



Photo of Old Growth Red Spruce taken by Devon Gilligan

BLUFF WILDERNESS HIKING TRAIL

Final Report

**Woodens River Watershed
Environmental Organization (WRWEO)**

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Abstract/Summary

The purpose of this project was three-pronged:

- To examine the different ways the Bluff Wilderness Hiking Trail in Timberlea, Nova Scotia is used;
- To educate as well as promote the Bluff Wilderness Hiking Trail Stewardship Program; and
- To collect information from interactions with trail users and analyze that data to make recommendations.

Overall, the aim of this project was to help mitigate the human impacts on the trail in order to ensure the future protection of the trail and the success of the associated stewardship program. Hiking trails and wilderness areas in Nova Scotia are important because they are community resources that encourage residents and visitors to get outside, be active, and learn about the natural world.

The need for this project was not only ecologically and environmentally motivated but was also driven by the high prevalence of two diseases that have been linked to lack of physical activity, Obesity and Type 2 Diabetes. Additionally, spending time exercising outdoors has been proven to improve both physical and mental human health. The intent of this project was to develop and promote stewardship of the Bluff Wilderness Hiking Trail in order to encourage good health, recreation, ecological/environmental best practices and education. This project contributed to supporting this initiative through education, data collection, and trail maintenance over the course of six weeks.

The findings from this project include:

- Many users use the Trail to relieve stress and get exercise;
- Most users encountered were unaware of the program prior to speaking with me;
- Dogs off leash and leaving a trace are the two biggest issues identified; and
- The most common trail users were males aged 16-40 years.

Based on my findings, I recommend an increased presence of trail stewards throughout the trail. This would deter users from breaking regulations and also promote education and engagement of users on the trail. Additionally, stewards can help keep the trail clean by picking up garbage that is left behind. Finally, I recommend that the WRWEO along with the stewardship program, initiate and promote an educational trail program for youth. This will serve two functions. Firstly, it will promote, educate and create responsible and thoughtful future use. Secondly, it will have both health and social benefits for youth.

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Introduction

Established in 1995, the Woodens River Watershed Environmental Organization (WRWEO) was founded to protect 65 square kilometres of watershed, which includes 19 lakes and the 32 kilometre long Bluff Wilderness Hiking Trail in Timberlea, Nova Scotia. The WRWEO constructed the Bluff Wilderness Hiking Trail under the authority of the Nova Scotia Department of Natural Resources. The WRWEO was also created to foster community driven environmental projects within the Woodens River Watershed (Woodens River Watershed Environmental Organization, 2016). The Bluff Wilderness Hiking Trail is just one part of a much larger wilderness preservation and stewardship program within the Woodens River Watershed.

According to 2013 data from Statistics Canada, entitled *Canadians and Nature: Outdoor activities, 2013*, “Regardless of the type of activity, almost three out of four Canadian households (72%) reported that someone in the household had participated in outdoor activities close to home. Households in Nova Scotia were most likely to have done so (84%), and those in Quebec were the least likely with 67% of households reporting this.” This demonstrates that participation in outdoor activities is important to many Canadians which shows the importance of continuing to cultivate and maintain assets such as the Bluff Wilderness Hiking Trail.

From a health perspective, “Nova Scotia has the second highest prevalence of Obesity and Type 2 Diabetes in Canada.” (Capital Health, 2016). Furthermore, Nova Scotia has also been burdened with an aging population and “Health spending makes up a higher share of the gross domestic product in Nova Scotia than in any other province, according to a new report by the Conference Board of Canada.” (McLeod, 2013).

In a 2014 study that was published in the Journal of Pediatrics, a cross-sectional study of 306 youth aged 12-15 years of age showed that participants who spent time out of doors were more likely to achieve the recommended 60 minutes of activity daily. Time spent outside was positively associated with cardiovascular health (Schaefer, et al., 2014). Furthermore, a study conducted in 2016, showed hiking to be a cost-effective way for people to get regular exercise. This study was suggesting that doctors recommend hiking to patients as a way for children to get the recommended 60 minutes of exercise a week and for adults to get the recommended 150 minutes of exercise a week (Mitten, Overholt, Haynes, D'Amore, & Ady, 2016).

There are many proven benefits of hiking that were explored in the study. These include that it is low-cost and accessible and that hikers typically burn more calories as they exercise for longer than those who run or go to the gym. For those who are trying to lose weight, hiking has been proven as a more effective form of exercise when compared to indoor exercise (Mitten, Overholt, Haynes, D'Amore, & Ady, 2016). An Australian study conducted in 2014 found similar results, that hikers burned more calories when exercising (916 calories on average) when compared to runners (790 calories) and walkers (450 calories) (Wolf & Wohlfart, 2014). The prevalence of trail systems in Nova Scotia can provide individuals with access to exercise and a healthy lifestyle which they may otherwise not have had access to.

In addition to improving physical health, hiking and spending time outdoors can also lead to improvements in human mental health. A 2014 psychology study showed that time spent outdoors can improve the mental state of individuals. This was particularly true for those who lived in cities or areas with a lack of natural space (Pearson & Craig, 2014). The Bluff Wilderness Hiking Trail is close enough to downtown Halifax and Dartmouth to be accessible for city dwellers who may otherwise not have access to expansive natural environment. The findings from this study are not isolated. Another study conducted and published in fall 2016 in the American Journal of Preventative Medicine had similar findings, showing that those who spent time outdoors had fewer depressive symptoms (Kirsten, Szabo, & Nattinger, 2016).

In short, wilderness trails and environmental recreational assets have benefits to human physical and mental health and also contribute to the preservation of the natural world. Despite the positive impacts that these resources have on humans, it is important to note that humans do not always have a positive impact on these resources. This is why the roles of trail stewards and the Bluff Wilderness Hiking Trail Stewardship Program are so important. This program helps to ensure that these assets remain healthy and viable so they can continue to be used in the future.

The mission of the Bluff Wilderness Hiking Trail Stewardship Program is to educate the public on best practices while using the trail system in order to mitigate harmful human impacts on the environment. This includes educating users on local ecology, vulnerable flora and fauna, leaving no trace, and to use fire bowls instead of having ground fires. My community project and involvement with the Bluff Wilderness Hiking Trail was designed with the intent of promoting and supporting the Bluff Wilderness Hiking Trail in order to encourage good health, recreation, arts and culture, education, transportation, and tourism. My role specifically focused on being on site at the head of the trail where I could greet trail users and provide them with important information on the trail and local natural environment.

In order to participate in this project I had to undergo a one-day orientation session where I was able to learn valuable information on the local environment and best practices for trail users. For each day that I volunteered outside on the trail, I created a report on my interactions with trail users and the local environment which I provided to my supervisor. These results are useful to the organization as they demonstrate which issues are most frequently encountered by trail users, the types of trail users that have the highest traffic (i.e. dog walkers, hikers) and where they are from. This report will further explore my experience as a trail steward and the results from my project.

Methods

The methods I used consisted of observations and informal conversational interviews. The primary method I used when engaging trail users were brief informal conversational interviews where education was the goal and data derived was secondary in order to help facilitate and tailor education to the specific trail user engaged. My methods also included quantitative and qualitative analysis of the data derived from the various trail users to include in reports to my supervisor.

As mentioned previously, upon beginning this volunteer community project I went through an eight hour long orientation. This orientation covered the stewardship program goals, the history of the WRWEO, the Bluff Wilderness Hiking Trail and the surrounding Five Bridge Lakes Wilderness Area. The training also outlined how to engage, create rapport, converse and educate trail users on best practices, especially when it was observed that the trail user was not following best practices. In addition the training covered the principles of Leave-No-Trace (LNT). These principals include:

- Planning ahead and being prepared;
- Staying on the trail as well as camping at designated sites or on the trail itself;
- Packing up all waste to be brought out of the wilderness area;
- Leaving found natural items within the wilderness area;
- Minimizing campfire impacts by only using a camping stove or bowl fire (therefore recognizing the illegality of ground fires);
- Respecting the flora and fauna; and
- Being considerate of other trail users.

Over four days spread throughout one month, between the end of February and the middle of March I volunteered a total of 30 hours (including travel time). Over this time I hiked roughly 20 kilometres and engaged with a total of 23 trail users. The dates I volunteered, including hours and number of people engaged were:

- Feb. 25th – 9 hours, orientation
- Mar. 3rd – 8 hours, engaged eight trail users
- Mar. 11th – 6 hours, engaged three trail users
- Mar. 17th – 7 hours, engaged 12 trail users

I was also responsible for providing my own field gear and materials to conduct this project. These materials and pieces of gear included: food, two or more litres of water, fuel (for transportation), boots, warm clothing and jacket, first aid kit, survival blanket, notebook and pen, hiking staff, utility tool (including a knife), map and compass. At the beginning of every session I built a fire in the “fire bowl” at the trail head to exhibit and educate trail users on both the illegality of ring ground fires and to demonstrate best practices when requiring a fire.

Upon encountering a trail user I would introduce myself as a Bluff Wilderness Hiking Trail Steward with the Woodens River Watershed Environmental Organization. Often after introducing myself if the trail user had not reciprocated I would try to create rapport through small talk. I would then segue from the beauty of the landscape into how it needed to be protected. I would then ask if the user had heard of the stewardship program. Through explaining the need for the program as well as its mission I could quickly and efficiently educate the trail user.

The content I presented was based on my first hand observations of the trail user and tailored to what was appropriate and relevant to them and the situation. I believe that because these interactions were more informal educational conversations tailored to the individual, I was successful in maintaining their interest. Often I would use the state of another local trail, that of Long Lake as illustrative of negative human impacts and a lack of stewardship. Due to the fact that Long Lake has been heavily negatively impacted by users I would use it as an example of what WRWEO and other trail users don't want to happen.

Although I would have liked to have recorded audio interviews with each trail user I engaged for both post quantitative and qualitative analysis, this was not feasible or appropriate given the situation and circumstance. I felt that many people were in a rush to get on with their activities and I did not want to overly interfere with their usage of the trail. Also, in order to record my conversations with trail users I would have had to have gained their permission. Additionally, by asking to record them I would have undoubtedly caused trail users to not engage with me or to dismiss me (especially if they were not following established best practices).

Discussion

During my time spent on the trail I was responsible for keeping journal entries on my observations and interviews. For the purposes of this report I will discuss my key findings in relation to the goals of the Bluff Wilderness Hiking Trail Stewardship Program: educating users on local ecology, vulnerable flora and fauna, leaving no trace, and to use fire bowls instead of ground fires.

I spoke with 23 people during the course of my volunteering. Out of these 23 people I was able to educate all of them on the program. The average conversation with trail users was five minutes long and conversations ranged in length from approximately two minutes to ten minutes. Some users were in a rush to get on with their hike or were with a group and were less interested in conversation, while others were easily engaged and interested in learning more about the program.

It should be noted that this project was done in the winter. Therefore, the weather and climate did have an effect on the number of trail users I was able to engage with. For the 23 trail users I engaged, I noted their level of awareness prior to our discussion about the Bluff Wilderness

Hiking Trail Stewardship Program. Of these trail users, four were previously aware of the program, 15 were unaware of the program and the awareness of the remaining four is unknown.

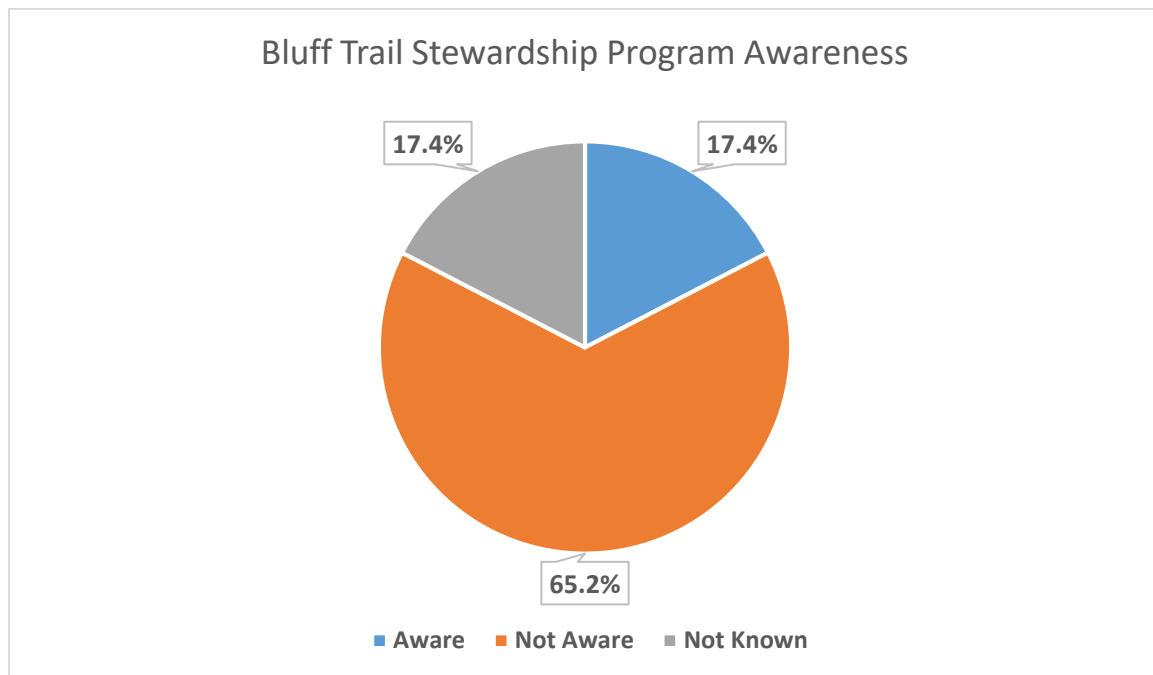


Figure 1: Bluff Trail usage (%) by program awareness

It should also be noted that upon asking trail users their reasons for hiking at the Bluff Wilderness Hiking Trail the vast majority answered very similarly stating it was to enjoy nature while getting outside and exercising. I find this particularly interesting given the time of year. The combination of enjoying nature, relieving stress while getting exercise seems to reinforce the importance of the previous academic findings identified in this paper.

In addition to the way people use the trail it is also important to distinguish the demographics of those trail users. Two demographic metrics that may be useful to know are the sexes and ages of the trail users I encountered. While I did record the sexes of the users I did not record their ages. Therefore the ages given in the chart below are speculation based on my observation and interview notes. However, by segmenting trail user ages into more distinguishable categories I can infer with an accuracy of +/- 5 years.

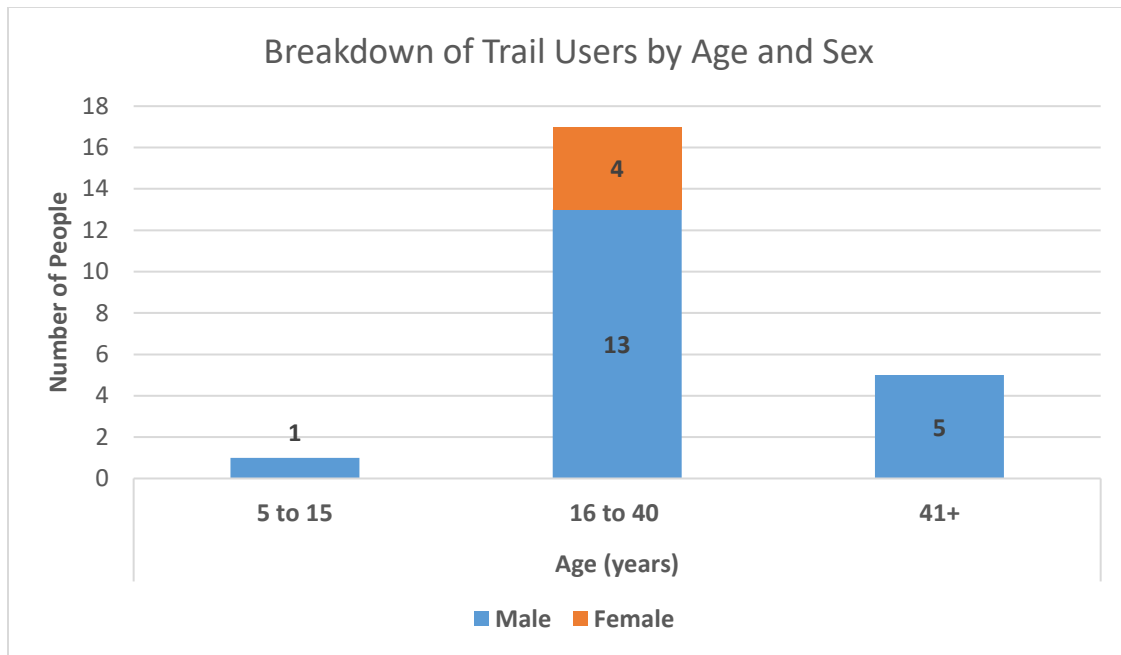


Figure 2: Breakdown of Trail Users by Age and Sex

After being on the trail over the four days I recognized a pattern of two issues that reoccurred frequently. The two most common issues that I encountered while on the trail were:

1. Dogs off leash; and
2. Users leaving a trace (primarily garbage).

Out of the five dogs I came across while acting as a trail steward, only one was on leash. Although a sample size of five is very small, my findings suggest that of the users with dogs that I engaged, only 20% were leashed. Many dog owners assumed that the trail was a spot they could have their dogs off leash. This is a problem because there are sensitive flora and fauna species near the trail that dogs disrupt while off leash and not all trail users are comfortable with dogs. Because there are many wildlife species that live near the trail, there is also a risk to dogs that are off leash. Finally, dogs that are off leash during hunting season have a greater risk of injury and/or death.

When I encountered users who had their dogs off leash I tried to educate them on why they should keep their dogs on a leash. All of them put their dogs on a leash after speaking with me. However, many of them indicated they didn't see the purpose in keeping their dog on leash due to the lack of other trail users at the time. There seemed to be a perception that having their dog off leash was acceptable due to the season and the low trail user volume. Many indicated that if there had been more users on the trail they would have kept their dogs on leash. The off leash issue is difficult to enforce due to the perceived lack of consequences.

Regarding the adherence of LNT principles, my observations and interactions suggest that the majority of trail users comply and pack out what they take in. However, although I did not

observe a direct violation of LNT principles by a trail user, I found that of the garbage I collected, bagged dog feces, pistachio shells, and orange peels were the most common. The majority of the garbage I collected was between the trail head and the Pot Lake Loop intersection. This likely due to the fact that it is closest to the entrance and has the highest volume of traffic. Also, I would suggest that those that hike beyond the first loop are generally more prepared, conscientious, educated and ecologically and environmental minded.

Conclusions & Recommendations

In conclusion, there is a need for outdoor trail assets in Nova Scotia. Outdoor exercise, particularly hiking, promotes good physical and mental human health. In Nova Scotia, where occurrence of diseases such as diabetes and obesity are more common than in other parts of Canada, it is of utmost importance that effective, accessible, and low-cost methods of exercise are available to the public.

Throughout my volunteer work I found that the most common impacts from trail users on the environment were having their dogs off leash and leaving a trace (leaving garbage behind). These issues are currently difficult to prevent because trail stewards have no official ability to enforce regulations, rather it is our mandate to educate and inform. Additionally, there are many parts of the trail that are not monitored by trail stewards so there is a perception from many users that they do not have to monitor their activities, regulations or follow best practices while using the trail.

Based upon my observations the majority of trail users follow LNT principles and best practices. However, regarding dogs, my inclination is that users feel entitled and/or are unaware of how an off-leash dog has a negative impact on the ecology of the wilderness area. While signage will educate and/or deter negative behaviours, signage cannot be a substitute for an on-site trail steward. Based upon my observations and engagement with trail users it is my belief that the cumulative negative impacts on the Pot Lake Loop portion of the trail are inevitable and will accumulate. However, the good news is that with an increased presence of stewards these impacts can be mitigated and managed through monitoring, education and LNT garbage collection.

My final recommendation is that the WRWEO/stewardship program create youth targeted education and involvement. This will serve two functions. Firstly, it will promote, educate and create responsible and thoughtful future use. Secondly, it will have both health and social benefits for youth. In the future I hope that the trail steward program grows. If there are more stewards placed at the trail head and throughout the trail, then users would be deterred from breaking the regulations.

References

- Capital Health. (2016). *Halifax Obesity Network*. Retrieved from Capital Health: <http://www.cdha.nshealth.ca/obesity-network>
- Kirsten, M. B., Szabo, A., & Nattinger, A. B. (2016). Time Spent Outdoors, Depressive Symptoms, and Variation by Race and Ethnicity. *American Journal of Preventative Medicine*, 281-290.
- McLeod, P. (2013, January 13). *N.S. leads in level of health spending*. Retrieved from The Chronicle Herald: <http://thechronicleherald.ca/novascotia/595527-n.s.-leads-in-level-of-health-spending>
- Mitten, D., Overholt, J. R., Haynes, F. I., D'Amore, C. C., & Ady, J. C. (2016). Hiking: A Low-Cost, Accessible Intervention to Promote Health Benefits. *American Journal of Lifestyle Medicine*.
- Pearson, D. G., & Craig, T. (2014). The great outdoors? Exploring the mental health benefits of natural environments. *Frontiers in Psychology*.
- Schaefer, L., Plotnikoff, R. C., Majumbar, S. R., Mollard, R., Woo, M., Sadman, R., . . . Normand, B. (2014). Outdoor Time Is Associated with Physical Activity, Sedentary Time, and Cardiorespiratory Fitness in Youth. *The Journal of Pediatrics*, 516-521.
- Wolf, I. D., & Wohlfart, T. (2014). Walking, hiking and running in parks: A multidisciplinary assessment of health and well-being benefits. *Landscape and Urban Planning*, 89-103.
- Woodens River Watershed Environmental Organization. (2016). *The Bluff Trail*. Retrieved from WRWEO: <https://wrweo.ca/wp/the-bluff-trail/>

Appendices

Bluff Trail Steward Report #1

By Devon J. Harlow-Gillighan

Date and Time: March 3, 2017 (10:30 am – 5:30 pm) 7hrs + 1hr drive time

Sections of trail monitored: Entrance to trail/First 100m of Pot Lake Loop

of People: 8

of Dogs off-leash: 1

of Dogs on-leash: N/A

of Trail Users Engaged: 8

of Cars in Parking Lot: No Data

Notes on trail user activities (good news and bad):

~11:30 am

- I engaged with a man named [REDACTED] walking his dog off leash. I introduced myself as a Bluff Wilderness Trail Steward. I asked [REDACTED] if he was a frequent trail user, he said he was. It is my impression that [REDACTED] primary use of the trail is to walk his dog. He did not seem to be concerned with preparedness as there was no sign of equipment, food or water. After introducing myself and creating rapport I explained to [REDACTED] that due to rare and vulnerable plants (especially around the boardwalk) it was best if the dog was kept on leash. He was initially dismissive saying that the dog stayed on the trail. However, after I mentioned that this area was especially sensitive in the spring he did acknowledge the potential for ecologic damage at which point he said that come springtime he would leash the dog when walking the trail.

~11:35

- Two people came out of the trail entrance. I didn't see them go in. They were wearing athletic gear, with walking poles and running footwear with ice cleats. They were talking between themselves so I greeted them with a brief "hello, beautiful day" as they quickly walked/jogged by.

~12:15 pm

- A man entered the trail. I engaged with him by introducing myself and asked him if he was new to the trail. He said he had been using it since it opened. We made small talk for a bit until I asked him what he did. He told me he was a [REDACTED]. He was a very interesting man.

1:40 pm

- Older man walked by on BLT.

1:45 pm

- ATV rider went by heading west on BLT.

~3:00

- Man walked up to the head of trail looking at the main info sign. I approached him and introduced myself as a trail steward. We struck up a conversation. He introduced himself as [REDACTED]. He didn't seem very well prepared. I asked him if this was his first time on the trail. He said it was. He told me he "accidentally just stumbled onto it". I noticed he was wearing [REDACTED] sweatpants so I asked him if he was from [REDACTED]. He said he was and that he was new to the area and an experienced hiker (mostly in the New England states – New Hampshire). I explained a bit about the trail and its history, vulnerable plants, LNT and showed him the fire bowl. I explained that ring fires were prohibited. I also explained that the trail has become a popular spot for hikers and dog owners alike. I didn't ask him if he had a dog. However, I did go on to explain that although HRM, NSE and DNR allow for dogs to be off leash (as long as they remained under the owner's control) due to the rare and vulnerable species we (WRWEO) ask that dogs be kept on leash for both the protection of the ecology, animal safety and respect for other users. I also mentioned to him about the small herd of Mainland Moose. He seemed very agreeable and interested. He told me he was just going to do the first loop. I told him to enjoy the hike and that I'd see him on his way out.

3:10 pm

- ATV rider went back by heading east (towards parking lot) on BLT.

3:30 pm

- Runner started down the trail. Said "hello" as he ran by. He was wearing running gear with no evidence of supplies, food or water.

3:35 pm

- Man wearing shorts walked by trail, heading west on BLT with three dogs off leash. I noticed he did have a retractable leash in his hand. I said "hello" to which he responded with the same.

3:40 pm

- Woman walked by trail, heading west on BLT with dog off leash.

3:50 pm

- Man wearing shorts with three dogs off leash walked back by trail head on BLT heading east (towards parking lot).

3:52 pm

- Woman with three dogs walked back by heading east (towards parking lot). I said "hello" to which she responded with the same.

4:20 pm

- [REDACTED] from [REDACTED] came out of the trail. I didn't see him at first and only noticed him once he said "I love that smell" referring to the bowl fire. He told me he walked roughly 2.5km to 3km in. We walked out towards the info sign and I mentioned the program to him, pointed out the email for WRWEO, told him about the website and Facebook page and gave him Mike Lancaster's name and email as the coordinator of the program. I said it was a pleasure meeting him, gave him my name again, he said thank you and that he'd be back and went on his way.

4:27 pm

- Runner came back out.

5:05 pm

- I was about 100 m into the trail taking notes, collecting garbage when I heard voices. Two guys walked up to me with backpacks and lots of gear. I introduced myself. They said their names were [REDACTED] and [REDACTED]. I asked them if they were camping. They said yes for the night. By this time I was pretty cold and tired so I failed to notice or ask if they had a camping stove. I mentioned WRWEO and LNT to which they were familiar with both. I also explained the best location to set up tents was on hard, non-vegetative surfaces, preferably on the trail itself. As it was getting dark and I didn't want to keep them I told them to be careful. They appeared to be experienced and knew what they were doing.

Flora and Fauna observations:

Observed lots of Wintergreen at the head of the trail. No animal sightings.

General Notes (trail infrastructure, anything out of the ordinary):

There are some broken branches on a sapling at the head of the trail that need trimming.

Weather: -3 and sunny and clear

Garbage collected:

- 2 popsicle sticks
- 1 small bag of dog excrement
- 1 broken plastic fork
- 1 piece of synthetic fibrous material
- 1 plastic water bottle cap
- 2 cigarette butts
- 2 Tim Hortons cups

Bluff Trail Steward Report #2

By Devon J. Harlow-Gillighan

Date and Time: March 11, 2017 (9:30 am – 2:30 pm) 5hrs + 1hr drive time

Sections of trail monitored: Between trail head and Pot Lake Loop intersection

of People: 3

of Dogs off-leash: 3

of Dogs on-leash: 0

of Trail Users Engaged: 3

of Cars in Parking Lot: 3

Notes on trail user activities (good news and bad):

~12:30 am

- On one of my trips back from the Pot Lake Loop intersection I ran into my first trail user. I saw the owner's dog long before I saw the owner. The dog appeared to be a terrier-poodle mix however I am not entirely certain. I put my hand out to greet the dog. The dog jumped up on me numerous times. If I wasn't good with dogs, or was afraid or didn't like dogs the experience would have been terrible. About 30 feet behind the dog (now jumping on me) was the owner. He clearly didn't have the dog under control. He called out to the dog to discipline/control it. This wasn't entirely effective as the dog was quite hyper. Once he got close I introduced myself as a Bluff Wilderness Hiking Trail Steward. He introduced himself as [REDACTED]. After striking up a conversation about the weather trying to create comfortability I eased into talking to him about dogs on leash and why WRWEO prefers to have trail user have their dogs on leash. I explained to him that although I was a dog lover not all people are. I explained to him that there have been complaints in the past about dogs and that not all cultures view dogs the same way. I explained that this may cause certain groups/people to avoid the trail which is what we want to avoid. I tried hard to impress on him in a non-aggressive way that the last thing WRWEO wants is for certain users to feel excluded. I asked him if he was a frequent trail user. He said that he wasn't a frequent user but he had used the trail before. I

talked to him about the stewardship program and the importance of the program in order to protect the area as well as to educate users. He did not seem like he was very interested in putting the dog on leash. His response was that he didn't expect to see anyone out due to the colder weather. I suspect that he believed this to be a valid excuse not to have the dog on leash. He went on to say that he usually will keep the dog on leash until he gets further out and then takes the dog off leash. I transitioned the conversation from the reasoning for dogs on leash is not just because of other users but also because of vulnerable flora and fauna and finally (and probably most importantly to him) for the safety of the dog itself due to snares/traps/hunters/wild animals. Finally, after about 5 minutes of standing and talking in the cold he said that when it gets busier he would make sure the dog would be on leash. I said that WRWEO would very much appreciate that. I told him to stay warm and be safe and we both went our separate ways. Given the circumstance I thought it was a very pleasant and informative conversation.

- Upon leaving for the day, just before the trail head entrance I came across to hikers heading in with two dogs off leash. I instantly recognized one of them as the former [REDACTED]. I introduced myself and gave my title as a Bluff Wilderness Trail Steward. I asked both of them if they were familiar with the trail or if this was their first time hiking there. [REDACTED] told me he has hiked the trail in the past but that it was his friend, [REDACTED] first time on the trail. After creating some rapport and talking about the cold and greeting the dogs I explained to [REDACTED] that due to rare and vulnerable plants (especially around the boardwalk) it was best if the dog was kept on leash. He was initially dismissive saying that the dog stayed on the trail. However after I mentioned that this area was especially sensitive in the spring he did acknowledge the potential for ecologic damage at which point he said that come springtime he would leash the dog when walking the trail.

Flora and Fauna observations:

Observed rabbit and raccoon tracks all over. Also observed horse fungus and birch bracket fungus.

General Notes (trail infrastructure, anything out of the ordinary):

Weather: -15 to -8, sunny with partial cloud at times

Garbage collected:

- Small black plastic part belonging to a piece of equipment
- Pistachio shells
- 1 bag of dog excrement
- 1 Tim Hortons cups

Bluff Trail Steward Report #3

By Devon J. Harlow-Gillighan

Date and Time: March 17, 2017 (9:45 am – 3:45 pm) 6hrs + 1hr drive time

Sections of trail monitored: Trail head and Pot Lake Loop

of People: 12

of Dogs off-leash: 0

of Dogs on-leash: 1

of Trail Users Engaged: 12

of Cars in Parking Lot: 4

Notes on trail user activities (good news and bad):

9:45 am

- Upon arriving at the trail head at 9:45 I built a bowl fire to show to trail users I encountered.

10:15

- A young man and woman entered the trail. I greeted them and explained that I was a Bluff Wilderness Hiking Trail Steward with the WRWEO. Then I asked them how far they were going. They said they were hiking the first loop. We talked about the fire bowl and fire safety. They seemed very interested in what I had to say. I noticed they had poles and were generally well prepared.

11:35

- Two men came out of the trail. They were well prepared having poles, appropriate gear and backpacks. I introduced myself as per usual. Their names were [REDACTED] and [REDACTED]. I asked them if they were aware of the stewardship program. [REDACTED] told me that he was aware through social media. Both men were very engaged, especially [REDACTED]. They told me they were frequent users. I asked them how far they had gone and they said they had just done the first loop. They were very familiar with LNT principles. I mentioned the volume of users the trail had received in the past and the projections for increased usage in the future. [REDACTED] mentioned the wear and tear on the trail and how the further back you go the less impact there is. I talked to them about

the population of mainland moose in the area and they both were very interested. ■■■ talked about how the trail and the area are such an asset to the immediate urban population. He talked about how HRM is unique and lucky to have such a place compared to places like Toronto. ■■■ mentioned a conference in Banff, Alberta where Jan LaPierre and Chris Surette from *A for Adventure* spoke. ■■■ told me they cited information that said that in Nova Scotia not enough people get outdoors into nature and exercise in nature. I mentioned to both ■■■ and ■■■ that the WRWEO was holding its annual general meeting (AGM). I gave them the date and time. ■■■ told me he had twins on the way so he probably couldn't make it. Both men were very nice and after speaking with them I could tell that both men were very educated, experienced and knowledgeable concerning hiking, outdoor activity, health, ecology, and the environment.

~11:45

- I met with WRWEO board members Kimberly and Paul Berry. We discussed trail usage, bowl fires, best practices and how to minimize impact.

~2:15

- I encountered two young women with their Golden Retriever on-leash. I introduced myself and commended them for having the dog on leash, explaining why that was the best practice. Their names were ■■■ and ■■■. They told me they were from Halifax and that it was their third time on the trail. I mentioned the AGM. They were prepared, with water and a bag for their garbage. Very nice people. Very positive engagement.

2:40

- I encountered a group of three people. There was an older man in his late 40s or early 50s, a younger man in his 30s and a preteen. I introduced myself as per usual and they gave me their names ■■■, ■■■ and ■■■. They were very friendly. I told them about the stewardship program which they weren't familiar with. They told me they were from Halifax. They told me they frequent the trail regularly. I mentioned that there was a small herd of mainland moose on the peninsula, to which they were unaware. They were very interested. Very nice people, very positive interaction.

3:00

- I met young man on the trail and introduced myself and told him about the stewardship program. He seemed interested but in a hurry so I didn't hold him up.

~3:30

- On the way out, heading across the "Whale's Back" I encountered a man and a woman and introduced myself as per usual. They told me they were frequent users. They didn't seem to want to engage (possible because it was getting late in the day). I mentioned the AGM to them and wished them well and went on my way.

Flora and Fauna observations:

Nothing new

General Notes (trail infrastructure, anything out of the ordinary):

Noticed dog tracks off trail boardwalk through sensitive area.

Weather: -1 to -5, sunny with partial cloud at times

Garbage collected:

- 3 bags of dog excrement
- Single glove
- Orange peel