This chapter will examine various definitions of terms relevant to this research as well as introduce and explore the concept of the functional approach and the volunteer functions inventory (VFI). Furthermore, this chapter will review methodologies used in similar studies and will discuss similarities and differences among these studies. It will conclude by addressing areas in the research that may warrant further investigation.

### **2.2 Definitions**

As previously mentioned, only a limited number of articles speak to environmental volunteer motivations, and even fewer specifically look at outdoor based conservation oriented organizations. As a result, I have also reviewed articles exploring volunteer motivations related to citizen science programs, environmental stewardship programs, and other general volunteer motivation studies.

Because this chapter explores articles relating to environmental stewards and citizen scientists, it is important to understand the differences and similarities between these categories of volunteers. While there are various definitions offered for each of them, most of the definitions share common key words and themes. An environmental volunteer can be involved in a wide range of activities including monitoring, restoration, and educational work. A citizen scientist partners with scientists with the aim of collecting scientific data; they work on “projects in which volunteers partner with scientists to answer real-world questions” (“Defining Citizen Science,” 2015). Citizen scientists can be involved in various types of volunteer work; they need not be specific to the environmental sector. However, many citizen science initiatives are environmentally

related and the articles explored later in this chapter that pertain to citizen science do explore environmental citizen science programs. Thus, whenever I refer to citizen science in this thesis, it can be assumed that the reference is environmentally related. It is important to note that a citizen scientist is considered an environmental volunteer but an environmental volunteer may not always be considered a citizen scientist; one has to actively be involved in the scientific process to be considered a citizen scientist.

An environmental steward takes responsibility for protecting our environment; environmental stewardship is “the act of taking responsibility for the well-being of the environment and taking action to restore or protect that well-being” (“Stewardship,” 2015). Although there are various definitions offered for the term environmental steward, they all share the theme of having a responsible relationship with the environment. Articles relating to environmental stewardship motivations are also relevant to this study since environmental stewards who volunteer their time are considered environmental volunteers. One can think of the term “environmental volunteer” as an umbrella term under which both citizen scientists and environmental stewards can fall.

### 2.3 Methodologies

This section discusses methods used to explore environmental volunteer motivations to offer the reader greater insight into the approaches taken in other studies as well as to give the reader a better understanding of the choices I made regarding methodology for this particular research project. My primary focus will be on the functional approach and the volunteer functions inventory, as this was the most frequently used method among the research.

### 2.3.1 Functional Approach and Volunteer Functions Inventory

A functional approach has been employed in several studies investigating volunteer motivations. As Bruyere & Rappe note, “a recurring approach within the psychological and environmental disciplines for studying individual behavior such as volunteerism is the functional approach” (Bruyere & Rappe, 2007, p. 505). This approach, introduced by Daniel Katz in 1960, is a “motivational perspective that investigates the personal and social processes that initiate, direct and sustain action” (Bruyere & Rappe, 2007, p.505). The principle concept behind the functional approach is that although people perform the same actions, their motivations may be different. This is an important concept to consider when investigating environmental volunteer motivations because sustained participation depends on satisfying each volunteer’s motivations (Clary & Snyder, 1999; Bruyere & Rappe, 2007; Katz, 1960). Similarly, the reasons for volunteering initially may differ from the motives that keep people volunteering (King & Lynch, 1998).

To apply the functional approach to assess the motivations of volunteers, Clary and others identified six motivational functions, together known as the voluntary functions inventory (VFI) (Clary et al., 1998). Note that while the VFI captures volunteer motivations in general and is not specific to environmental volunteers, it can be useful in helping why people participate in environmental organizations. The six categories of the VFI are values, understanding, social, career, protective, and enhancement. Definitions as they pertain to this study are as follows:

- Values: The opportunity that volunteers are often provided to express their values. In this study it is mentioned that this refers specifically to the

opportunity for volunteers to express their values related to “altruistic and humanitarian concerns for others” (Clary et al, 1998, p. 1517).

- Understanding: The prospect of learning and experiencing new things.
  - Social: The motivations of volunteers that relate to socializing with others whether it’s an opportunity to meet new people or engage in an activity with a friend.
  - Career: The opportunity to obtain career related benefits is another function that may be served from volunteering.
  - Protective: Protecting the ego and giving volunteers a chance to relieve guilt or escape negative feelings. For example, one may volunteer to those less fortunate to relive guilt for living a more fortunate life.
  - Enhancement: The chance to enhance one’s ego. For example, one may volunteer to enhance personal growth or obtain personal satisfaction.
- (Clary et al., 1998).

To apply these functions in assessing volunteer motivations, Clary et al gave volunteers a number of statements (items) and asked them to rate their level of importance using a 7-point Likert rating scale (see figure 2.3.1) As you can see, each item in the scale is associated with its respective function. The mean ratings were then calculated to determine the strongest motivators.

Protective

7. No matter how bad I've been feeling, volunteering helps me to forget about it.
9. By volunteering I feel less lonely.
11. Doing volunteer work relieves me of some of the guilt over being more fortunate than others.
20. Volunteering helps me work through my own personal problems.
24. Volunteering is a good escape from my own troubles.

Values

3. I am concerned about those less fortunate than myself.
8. I am genuinely concerned about the particular group I am serving.
16. I feel compassion toward people in need.
19. I feel it is important to help others.
22. I can do something for a cause that is important to me.

Career

1. Volunteering can help me to get my foot in the door at a place where I would like to work.
10. I can make new contacts that might help my business or career.
15. Volunteering allows me to explore different career options.
21. Volunteering will help me to succeed in my chosen profession.
28. Volunteering experience will look good on my résumé.

Social

2. My friends volunteer.
4. People I'm close to want me to volunteer.
6. People I know share an interest in community service.
17. Others with whom I am close place a high value on community service.
23. Volunteering is an important activity to the people I know best.

Understanding

12. I can learn more about the cause for which I am working.
14. Volunteering allows me to gain a new perspective on things.
18. Volunteering lets me learn things through direct, hands on experience.
25. I can learn how to deal with a variety of people.
30. I can explore my own strengths.

Enhancement

5. Volunteering makes me feel important.
13. Volunteering increases my self-esteem.
26. Volunteering makes me feel needed.
27. Volunteering makes me feel better about myself.
29. Volunteering is a way to make new friends.

Figure 2.3.1 Volunteer Functions Inventory Items for Clary et al.

Three years after the initial Clary et al study, Ryan et al. (2001) adapted the volunteer function inventory and modified it to be more applicable for predicting volunteer commitment in environmental stewardship programs. These authors kept “social” and “understanding” (although they changed the term to “learning”) and removed “values,” “career,” “protective,” and “enhancement.” Instead, they added “environment,” “reflection,” “project organization,” “feeling of doing something useful,” and “making decisions about projects” (Ryan et al., 2001). These authors describe “reflection” as “having a chance to reflect” or “feeling peace of mind” (2001).

Similarly, another six years later, Bruyere & Rappe adapted the functional approach to identify the motivations of environmental volunteers and applied their own modifications. This new VFI was subsequently used by Jacobson, Carlton, & Monroe (2012) to explore volunteer motivations and satisfactions at a Florida Natural Resource Agency. Similar to Clary et al., Bruyere & Rappe identified “learning,” “career,” and “social” as functions of motivation. In addition, following Ryan et al., Bruyere & Rappe also identified “environment” and “project organization” (2007). The following table (Table 2.3.1) offers a visual aid to observe the evolution of the volunteer functions inventory in environmental volunteer motivation studies. In addition, the functions were listed in order from strongest to weakest as identified by its associated study for the last three columns. Environment ranked as strong motivator for all three studies, and learning ranked as a fairly strong motivator whereas functions such as social and career do not rank highly as strong motivators.

Table 2.3.1 An Evolution of Volunteer Functions Inventory in Environmental Volunteer Motivation Studies

(Clary et al., 1998)	(Ryan et al., 2001) *	(Bruyere & Rappe, 2007) *	(Jacobson et al., 2012) *
Values	Feeling of doing something useful	Environment	Environment
Understanding	Environment	User	Learning
Social	Learning	Values & Esteem	User
Career	Project organization	Learn	Values & Esteem
Protective	Social	Social	Project organization
Enhancement	Reflection	Project organization	Social
	Making decisions about projects	Career	Career

\* The functions in these column are listed in order from strongest to weakest motivator as identified in their associated studies.

Because Bruyere & Rappe modified the VFI and because Jacobson et al. and I used this VFI in our studies, I am offering a definition for each of these functions as they pertain to both the Jacobson et al study and my own to ensure that the reader understands what each function means.

- Help the environment: This refers to a desire to help the environment or an expressed concern for the environment. The expressed concern can be held at a local scale for a specific issue, or it can be a broad concern towards global or general environmental matters. For example, a volunteer may be motivated to do the work that he or she does because of a concern held towards a local environmental or ecological concern such as stormwater pollution if that is a serious matter in one's community (Jacobson et al., 2012; Bruyere & Rappe, 2007).
- Learning: Similar to "understanding" introduced by Clary et al., this refers to a desire to learn; this may refer to environmental knowledge or other information. For example, some may volunteer to gain knowledge about local flora and fauna or other local plant and animal species while others may volunteer to learn about community events (Jacobson et al., 2012; Bruyere & Rappe, 2007).
- Social: As with the "social" function identified by Clary et al., this function refers to social benefits such as hanging out with friends and meeting new people (Jacobson et al., 2012; Bruyere & Rappe, 2007).
- Career: Like the "career" function identified by Clary et al., this refers to a desire to gain career experience or experience that can be added to one's

resume. Some volunteers may devote their time in order to gain skills for a resume and/or career advancement which may include networking or making contacts that may help career/job advancement. In addition, a volunteer may devote his or her time to explore possible career options (Jacobson et al., 2012; Bruyere & Rappe, 2007).

- User: This function refers to a motivation where volunteers are willing to donate their time when their work improves an area that they use for recreation. This can include invasive plant species removal for clearing trails that a volunteer may use recreationally. Or, for example, a fisherman may participate in salmon stewardship projects in hopes of protecting future salmon runs (Jacobson et al., 2012; Bruyere & Rappe, 2007).
- Values and esteem: This function represents the motivation of a volunteer to live closely to their values. One may choose to volunteer because it provides an opportunity to put a value into action. For example, one may value family activities and chose to join organizations that allow the family participate together because it gives them an opportunity to express that value. Or, similar to the “enhancement” function identified by Clary et al., this may serve to improve one’s self esteem (Jacobson et al., 2012; Bruyere & Rappe, 2007)
- Project organization: This refers to a motivation to be part of a well-organized program (Jacobson et al., 2012; Bruyere & Rappe, 2007).

The following figure (Figure 2.3.2) comes from Jacobson et al., showing all the functions and their associated items which volunteers were asked to rate from 1 (strongly unimportant) to 7 (strongly important). Although Bruyere & Rappe identified this set of functions and created the items associated with them, the findings from this research will be compared to this figure, since it includes the mean values obtained from their study.

Motivation Category/Item	Category/ Question Mean
<i>Help the environment</i>	6.29
Concern for the environment	6.19
Protecting natural areas from disappearing	6.41
Do something for a cause that is important to me	6.34
See improvements to the environment	6.17
Ensure future of natural areas for my enjoyment	6.23
Help preserve natural areas for future generations	6.42
<i>Learning</i>	5.23
Learn about specific animals	5.04
Learn about specific plants	4.85
Learn about the environment	5.76
<i>User</i>	5.03
Allow me to work at an area where I visit	4.13
Enrich my future recreation experiences	5.23
Enhance the activities I enjoy doing	5.70
<i>Values and esteem</i>	5.02
Feel better about myself	4.74
Express my values through work	5.78
Feel needed	3.86
Live closely to my values	5.67
<i>Project organization</i>	4.80
Work with a good leader	4.86
Know what is expected of me	4.29
Be part of a well organized project	5.24
<i>Social</i>	4.79
Meet new people	4.85
Work with friends	5.15
See familiar faces	4.25
Have fun	5.71
<i>Career</i>	3.36
Get a foot in door where I would like work	3.26
Make contacts that might help my career	3.44
Explore possible career options	3.29
The experience will look good on my resume	3.14
Help me succeed in my chosen profession	3.61

Figure 2.3.2 Volunteer Motivation Categories with Mean Scores

If you refer back to table 2.3.1, you can see that “environment” was identified somewhere in the top three motivators in all three studies (Ryan et al., 2001; Bruyere & Rappe, 2007; and Jacobson et al., 2012). “Learn” was found somewhere in the top three for both Ryan et al. and Bruyere & Rappe’s study and falls fourth in Jacobson et al. “Career” came in last for both Jacobson et al. and Bruyere & Rappe’s study (keeping in mind that the functions listed for Clary et al. were not identified in any order). This dimension was among the lowest motivators and was typically a factor for younger volunteers (Clary et al., 1998; Jacobson et al., 2012). Based on these results, I expected to find that “career” will be identified as a weak, not a strong, motivator for most of the volunteers of Stream Team and the Nisqually Reach Nature Center. Similarly, I expected that those who identify “career” as a strong motivator will likely to be younger in age.

### 2.3.2 Other Inquiries

In addition to applying the VFI, Bruyere & Rappe asked an open-ended question in their research: “What is the most important reason that you volunteer for an outdoor organization?” (2007). After coding the responses into themes related to the seven identified categories, a new theme of “getting outside” emerged, representing 18% of the themes identified from open-ended responses (Bruyere & Rappe, 2007). Although this theme was mentioned as a potential new category, it was not used in Jacobson et al. study (2012).

Although Jacobson et al. did not gather qualitative data, the authors did obtain sociodemographic information to examine whether volunteer motivations varied by volunteer characteristics. In addition, these authors sought to explore if programmatic factors contributed to volunteer satisfaction in efforts to gain a better understanding about

if and how these volunteers' motivations were being satisfied. They found that most of the volunteers were Caucasian (95%), male (57%), between the ages of 40-64 (63%), were employed part time (58%), and had some form of college degree (62%) (2012). In addition, when testing for associations between demographics and volunteer motivations, they found "women had significantly higher average scores than males in motivations based on helping the environment, career, learning, and values and esteem categories" (Jacobson et al., 2012, p. 64). General research on volunteerism implies that the motivations of volunteers differ by gender, with women often reporting stronger motivations (Clary, Snyder, & Stukas, 1996; Fletcher & Major, 2004). I expected similar results in my study of volunteers in Thurston County.

#### 2.4 Research on Volunteer

Studies suggest that environmental volunteer motivations or reasons for volunteering may change from the initial stages, when people first join organizations, and their continued involvement (Rotman et al., 2014; Ryan et al. 2001). Additionally, volunteers are often motivated by more than one reason (Ryan et al., 2001).

Jacobson et al. found that social benefits were stronger motivators for long term volunteers (2012). This is important to consider this when exploring volunteer retention. Although "environment" is often the strongest or one of the strongest motivators, "social" may be important for those volunteers who continue their involvement. It may be that volunteers are committed to long term engagement because they seek an opportunity to develop personal relationships or build on existing relationships as they continue to volunteer over longer periods of time. Additionally, Ryan et al suggest that volunteer activities play a role in volunteer involvement and commitment. They note that more

proactive activities, like stream restoration tasks, develop stronger commitment of volunteers; these opportunities offer volunteers a chance to see tangible results or develop an attachment with the area they are working in (Ryan et al., 2001). This research suggests that what motivates the newer volunteers at Stream Team and the Nisqually Reach Nature Center may differ from the factors that motivate the long time volunteers.

## 2.5 Limitations

Many of these studies incorporated an online survey; this creates the potential to leave out certain portions of the study population. As Jacobson et al noted, these non-respondents are likely to be poor, less educated, or elderly (2012). Another limitation that specifically impacts the volunteer functions inventory is that a person's motivation may not fall into one of the predetermined categories. On the other hand, a motivation may fall into more than one category. For example, although a volunteer may identify a concern for the environment as a motivator, that volunteer may also be acting upon that concern because he or she is living closely to their values. Without follow-up interviews, there is no way to know how a person responded in such cases.

## **Chapter 3: Methods**

### **3.1 Introduction**

As will be discussed further in the sections that follow, I chose to survey the volunteers of two volunteer organizations in Thurston County as case studies for evaluating volunteer motivations: Stream Team and the Nisqually Reach Nature Center (NRNC). I employed an online survey method, SurveyMonkey, to create and administer my survey. The link to the survey was sent out via email by both of these organizations to their volunteer database as it was discussed and determined that this would be the best method for reaching the most participants. A follow-up reminder email was sent out three weeks after the initial emails were sent. In addition, Stream Team advertised the link to the survey in their paper copy newsletter. After a total of six weeks, the survey link closed and the data was collected.

I collected volunteer demographics as well as data on motivational responses to look for associations among sociodemographic and motivational responses; a list of the survey questions can be found in Appendix A. In addition, Stream Team administered an online survey to their volunteers in 2011 with various questions relevant to this research; this data will be considered when discussing results.

### **3.2 The Organizations**

I chose Stream Team and the NRNC because of their similarities in goals and volunteer activities and opportunities. The goals of both of these organizations involve education, restoration, and conservation. Stream Team, for example, has the motto: Educate Protect Restore, and their mission involves protecting and enhancing “the water resources, associated habitats, and wildlife of Thurston County through citizen education

and action” (“About Stream Team,” 2013). Nisqually Reach Nature Center “promotes the understanding, appreciation, and preservation of the Nisqually estuarine ecosystem and its integral role in the local environment, history, and culture, through interpretation, education, and research (Nisqually Reach Nature Center, n.d.) Both of these organizations offer volunteer activities that include data collection (citizen science opportunities) as well as educational programs that can both educate volunteers or allow volunteers to educate the public. Thus, on paper, these organizations appear similar in terms of goals and volunteer activities. In the context of this study, this begs the question: Are the volunteers and their motivations similar? One would assume that volunteer demographics and motivations are similar; my data collection will help shed light on this.

### 3.3 Survey Development

The survey administered to members of both organizations consisted of the same base questions, plus organization-specific questions regarding outreach and activity interests. A question about how volunteers initially heard about the volunteer opportunities and how they continue to communicate with the organization was also included for both organizations, although specific details of the question were different since the organization had different ways to recruit and keep their volunteers engaged. In addition, some of the questions chosen for the Stream Team survey were copied directly from their previous 2011 survey to allow for cross comparisons; those questions were not included on the NRNC survey. The survey was divided into three distinct sections: volunteer motivations, volunteer background, habits & preferences, and volunteer demographics

To identify volunteer motivations, I chose to explore this topic with three different modes of questioning to identify consistency between responses, or lack thereof: open ended, Likert statements, and “single most” statements, which will further be explained.

### 1. Open Ended Question

The very first question of the survey was an open ended question: “What motivates you to volunteer?” I asked this first because I wanted to capture the volunteers’ unbiased response to the question. I did not want the material of the survey to play a role in how they scoped their response to this question – I was looking for volunteers’ initial reply to this question. After collecting responses, I coded them into motivational categories using key words and phrases such as “learn”, “help the environment”, “career”, and “meet new people”. Many answers were coded into more than one motivational category. When added up, the percentages will equal more than 100% because many responses fell into more than one category. For example, one response was “care for local environment, work with like-minded people.” This response would fall into the both “environment” and “socializing” motivational categories.

### 2. Likert Statements (Functional Approach)

A motivation scale consisting of 35 items, adapted from Bruyere & Rappe (2007), was used to rank motivational categories. Volunteers responded to these items by choosing one of the following: strongly disagree, disagree, neutral, agree, and strongly agree; there was no order to how these items were listed. Each item corresponded to a specific motivational category, i.e. “career,” etc. However, as mentioned earlier, I also included items to rank motivation levels for “outdoors” and community”. These two

categories have not been used as functions in a volunteer functions inventory in previous studies on environmental volunteer motivations that employed this type of functional approach. Bruyere & Rappe noted that “outdoors” was identified as a strong motivator in their open-ended responses; because of this I decided to add three of my own items to represent this category: “have fun outdoors,” “observe nature,” and “do something outside.” To represent community, I added “to connect to my community” and “to give back to my community” as items. Again, all items were randomly displayed within this section of the survey. From the five point scale, I collected averages for each item and then, after matching each item to its own motivational category, calculated final averages for each category (see Appendix B for an example).

In addition to the items used to identify the strength of specific motivators, I asked four statements inquiring into volunteer preference and used the same five point scale as previously mentioned: strongly disagree, disagree, neutral, agree, and strongly agree. I merged the first two responses together and the last two responses together. For example, all responses indicating a strongly disagree or disagree were clumped together and considered a “disagree” response while all agree and strongly agree responses were considered an “agree” response for the purpose of calculated percentages.

### 3. “Single Most” Statements

In this section of the survey I offered single statements representing each motivational category and asked the volunteers to identify their single strongest and single weakest motivator.

A series of demographic questions were asked included items related to age, gender, household income, education, military, and race. The age, race, and household

income questions were all modeled after the 2010 and 2013 census for the purpose of comparing the survey data to county data. Outreach questions were constructed as per suggestions from organization representatives. A military affiliation question was constructed as desired by representatives of Stream Team.

### 3.4 Deleted Responses

Out of 101 responses from Stream Team volunteers, three were deleted. Two were deleted because for the very first question, the open ended question asking volunteers what motivates them to volunteer, these responders indicated that they have not yet volunteered. One of them offered no subsequent responses and another continued to answer the questions. A third responder's answers were deleted from the data set due to "silly" responses that led me to believe that the responder did not take the survey seriously. For example, this person's response to the first question about what motivates them to volunteer was "lust, aggression, and boredom." There were 36 respondents for the Nisqually Reach Nature Center volunteer survey and no responses were deleted.

### 3.5 Data Analysis

I used Microsoft Excel and JMP to manage my data as well as perform statistical analyses. I used Chi-square to test for associations among various sociodemographic and responses and motivational response. This was, however, only performed on data from Stream Team as there was not a large enough sample size from NRNC to apply a chi-squared analyses; this will be discussed further in the following chapter.

## **Chapter 4: Results & Discussion**

### **4.1 Introduction**

This chapter integrates both results and discussion for Stream Team and for NRNC data. The demographics will be presented and discussed first, followed by motivational responses, and volunteer habit and preference information. This chapter will conclude with a final discussion examining key similarities and differences among these results as well as limitations of this study and suggestion for future studies.

There were 36 respondents from NRNC and 101 from Stream Team but, as previously mentioned in the methods chapter, three have been deleted.

### **4.2 Demographic Results**

For some of demographic data explored in this section, I have included data from the Thurston County census for comparison purposes and to reveal any groups that are being underrepresented in the volunteer populations of these two organizations. For the purposes of recruitment, this may be valuable information to a project or organization manager as it may shed light on areas in which an organization may like to extend or improve outreach methods.

\*Note: The gender and age sections that follow include Stream Team's 2011 survey data for comparisons.

## GENDER

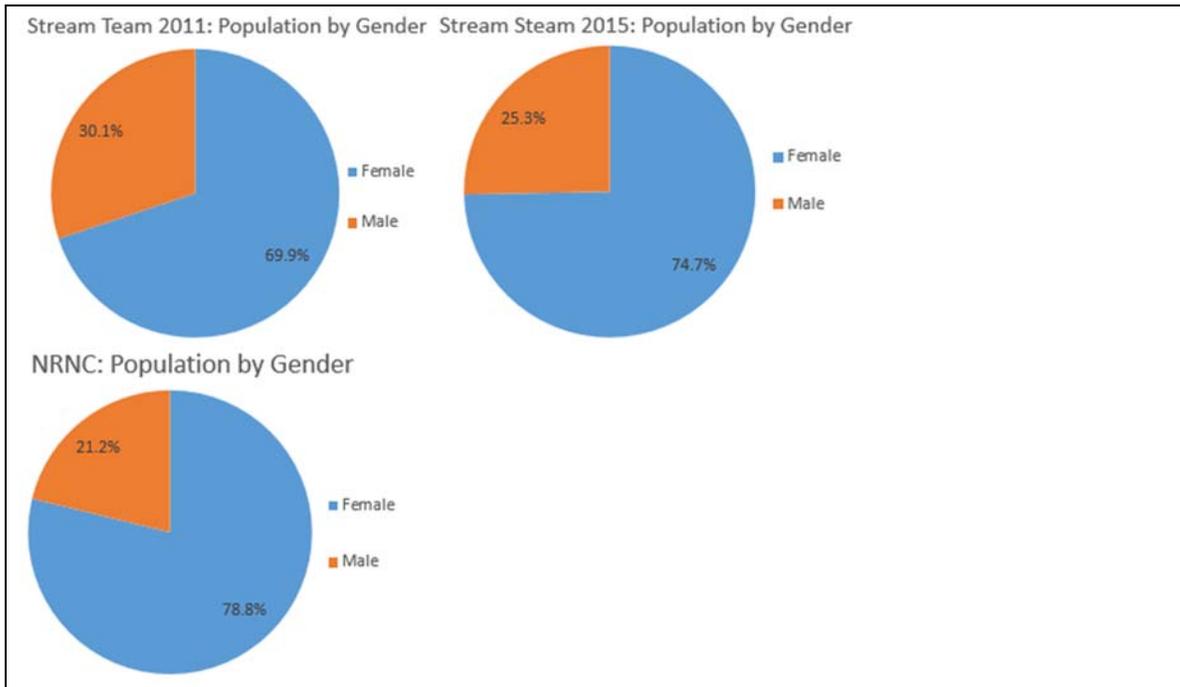


Figure 4.2.1. Population by Gender

As these graphs indicate, the majority of the volunteer population for both organizations is female. These data are not consistent with Jacobson et al., (who sought to link sociodemographic information to motivators) who noted surveying a 57% male population. However, the Bureau of Labor Statistics notes that women volunteer at higher rates than men (about 58% women, 42% men) (2014). Even so, the 2010 census noted the female population for Thurston County was 51.3% (U.S. Bureau of Census 2010), suggesting both Stream Team and NRNC have an opportunity to target the male population in new recruitment efforts.

## AGE

In the survey, I asked volunteers to denote their age in increments of five years. However, I have grouped the data into decades for the purposes of comparing with the previous 2011 Stream Team survey data. In addition, the Stream Team 2015 survey and the NRNC survey denoted age ranges in the 70's and 80's; this age specific information was not available for Stream Team 2011 survey data -- the highest age increment noted was "60+".

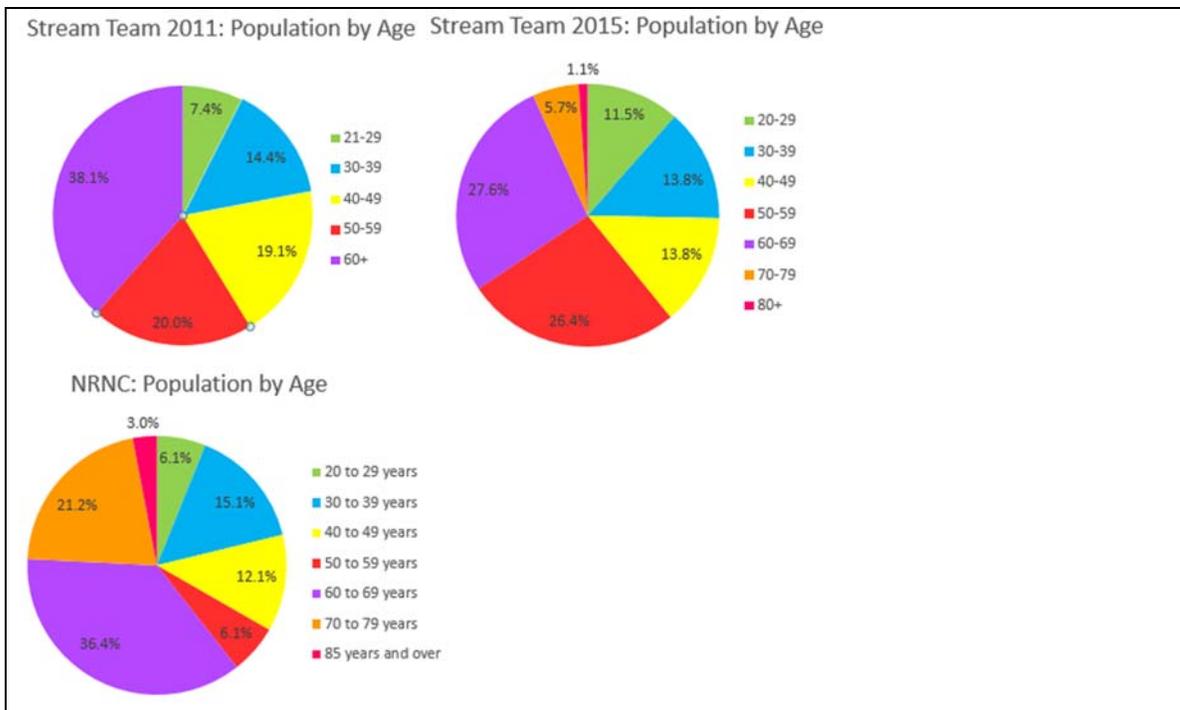


Figure 4.2.2. Population by Age

Figure 4.2.2 shows that for both organizations, the largest age group 60 to 69 years old. In addition, for both organizations, the majority of the population is in a 50 or older age group. This information is consistent with existing literature (Jacobson et al., 2012).

## RACE

Table 4.21. Population by Race

<b>Stream Team</b>		<b>NRNC</b>		<b>Thurston County (U.S. Bureau of Census 2013)</b>	
American Indian and Alaskan Native	4.1%	American Indian and Alaskan Native	0.0%	American Indian and Alaskan Native	1.7%
Asian	2.1%	Asian	0.0%	Asian	5.5%
Black or African American	0.0%	Black or African American	0.0%	Black or African American	3.3%
Hispanic or Latino	2.1%	Hispanic or Latino	2.9%	Hispanic or Latino	8.1%
Native Hawaiian or Other Pacific Islander	0.0%	Native Hawaiian or Other Pacific Islander	0.0%	Native Hawaiian or Other Pacific Islander	0.9%
White	91.8%	White	97.1%	White	83.4%

Most of the volunteers for both Stream Team and Nisqually Reach Nature Center and white, aligning with county census data. Again, these results match with volunteer demographics from the existing literature. Both of these organizations have an opportunity to reach out to different racial/ethnic populations and perhaps this may require more directed outreach methods.

## EDUCATION

Table 4.2.2. Population by Education

<b>Stream Team</b>		<b>NRNC</b>	
Less than high school degree	0.0%	Less than high school degree	0.0%
High school degree or equivalent (e.g., GED)	0.0%	High school degree or equivalent (e.g., GED)	0.0%
Some college but no degree	7.6%	Some college but no degree	0.0%
Associate degree	6.5%	Associate degree	9.1%
Bachelor degree	41.3%	Bachelor degree	45.5%
Graduate degree	32.6%	Graduate degree	42.4%
Doctoral degree	7.6%	Doctoral degree	0.0%
Other	4.4%	Other	3.0%

Stream Team volunteers revealed that 88% of the population who responded to the survey had some type of college degree. Another 8% indicated that they had some college but no degree. NRNC volunteers revealed that 97% of the population who responded had some type of college degree. Census data reveals that 32.3% of the population in Thurston County has a bachelor’s degree or higher; this percentage is calculated from people of age 25 years or older (“State & County Quick Facts,” 2013). It appears that most of who chose to volunteer with these types of organizations are well-educated. This is consistent with Jacobson et al. who noted that the respondents of their study were better educated than the general population of their study area (2012). This is also consistent with the Bureau of Labor Statistics which notes that there are higher rates of volunteers with college degrees than without (“Volunteering in the United States,” 2014).

## **INCOME**

Table 4.2.3. Population by Household Income

<b>Stream Team</b>		<b>NRNC</b>		<b>Thurston County (U.S. Bureau of Census 2013)</b>	
Less than \$10,000	8.6%	Less than \$10,000	7.7%	Less than \$10,000	4.0%
\$10,000 to \$14,999	2.5%	\$10,000 to \$14,999	3.9%	\$10,000 to \$14,999	2.0%
\$15,000 to \$24,999	9.9%	\$15,000 to \$24,999	7.7%	\$15,000 to \$24,999	5.7%
\$25,000 to \$34,999	8.6%	\$25,000 to \$34,999	7.7%	\$25,000 to \$34,999	6.4%
\$35,000 to \$49,999	16.1%	\$35,000 to \$49,999	15.4%	\$35,000 to \$49,999	11.2%
\$50,000 to \$74,999	21.0%	\$50,000 to \$74,999	11.5%	\$50,000 to \$74,999	21.5%
\$75,000 to \$99,999	14.8%	\$75,000 to \$99,999	11.5%	\$75,000 to \$99,999	18.2%
\$100,000 to \$149,999	13.6%	\$100,000 to \$149,999	26.9%	\$100,000 to \$149,999	20.3%
\$150,000 to \$199,999	1.2%	\$150,000 to \$199,999	0.0%	\$150,000 to \$199,999	6.5%
\$200,000 or more	3.7%	\$200,000 or more	7.7%	\$200,000 or more	4.2%

Although there are varying responses for income, the majority of the volunteers report a household income of \$50,000 or more per year; this is concurrent with county

census data. This may associate with the fact that many of the volunteers are educated and are thus more likely to earn these rates of income.

## RETIRED

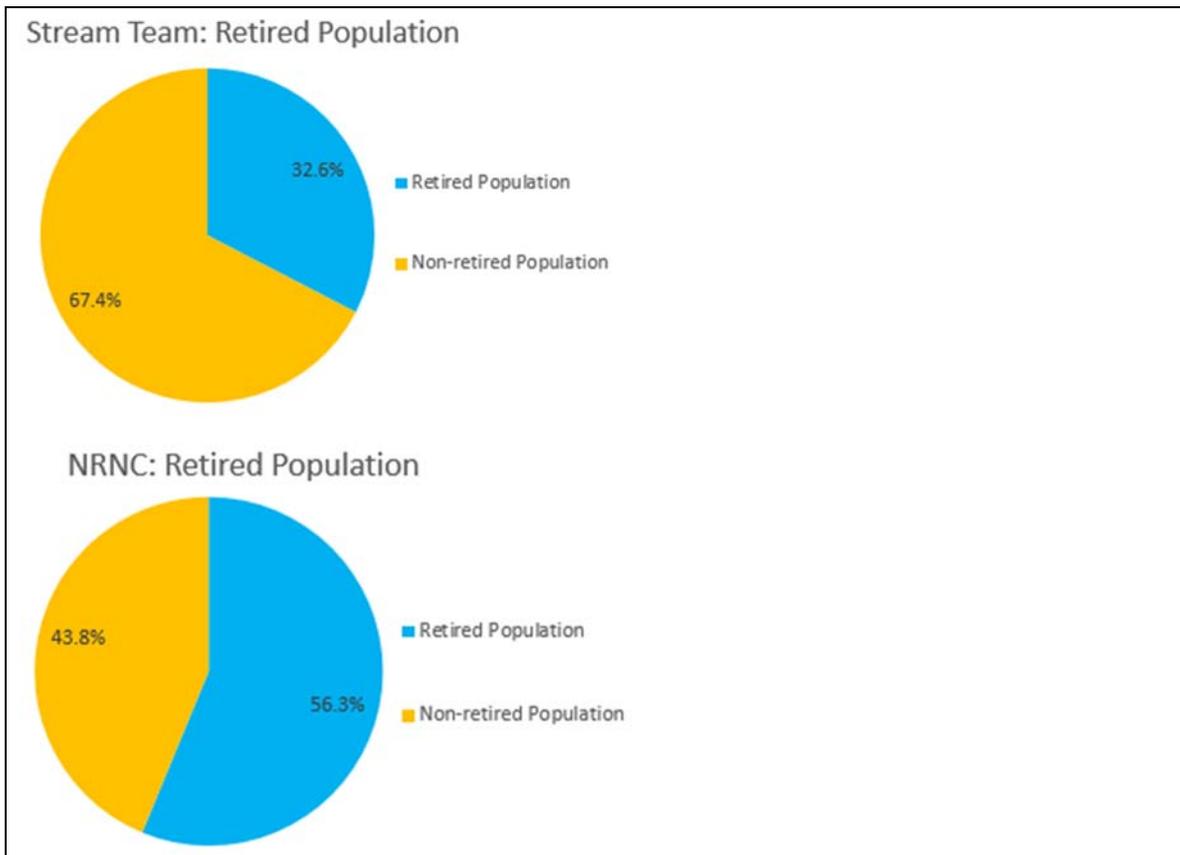


Figure 4.2.3. Population by Retirement

Over half of NRNC's volunteer population consider themselves retired while about a third of Stream Team's volunteer population considered themselves retired (See Figure 4.2.3). Jacobson et al. (2012) noted a 29% retired population in their study; these organizations appear to have a fairly high percentage of retired population. The high percentage of retirees may play a role in producing results that differ from those from Jacobson et al., particularly in motivational responses.

## MILITARY

Table 4.2.4 Population by Military Affiliation

Stream Team		NRNC	
Non-military	84.1 %	Non-military	93.1 %
Retired military	2.3%	Retired military	3.5%
Veteran	11.4 %	Veteran	0.0%
Active duty military	0.0%	Active duty military	3.5%
No, but I am an active duty military spouse or child	2.3%	No, but I am an active duty military spouse or child	0.0%

In general, there is little military affiliation among the volunteer populations for both organizations. I found no environmental volunteer motivation studies that inquired into military affiliation. Perhaps, as with other racial groups, this may be an opportunity for these organizations to reach out to a specific demographic.

## CITY

Table 4.2.5 Population by City

Stream Team		NRNC	
Olympia	54.8%	Olympia	42.4%
Lacey	11.8%	Lacey	9.1%
Tumwater	2.2%	Tumwater	0.0%
Yelm	1.1%	Yelm	0.0%
Tenino	0.0%	Tenino	0.0%
Bucoda	0.0%	Bucoda	0.0%
Unincorporated Thurston County	12.9%	Unincorporated Thurston County	15.2%
Other	17.2%	Other	33.3%

## TIME LIVED IN THURSTON COUNTY

Table 4.2.6 Population by Time Lived in City

Stream Team		NRNC	
0-2 years	21.3%	0-2 years	12.1%
3-5 years	6.4%	3-5 years	6.1%
6-8 years	7.5%	6-8 years	6.1%
8+ years	55.3%	8+ years	57.6%
Not applicable	9.6%	Not applicable	18.2%

Most of the volunteers for both organizations have lived in Thurston County for eight years or more. This seems intuitive -- one would expect those who have spent more time living in the County would have a stronger connection or feel more of a desire to contribute to their home area. However, the second largest group (other than the “not applicable” category) was volunteers who have lived in Thurston County for two years or less. It is possible that the majority of volunteers are those who have lived in the county for a long period of time and have established a role with these organizations, and those who are new to this area and are seeking explore opportunities or establish a role within the community. Finding a way to motivate these very different groups can be challenging.

#### 4.3 Motivations

As previously discussed, I explored volunteer motivations with three separate methods of questioning. An open ended question “What motivates you to volunteer?” was asked first. Then, the volunteers were asked to rank their level of agreement to a series of items relating to motivational functions. Finally, the volunteers identified their single strongest and weakest motivator. This was done to detect internal consistencies, or lack thereof, among motivational responses. Table 4.3.1 below represents the three top responses for each method of inquiry. The percentages represent the percent of population that chose that motivator. The open-ended responses equal more than 100% because many responses fell into more than one category.

Table 4.3.1 Stream Team Volunteer Motivations

<b>Stream Team: Motivations</b>		
<b>Open ended responses</b>	<b>Mean Likert Scores (1 least important to 5 most important)</b>	<b>Single strongest motivator</b>
Environment 46.8%	Environment 4.6	Environment 40.2%
Community 25.5%	Outdoors 4.1	Learn 28.9%
Learn 21.3%	Learn 4.0	Community 15.5%
Social 20.2%	Community 3.8	Values 7.2%
Outdoors 14.9%	Values and Esteem 3.7	User 2.1%
Career 6.4%	User 3.6	Outdoors 2.1%
Kids 6.4%	Project organization 3.2	New to area (if applicable) 2.1%
Support efforts of organization 4.3%	Social 3.1	Career 1.0%
Values 4.3%	Career 2.0	Project organization 1.9%
New to area 2.1%		Socialize 0.0%

Survey respondents identified a concern or care for the environment as the number one motivator for all three modes of inquiry. Similarly, a desire to learn appears somewhere in the top three responses in all three as well, and “community” is found in two. This reveals consistency in volunteers’ responses about their motivations. There are, however, examples of inconsistencies. Most notably, social was eighth in the Likert scale rating and last in the “choose one” rating yet ranked fourth in the open-ended questions. A fifth of the population mentioned some form of socializing when answering to what motivates them to volunteer. The discrepancy may lie with how I coded the open-ended responses, in what I decided should fall under the “social” category. Or, it may be that volunteers chose not to rank social items high when prompted as they may feel pressured to maintain the notion of volunteering as a selfless act.

Although most of the responses were easily placed into one or more known motivational categories (which concurs with the suggestion that volunteers are motivated by more than one function), it is important to note that how I interpreted the responses

plays a role in the data that is represented; this process was done at my discretion but based on my understandings of the organizations and their missions. For example, one response was "...love the outdoors." This could be interpreted as a response that should fall into the "get outdoors" category indicated that he participates in these outdoor volunteer opportunities because he loves to be outdoors. However, it could have also meant that because he loves the outdoors, he chooses to volunteer with an organization whose main goals are to protect outdoor areas. In this case, I placed the response in the "get outdoors" category. "My interest in Low Impact Development stuck my interest in the program" could have been related to the "environment" but because the survey respondent did not explicitly link it to the environment, it was placed it into the "other" category.

As the open-ended responses in Bruyere & Rappe's study suggest, "outdoors" is identified as a strong motivational function. Because outdoor ranked high with the functional approach, I think future studies should investigate this notion to determine if "outdoors" is a more plausible function for the VFI than other, lower ranked functions such as "organized program." It would also be interesting to examine the link between those who volunteer with outdoor activities with their rating of volunteering, to better evaluate the strength if this motivator.

Table 4.3.2 Nisqually Reach Nature Center Volunteer Motivations

<b>NRNC: Motivations</b>		
<b>Open ended responses</b>	<b>Mean Likert Scores (1 least important to 5 most important)</b>	<b>Single strongest motivator</b>
Environment 38.9%	Environment 4.4	Learn 31.4%
Learn 19.4%	Community 3.7	Environment 25.7%
Personal Satisfaction 19.4%	Learn 3.6	Community 25.7%
Social 16.7%	Outdoors 3.6	Career 14.3%
Career 16.7%	Values and Esteem 3.5	Outdoors 2.9%
Support efforts of organization 13.9%	User 3.3	User 0.0%
Community 8.3%	Social 3.1	Values 0.0%
Teach 8.3%	Project organization 3.1	Project Organization 0.0%
Outdoors 5.6%	Career 2.0	Socialize 0.0%
		New to area (if applicable) 0.0%

NRNC has an older population and a larger retired population, yet “career” is a strong motivator for this population, primarily among the younger respondents. This organization seems to primarily have older volunteers and younger volunteers seeking career opportunities. Is this organization hitting a “middle crowd” or “family crowds”? That could be a target population for future outreach activities.

The “single strongest motivator” column reveals important information not just on what volunteers identify as their strongest motivator but also because it offers insight into what are not indicated is strongest motivators for any volunteer. Functions such as “user,” “project organization,” and “social” are not identified as the strongest motivator for any volunteer. I find that results for “social” surprising as almost 17% of the respondents mentioned social motives in their open-ended response. It could be that for many volunteers, socializing is an additional benefit gained from participation but is not the strongest motivator for volunteering.

Table 4.3.3 (below) represents the mean Likert scores from both Bruyere & Rappe and Jacobson et al. Compared with the results from Stream Team and NRNC, one can see that “helping the environment” and “learning” are strong motivators. However, “values and esteem”

as well as “user” are both functions that rated between fourth and sixth place for Stream Team and NRNC, while for Bruyere & Rappe and Jacobson et al. these functions were rated in second to fourth place. This difference is likely due to the fact that “outdoors” and “community” to my survey were added and scored higher than both “user” and “values and esteem.”

Table 4.3.3 Ranked Motivational Responses from Bruyere & Rappe and Jacobson et al.

<b>Bruyere &amp; Rappe (2007)</b>	Mean Likert Scores	<b>Jacobson et al., 2012</b>	Mean Likert Scores
Help the environment	6.11	Help the environment	6.29
User	4.96	Learning	5.23
Values and esteem	4.96	User	5.03
Learning	4.91	Values and esteem	5.02
Social	4.88	Project organization	4.80
Project organization	4.59	Social	4.79
Career	2.82	Career	3.36

#### 4.4 Chi-squared

There were no Chi-squared analyses performed with NRNC data because the sample size was less than 50 (n = 36) and therefore when calculating observed figures the observed cells would have a frequency less than five, making a Chi-square analysis less reliable. Thus, the following Chi-square discussions relate to Stream Team Data only.

To look for associations between gender and motivational responses, I used a Chi-squared method with volunteers’ responses indicating their single strongest motivation. I found a statistically significant association between women and identifying “learn” as their strongest motivator over men ( $X^2 = 4.15, p < 0.05$ ). This result is consistent with a similar study performed by Jacobson et al. (2012). A Chi-square method was also used to look for associations between age and motivational responses. A statistically significant association was found between volunteers in their 40’s or below and identifying “career” as a motivation ( $X^2 = 4.93, p < 0.05$ ). Likewise, this result is also

consistent with existing literature which suggests that career motivations are more prevalent among younger volunteers (Katz, 1960; Jacobson, 2012). No Chi-square analyses were performed for other demographics as they were dominated by one characteristic. For example, because almost all of the volunteers identified as white, there is no point in looking for associations between race and motivations; the same holds true for education and military affiliation.

#### 4.5 Volunteer Background & Habits

How long have you volunteered for this organization?

Table 4.5.1 Population by Time Spent as a Volunteer

<b>Stream Team</b>		<b>NRNC</b>	
Less than 1 year	36.2%	Less than 1 year	33.3%
1 to 3 years	34.0%	1 to 3 years	36.4%
4 to 10 years	17.0%	4 to 10 years	15.2%
10+ years	6.4%	10+ years	12.1%
Not sure	6.4%	Not sure	3.0%

Going into this research, I assumed that the majority of those who took the time to respond to the survey would be those who were long term volunteers and already committed to these organizations. However, a third or more of the sample responding have been volunteers for less than a year. Likewise, a little over a third of the samples from both organizations indicated that they have been volunteering for 1 to 3 years. This can be helpful information as much of this survey data represents new volunteers or those beginning to establish their role with these organizations, and may be useful for making decisions that relate to their expectations or interests to promote retention. However, although it sheds light on why these “newer” volunteers are motivated to contribute, it leaves a gap in insights for reoccurring volunteers. If I had as much data on volunteers who have been showing a steady commitment to these organizations, I could gain deeper

insights into volunteer retention and those motives that keep volunteers coming back. It is clear that “environment” is a strong motivator for most of these volunteers (long-term and short-term included), and, as Jacobson et al. note in their study, dedicated volunteers are more strongly motivated by “social” functions (2012). It is a bit surprising to see low a low ranking for social motivations. It is important to keep in mind that the motives that influence a person to volunteer initially may differ from those that keep them involved.

In the past 12 months, how many Stream Team activities have you attended?

Table 4.5.2 Stream Team Volunteers: Number of Events Attended in the Last 12 Months

<b>Number of events attended</b>	
0	1.2%
1	19.5%
2 to 5	60.9%
6 to 10	13.8%
10+	4.6%

\* This question was not given to NRNC volunteers

Figure 4.5.1 below displays a mosaic plot that examines the relationship between how long one has volunteered with Stream Team (x-axis) and how many events they attend per year (y-axis). The assumption is that those who are long-term, committed volunteers are likely to attend more activities than newer volunteers.

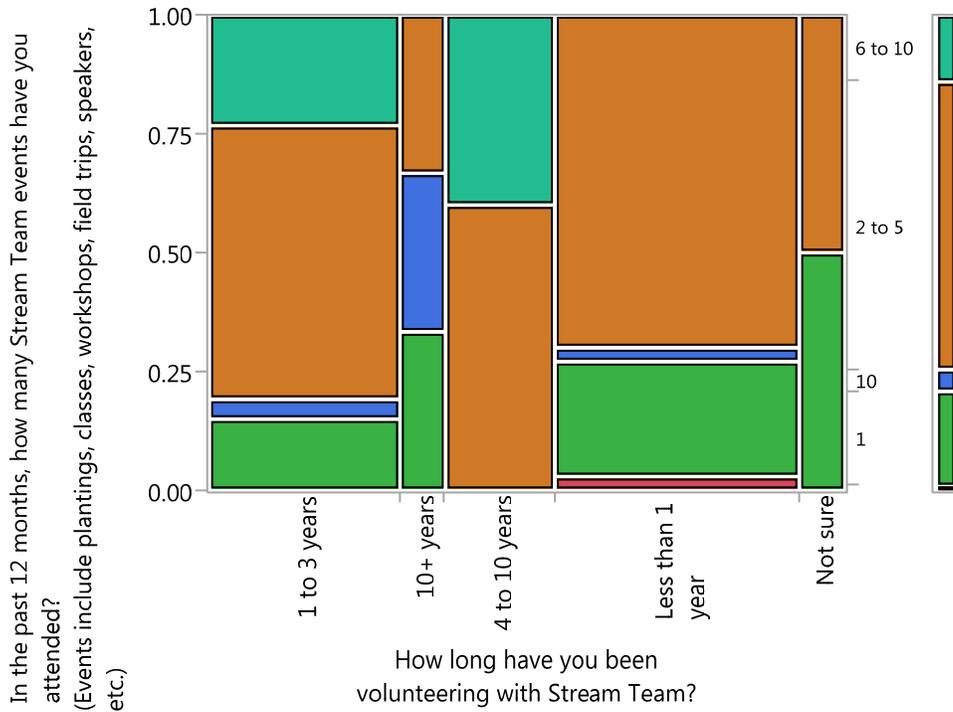


Figure 4.5.1 Mosaic Plot Examining the Relationship Between How Long One Has Volunteered and How Many Activities They Participate in. (Note that the items are not in sequential order)

The largest percentage (per group) that chose 10 or more events was those volunteers who have been volunteering for 10 or more years. There was a fairly even distribution of “2 to 5” activities per year among the rest of the groups. However, given the small population count in the data set it is important to note that the overall “picture” being represented is not highly accurate; very small differences in responses can appear to have large impacts on how the data is represented.

Do you volunteer other places?

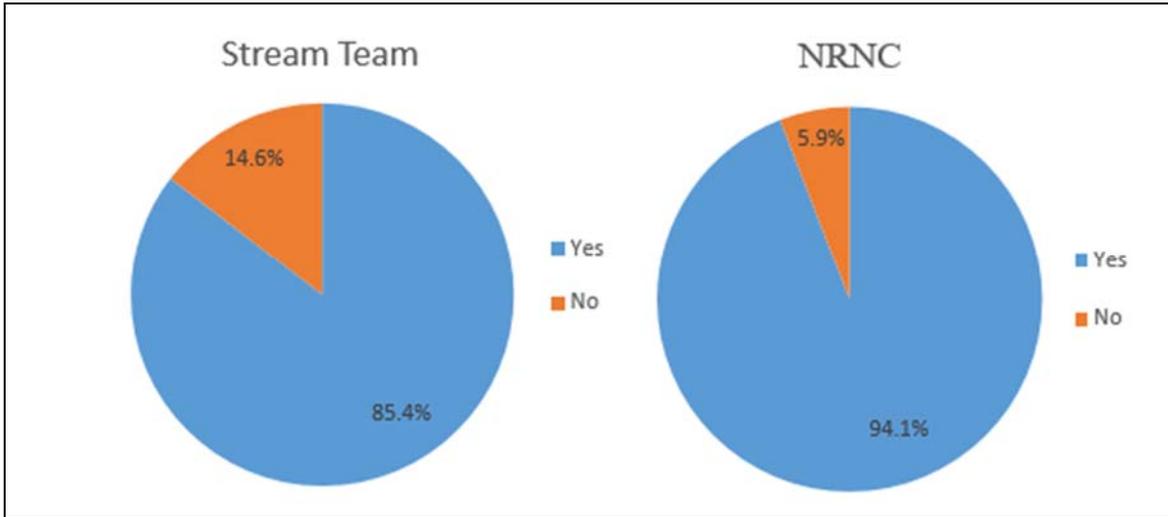


Figure 4.5.2 Participants Who Volunteer with Other Organizations of Any Kind

Many of these participants volunteer elsewhere. The table below represents the type of organizations and the percentage of respondents that indicated volunteering with them.

Table 4.5.3 Other Organizations That Participants Volunteer With

<b>Stream Team</b>		<b>NRNC</b>	
Civic (Rotary, Lions, etc.)	9.8%	Civic (Rotary, Lions, etc.)	9.4%
Religious	12.2%	Religious	28.1%
Environmental	57.3%	Environmental	46.9%
Citizen Science	25.6%	Citizen Science	28.1%
Community/Government (advisory committees, etc)	18.3%	Community/Government (advisory committees, etc)	28.1%
School (PTA, classroom, etc.)	14.6%	School (PTA, classroom, etc.)	12.5%
Social Justice (CYA, Food Bank,)	13.4%	Social Justice (CYA, Food Bank,)	25.0%
Other (please specify)	37.8%	Other (please specify)	21.9%

Although “environment” was indicated as the main type of organization others volunteer with, many of the respondents volunteer with non-environmental organizations as well. This makes me curious to know what really motivates these respondents to volunteer; what truly separates volunteers from non-volunteers. These results make me question this because although “environment” is the strongest motivator among the

respondents, many of them are volunteering with non-environmental organizations. It may not be just the environmental aspect of Stream Team or NRNC that draws them to volunteer. “Learning” is also a strong motivator among these respondents; perhaps they are continuing to fulfil their desire to learn about other places or new subject matter?

I believe these results point to a limitation of the functional approach; the volunteer functions inventory may identify themes in volunteer motivations, but it does not delve into the psychology of individual behavior. For example, the inventory may identify a group of people who share a concern for the environment and value community connection and choose to volunteer. Yet, there are others who share a concern for the environment and hold community values yet do not volunteer. Why? Although I feel this really gets at the heart of volunteer motivations, it is a very difficult question to answer; there may be so many variables that come into play when a person does or does not develop volunteering behavior. For example, upbringing may play a role (i.e. parents who volunteer, children involved in scout troops, etc.) as well as the availability one has to volunteer. If one is not able to satisfy their needs outside of volunteering, such as securing shelter, safety, education, income, food, etc. they may not be able to volunteer despite their shared concern for the environment or desire to learn etc. (this may contribute to why many of the volunteers are educated and generating moderate to high income; their needs are met and they may spend time volunteering).

Table 4.5.4 Volunteer Preference in Working with a Project Leader

<b>Stream Team</b>		<b>NRNC</b>	
Yes	38.5%	Yes	25.7%
No	1.0%	No	2.9%
Doesn't matter	60.4%	Doesn't matter	71.4%

Jacobson et al. noted that volunteers who received training had significantly higher satisfaction ratings (2012). Training often involved working closely with project leaders. This question was an attempt to determine how much of the population prefers working with a project leader so that organization managers can meet those satisfactions and improve retention rates for volunteers. As you can see from Table 4.5.4, for most volunteers it does not matter if they work with a project leader or not. However, a strong portion of the respondents (26% - 38%) indicate that they do prefer a project leader. It is important for these organizations to continue to offer activities that involve co-working with project leaders to satisfy the needs of this group of volunteers.

The table below represents the level that volunteers agree to two statements relating to volunteer decisions.

Table 4.5.5 Volunteer Decisions Based on Time and Activities

	Stream Team			NRNC		
	Disagree	Neutral	Agree	Disagree	Neutral	Agree
I volunteer, depending on time	3.1%	7.3%	89.6%	2.8%	13.9%	83.3%
I volunteer, depending on the activity	0.0%	6.3%	93.7%	5.6%	13.9%	80.5%

It appears that both time and activity play an important role for respondents when making decisions about volunteering. As a project manager, it is important to be aware of the importance of these two factors so as to have a better understanding of what influences their volunteers' decisions. For example, if an organization is aware of how important time is for a volunteer when deciding to participate, the organization may offer activities on different days of the week, at different times, and of different durations to allow more options for volunteers to fit activities into their schedules.

Because time is such an important factor to volunteers I was curious to see if those who considered themselves retired disagreed or voted neutral to the statement “depending on time” (this analysis was not done with NRNC data due to a low frequency of responses). However, there was no significant difference among the responses between retired and non-retired respondents. Although, more non-retired folks strongly agreed with that statement while more retired respondents merely agreed with the statement (vs strongly agreed) as indicated by the figure below.

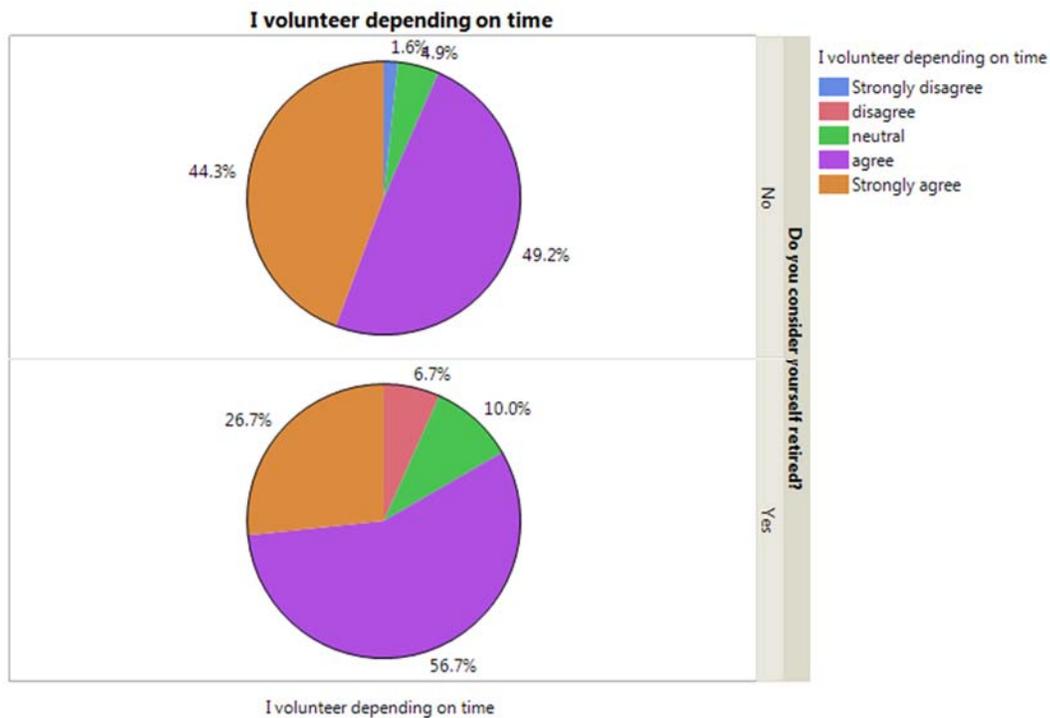


Figure 4.5.3 Retired vs. Volunteer Depending on Time

As with time, it is also important to note how activity plays an important role when a volunteer is determining to participate. This information allows project managers to offer diverse activities that satisfy the desires of their volunteers. Additionally, as Ryan et al. note, activity plays a role in volunteer retention; specifically, volunteers who

participate more proactive type of activities are more likely to develop a level of commitment (2001). The table below shows the top three responses from Stream Team volunteers for activities to which they were not interested, interested, already do, and plan on doing.

Table 4.5.6 Top Activity Responses from Stream Team Volunteers

Top 3 "not interested"	Top 3 "interested"	Top 3 "already do"	Top 3 "will do"
Assist at festivals and fairs	Beach and nature walks	Workshop + classes	Planting trees
Family-friendly events	Habitat and wildlife monitoring	Planting trees	Watershed bus tours
Watershed bus tours	Marine creature Monday	Educating the public	Educating the public

I highlighted the watershed bus tour because it ranked both in “not interested” and “will do.” I also highlighted planting trees and educating the public because these ranked in both “already do” and “will do” which indicates volunteer commitment towards what they’ve already been doing. It appears that these volunteers want to get out and do something physical or hands-on. This concurs with the suggestion offered from Ryan et al. that volunteers who participate in more proactive activities are more likely to develop commitment, as illustrated here as these volunteers indicate that they plan to continue their involvement. Table 4.5.7 below, represents the top four activities of interest as indicated by NRNC volunteers.

Table 4.5.7 Top Four Activities of Interest for NRNC Volunteer

NRNC: Top 4 activities of interest	
Pigeon guillemot surveys	71.9%
Forage fish surveys	40.6%
Citizen stewardship committee	34.4%
Other education programs	34.4%

As with Stream Team respondents, it appears that NRNC volunteers also like to get out and do something active, as in the case of their pigeon guillemot and forage fish surveys.

#### 4.6 Other Considerations

Table 4.6.1 (below) reveals that most volunteers of both organizations agree that the organizations’ mission and work are valuable. Yet, many feel neutral or even disagree that their role with these organizations is important. It is great that volunteers relate to the importance of these organizations’ mission and work as that plays a role in their motivations relating to the environment. However, it just as important that volunteers agree that their role is important; if they understand that their efforts are necessary to help these organizations achieve their goals, this may increase their level of motivation to continue participating (retention) or participate in more activities (frequency).

\*I looked for associations between ages and if one agreed or felt neutral about the importance of their role with Stream Team in efforts to identify a population that may feel neutral about their importance. However, there were no significant differences among age groups and their level of agreement.

Table 4.6.1 Self Perceived Importance of Role

	Stream Team			NRNC		
	Disagree	Neutral	Agree	Disagree	Neutral	Agree
My role in this organization is important	10.6%	33.0%	56.4%	12.1%	51.5%	36.4%
This organization’s mission and work are valuable	0.0%	2.1%	97.9%	0.0%	2.9%	97.1%

### **Outreach**

To gain greater insight into volunteer recruitment I asked volunteers where they first heard about volunteer opportunities with Stream Team and Nisqually Reach Nature Center. For Stream Team respondents, most volunteers (43%) initially heard about

volunteer opportunities through Stream Team's newsletter. The next largest group (22%) chose "other" and filled in various responses as to how they initially heard about volunteer opportunities; the third largest group (13%) indicated "friend or family." Although some items written in the "other" category should have been placed into a predetermined option, many of the written responses were varied. Other options available for respondents to choose were website, social media, newspaper, radio, blogs, etc.

Most volunteers for Nisqually Reach Nature Center (55%) chose the "other" category when answering this question and the written responses they filled in were quite varied. Similar to Stream Team respondents, the second largest group indicated "friend or family" for how they initially heard about volunteer opportunities with the third largest group (9%) choosing the organization's website.

Here lies an opportunity for both of these organizations to improve recruitment methods. Because most of NRNC volunteers initially heard about opportunities through random places, this reveals that there is not a strong recruitment method taking place. NRNC should focus efforts on reaching out to the public, particularly the underserved groups mentioned earlier. Similarly, a large group of volunteers from both organizations became aware of opportunities through family and friends. Although it is good that volunteers are sharing their experiences with family and friends, it also indicates a lack of more direct outreach methods. To improve recruitment efforts, I feel that attention should be spent on developing outreach methods.

### **An awesome note!**

Sixty percent of respondents either agreed or strongly agreed that participating in Stream Team's programs has changed their behavior outside of Stream Team programs

(i.e. lawn care practices, picking up dog poop, taking car to commercial car wash, landscaping w/ native plants, etc.)! Similarly, 37% of NRNC respondents agreed that participating in Nisqually Reach Nature Center activities has changed their behavior outside of the activities! This is important to note as it represents the benefits that these programs offer and the importance of better understanding volunteer motivations for the purposes of recruitment and retention.

#### 4.7 Limitations of study

Because this was a case study using two different organizations, the results are not widely generalizable, although they still contribute to the overall picture of volunteer motivations. Similarly, the sample size should be considered, especially in the case of the Nisqually Reach Nature Center survey. However, I do feel they were strong enough to represent the volunteer populations of these two organizations. On that note, however, it is important to point out that the limitation of not having information about non-respondents may be more limiting than the sample size. These non-respondents may provide very similar answers compared the responding sample, or it could be that their responses are quite varied.

Using an online service to collect data also creates a limitation by leaving out those volunteers who are not as active with the internet. It is assumed that this population would likely to be older or lower income volunteers (Jacobson et al., 2012). Additionally, because this survey was sent via email, those volunteers who have not provided emails to these organizations were excluded from the study.

Additionally, as noted and discussed in the literature review, a limitation of the functional approach is that some motivations may not fall into one of the volunteer

functions inventory or a motivation may fall into more than one category. I believe another limitation associated with this method is that a volunteer's interpretation of the items (Likert statements) used to rank motivators may be different than how the researcher interprets them. For example, to help rank the "learning" motivational function, Bruyere & Rappe developed the item "to observe nature." To a volunteer, observing nature may not be considered a learning activity.

## **Chapter 5: Conclusion**

The results gathered from this study benefit Stream Team and the Nisqually Reach Nature Center (NRNC) by gathering a greater insight into volunteer motivations, habits, and preferences. In addition, this research adds to the broader field of environmental volunteer motivation studies by confirming existing trends and offering further insight into environmental volunteer demographics and motivations. The following section is designated to suggestions to the organizations that participated in this study and is followed by a section allocated to suggestions for future environmental volunteer motivation studies.

### **5.1 Suggestions for Stream Team and Nisqually Reach Nature Center**

Volunteers of NRNC heard about volunteer opportunities from a variety of places. While 15% chose the listed categories of Nisqually Reach Nature Center website and social media, 55% wrote something in the “other” category, and 30% indicated that they heard about NRNC through family and friends. Because NRNC relies solely on volunteers to accomplish their mission, it is imperative that recruitment and outreach methods be developed that move beyond their current outreach methods.

Because helping the “environment” is identified as a strong motivator, and because the survey indicated that at least half of the volunteers tended not to see their role in the organization as important, project leaders should be more overt in expressing to volunteers the value of their work and the contributions they make to the environment. Some activities may not appear to supply a direct contribution towards the environment, such as working a booth during an event, but the work is still relevant and does contribute to the mission and goals of the organization which are, in part, meant to improve the

environment. Without the efforts of the volunteers, the organizational missions could not be accomplished. Thus, it is very important for these organizations to make an effort in expressing the importance of the work that the volunteer are doing in efforts to retain volunteers and increase participation in activities.

## 5.2 Suggestions for Future Studies

For future studies seeking to explore environmental volunteer motivations that will utilize a similar voluntary functions inventory approach, I recommend adding “community” as a motivational function because it received high scores from both volunteer populations surveyed in both open ended responses and the calculated means of the VFI. Community involvement or a connection to the community is missing in many of the research articles relating to environmental volunteer motivations. Future studies may test this motivator and see if “community” remains a strong motivator for environmental volunteers; this can be useful information for program managers who want to develop activities that attract or retain volunteer participation. If “community” continues to be a strong motivator for a population of volunteers, perhaps organizations may want to create events that directly contribute to the community as the same time they benefit the environment (such as tree plantings in local parks) or allow volunteers to establish a role or develop a relationship with their communities.

In addition, in exploring these reoccurring questions among the literature (i.e. what motivates environmental volunteers? How can retention efforts be improved?), I feel open ended questions can lead to valuable insight. Although this method is not always feasible due to time and resource constraints, I feel if it were an option for

researchers, this qualitative data could lead to greater insights into why individuals chose to continue their involvement with volunteer organizations.

I now turn to a couple of things I would do different next time, or would recommend for future studies. First, I would delve more specifically into volunteer job hours. I only inquired into if a volunteer was retired or not but because time was shown to be an important factor to these respondents when deciding to volunteer. I would like to look for associations between full-time and part-time workers and the number of activities in which they typically participate. Additionally, I would inquire about volunteer rewards, specifically recognition, and look for associations between recognition and retention (i.e. is there an association between volunteers who receive recognition and their continued participation?). No satisfaction or recognition questions were asked in my survey, and these are inquiries that can help answer questions about volunteer retention.

Environmental volunteers continue to contribute to communities and play important roles with environmental organizations and agencies. Their benefits are widespread both directly and indirectly to the public and to the environment. It is important to continue research into the motivations of environmental volunteers to gain greater insight into how these motivations can be satisfied so that these volunteers will continue their involvement and contributions.

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Appendix A: Complete Survey

SECTION A: VOLUNTEER MOTIVATION

**What motivates you to volunteer your time with this organization? (fill in)**

**On a scale of 1 to 5, please rank the importance of each of these factors in explaining why you choose to volunteer. 1 indicating the least important and 5 indicating the most important.**

- Protect natural areas from disappearing
- Concern for the environment
- Observe nature
- Ensure future of natural areas that I use for my enjoyment
- Learn about plants of this area
- Do something outside
- Feel peace of mind
- Be part of a well-organized program
- To express my values through my work
- Allow me to work on an area where I visit for recreation (i.e. trails, parks, etc.)
- Meet new people
- Feel needed
- See familiar faces
- To enhance my skills set or resume
- To share information with the public in an official capacity
- I was/am new to the area (if applicable)
- Make contacts that might help my career goals
- Experience will look good on a resume
- Learn about the environment
- Give back to the community
- Be around others who also share similar interests
- Fulfill community service or student hours
- Try new things
- Work with a good leader
- Have fun outdoors
- Help preserve natural areas for future generations
- Work with friends
- Be part of an established organization
- Feel better about myself
- Enrich my future recreation experiences
- Learn about the animals of this area
- Help me succeed in a chosen profession
- To be connected to my community
- To live closely to my values
- To actively do something positive for the environment

**I volunteer, depending on time**

strongly disagree    disagree    neutral    agree    strongly agree

**I volunteer, depending on the activity**

strongly disagree    disagree    neutral    agree    strongly agree

**My role with this organization is important**

strongly disagree    disagree    neutral    agree    strongly agree

**This organization's mission and work are valuable**

strongly disagree    disagree    neutral    agree    strongly agree

**Participating in Nisqually Reach Nature Center has changed my behavior outside of the activities. (I.e. making more environmentally conscious decisions, improved conservation ethic, etc.)**

**\*This question was specific to NRNC volunteers**

strongly disagree    disagree    neutral    agree    strongly agree

**Participating in Stream Team programs has changed my behavior outside of stream team programs. (i.e. lawn care practices, picking up dog poop, taking car to commercial car wash, landscaping w/ native plants, etc.)**

**\*This question was specific to Stream Team volunteers**

strongly disagree    disagree    neutral    agree    strongly agree

**When participating in an activity, do you prefer to work with a project leader?**

Yes    No    Doesn't matter

**Out of the following list, identify your single strongest motivator**

Gain experience for career/resume

Contribute to my community

Learn (about the environment, community, plants, animals, etc...)

Socialize with others

Help the environment

Improve a recreational area or park that you use. (This can include places for walking/hiking, picnics, wildlife/bird watching, kayaking, etc.)

Get outdoors

Express your values

Be part of a well-organized project

New to the area (if applicable)

**Out of the following list, identify the one that motivates you the least?**

Gain experience for career/resume

Contribute to my community

Learn (about the environment, community, plants, animals, etc...)

Socialize with others

Help the environment

Improve a recreational area or park that you use. (This can include places for walking/hiking, picnics, wildlife/bird watching, kayaking, etc.)

Get outdoors

Express your values

Be part of a well-organized project

New to the area (if applicable)

**SECTION B: VOLUNTEER BACKGROUND, HABITS, & PREFERENCES**

**Have you ever participated in a tree planting, stewarding, outreach, or monitoring event with Stream Team? (These activities may include macroinvertebrate monitoring, amphibian monitoring, forage fish monitoring, salmon stewarding, stormwater stewarding, tree planting, maintenance and watering of plants, and invasive species removal.)**

**\*This question was specific to Stream Team volunteers**

Yes No

**Have you ever participated in the forage fish, pigeon guillemot, or visitor use survey activities?**

**\*This question was specific to NRNC volunteers**

Yes No

**How long have you been volunteering with this organization?**

Less than one year 1 to 3 years 4 to 10 years 10+ years Not sure

**In the last 12 months, how many Stream Team events have you attended? (Events include plantings, classes, workshops, field trips, speakers, etc.)**

**\*This question was specific to Stream Team volunteers**

0 1 2-5 6-10 10+

**Which Stream Team activities interest you?**

**\*This question was specific to Stream Team volunteers**

interested not interested already do will do in

2015

Planting trees

Removing invasive species

Educating the public

Workshops & classes

Habitat & wildlife monitoring

Family-friendly events

Watershed bus tours

Beach & nature Walks

Marine Creature Monday  
Assist at Festivals & Fairs  
Other (please specify)

**Which Nisqually Reach Nature Center volunteer activities interest you?**

**\*This question was specific to NRNC volunteers**

Staffing the center	Forage fish surveys	Tabling at outreach events
Pigeon guillemot surveys	Visitor use surveys	Eye on Nature
Fundraising	Grants	Anderson Island summer camp
Newsletter	Summer camp	JBLM summer camp
Website updating	Social media updating	Diving
Aquarium maintenance	Specimen collection	Citizen Stewardship committee
Other education programs	Other (write in)	

**How did you first hear about volunteer opportunities with Stream Team?**

**\*This question was specific to Stream Team volunteers**

Stream Team Newsletter (electronic copy)  
Stream Team Newsletter (paper copy)  
Stream Team e-mail  
Friend or family member  
Stream Team website  
Social Media (i.e. Facebook, Twitter, Etc...)  
Flyer or poster  
Newspaper, radio, blog  
Other (write in)

**Which of the following do you use to continue to be engaged with Stream Team volunteer opportunities? (check all that apply)**

**\*This question was specific to Stream Team volunteers**

Stream Team newsletter (electronic copy)  
Stream Team newsletter (paper copy)  
Stream Team bimonthly emails  
Read Stream Team Facebook posts  
Check the Stream Team calendar on the Stream Team website  
Friend or family member  
Flyer or poster  
Newspaper, radio, blog  
City or county agency  
Other (please specify)

**How did you first hear about volunteer opportunities with Nisqually Reach Nature Center?**

**\*This question was specific to NRNC volunteers**

Social Media (i.e. Facebook, Twitter, Etc...)

Nisqually Reach Nature Center website (nisquallyestuary.org)  
Friend or family member  
Flyer or poster  
Newspaper, radio, blog  
Other (write in)

**Which of the following do you use to continue to be engaged with Nisqually Reach Nature Center volunteer opportunities? (check all that apply)**

**\*This question was specific to NRNC volunteers**

Social Media (i.e. Facebook, Twitter, Etc...)  
Nisqually Reach Nature Center website (nisquallyestuary.org)  
Friend or family member  
Flyer or poster  
Newspaper, radio, blog  
Other (write in)

**Do you volunteer with other organizations of any kind?**

Yes No

**If so, what types (check all that apply)**

- \*Civic (Rotary, Lions, etc.)
- \*Religious
- \*Environmental
- \*Citizen Science (This may involve monitoring, data collecting, data analyzing, or other research related tasks)
- \*Community/Government (advisory committees, etc)
- \*School (PTA, classroom, etc.)
- \*Social Justice (CYA, Food Bank,)
- \*Other (fill in)

**If so, how did you hear about them? (fill in)**

**SECTION C: VOLUNTEER DEMOGRAPHICS**

**AGE**

**What is your age?**

15 to 19 years   20 to 24 years   25 to 29 years   30 to 34 years   35 to 39 years   40 to 44 years  
45 to 49 years   50 to 54 years   55 to 59 years   60 to 64 years   65 to 69 years   70 to 74 years  
75 to 79 years   80 to 84 years   85 years and over

**RACE**

**What is your race? (check all that apply)**

White Asian Hispanic or Latino Black or African American  
American Indian and Alaskan Native  
Native Hawaiian or Other Pacific Islander  
Other Race\_\_\_\_\_

**RETIREMENT STATUS**

**Do you consider yourself retired?**

Yes No

**FAMILY INCOME**

**What is your approximate family household income and benefits?**

Less than \$10,000 \$10,000 to \$14,999 \$15,000 to \$24,999 \$25,000 to \$34,999  
\$35,000 to \$49,999 \$50,000 to \$74,999 \$75,000 to \$99,999 \$100,000 to \$149,999  
\$150,000 to \$199,999 \$200,000 or more

**GENDER**

**What is your gender?**

Male Female Decline to answer Write in\_\_\_\_\_

**EDUCATION**

**What is the highest level of school you have completed or the highest degree you have received?**

Some high school Graduated high school Some college (no degree)  
Associates degree Bachelor's degree Master's Degree Doctoral degree

**LOCATION**

**What city do you live?**

Olympia Lacey Tumwater Yelm Tenino Bucoda Unincorporated Thurston  
County  
Other\_\_\_\_\_

**How long have you lived in Thurston County?**

0-2 years 3-5 years 6-8 years 8+ years Not applicable

**MILITARY**

**Have you ever served in any branch of the United States military?**

Non-military Retired military  
Veteran Active duty military  
No, but I am an active duty military spouse or child

## Appendix B: Example of FVI Items and Means

	1 (least important)	2	3	4	5 (most important)	Average	Total average
<b>ENVIRONMENT</b>							<b>4.6</b>
To actively do something positive for the environment	0	1	3	20	75	4.71	
Help preserve natural areas for future generations	0	3	9	17	70	4.56	
Protect natural areas from disappearing	0	1	5	20	73	4.67	
Concern for the environment	0	3	6	19	72	4.60	
<b>SOCIAL</b>							<b>3.0</b>
Be around others who also share similar interests	1	11	21	39	28	3.82	
See familiar faces	20	30	34	12	4	2.50	
Meet new people	8	21	37	25	8	3.04	
Work with friends	16	21	34	19	9	2.84	
<b>EXPERIENCE</b>							<b>2.0</b>
Experience will look good on a resume	66	13	8	6	6	1.72	
Help me succeed in a chosen profession	58	14	9	10	7	1.92	
To enhance my skills set or resume	45	15	14	18	8	2.29	
Make contacts that might help my career goals	56	17	13	8	6	1.91	
<b>LEARN</b>							<b>4.0</b>
Learn about the environment	0	7	12	34	46	4.20	
Learn about the animals of this area	6	11	12	33	37	3.85	
Learn about plants of this area	2	6	20	35	36	3.98	
<b>OUTDOORS</b>							<b>4.1</b>
Have fun outdoors	1	6	26	35	29	3.88	
Do something outside	2	8	21	34	35	3.92	
Observe nature	1	1	8	30	58	4.46	
<b>COMMUNITY</b>							<b>3.8</b>
To be connected to my community	7	13	18	35	26	3.61	
Give back to the community	3	5	16	34	42	4.07	
<b>Project Organization</b>							<b>3.2</b>
Be part of an established organization	16	17	33	21	12	2.96	
Be part of a well-organized program	7	12	32	26	23	3.46	
<b>VALUES</b>							<b>3.7</b>
To express my values through my work	15	10	22	27	25	3.37	
To live closely to my values	6	3	17	31	42	4.01	
<b>USER AREA</b>							<b>3.6</b>
Allow me to work on an area where I visit for recreation	13	10	32	23	21	3.29	
Ensure future of natural areas that I use for my enjoyment	1	4	9	28	57	4.37	
Enrich my future recreation experiences	14	18	26	27	12	3.05	

