



Bruce Trail
CONSERVANCY

COVID-19 and Trails Media Analysis Final Report

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Executive Summary

The purpose of this paper is to provide a media analysis of how trail usage within Ontario has been impacted by COVID-19, and outline the motivations, limitations and barriers of trail usage during the pandemic. This paper also highlights some of the key health and safety protocols implemented along trails to encourage safe use during the pandemic, with a special emphasis placed on the Bruce Trail Conservancy's health and safety protocols for safe use of trails during COVID-19.

The media analysis revealed that proximity tourism has become an increasingly popular form of tourism during COVID-19 (Rantala, et al., 2020) as more people are seeking to stay local to prevent the spread of the virus. As a result, parks and trails have become a popular destination for locals and tourists from neighbouring cities within the same region to engage in physical activity, enhance their mental health, and connect with nature. However, the increased number of foot traffic along trails raises concerns about overcrowding which can also lead to negative environmental impacts and increased public safety risks. As a result, many parks and trails have created web pages on their website to inform trail users about their hiking responsibilities and how to stay safe in the time of COVID-19, as seen with the BTC (2020a). However, it has been challenging for local trail committees to enforce these best practices, especially along popular parks and trails. The media analysis conducted revealed that parks, recreation and trail committees have been using five main strategies to control overcrowding along popular trails. These strategies include (1) closing the area, (2) creating one-way paths; (3) discouraging people from lingering in one area; (4) limiting the number of people allowed to enter parks and trails, and (5) "eventifying" hiking to mitigate traffic from popular parks/trails to lesser-known parks/trails.

The main strategy that has been used by the Bruce Trail Conservancy (BTC) is closing popular sections of their trails. These sections mainly include side-trails along the Bruce Peninsula section and Niagara section. In a meeting with Adam Brylowski, the Manager of Conservation and Trail usage for the Bruce Trails, on January 29, 2021, he outlined that overcrowding along trails has raised various of concerns and issues including health and safety risks due to trespassing on closed trails, and limited parking spaces leading to traffic congestions caused by illegal parking along roads. In this paper, we provide four suggestions on what the Bruce Trail can do to reduce overcrowding along their trails. These strategies include (1) adding more one-way trails along smaller side-loop-trails, along the Bruce Trail, such as at the Loree Side Trail in the Beaver Valley section; (2) limit the number of people by creating a parking pass reservation system at other popular sections of their trail, similar to the one implemented at the Bruce Peninsula section; (3) "eventify" hiking to encourage trail users to visit lesser-known trails; (4) use technology to track trail usage.

1. Introduction

In the light of this global COVID-19 pandemic, the UN World Tourism Organisation (UNWTO) has estimated that there has been a decrease in approximately 20% to 30% of international tourist arrivals in 2020 when compared to data from 2019 (Romagosa, 2020). As a result, this data indicates that the tourism industry has been significantly impacted by the global pandemic, as less people are travelling abroad, and more people are staying local. However, it is often argued that the tourism sector is resilient to change and has the capacity to adapt and recover from any unexpected or catastrophic phenomena. Experts view this as a new opportunity to promote domestic tourism and introduce proximity tourism to the public (Romagosa, 2020; Sharma & Paul, 2021). Proximity tourism is defined as doing tourism activity or travelling to destinations closer to the tourists' place of residence (Romagosa, 2020). It emphasizes local destinations, lower distance and lower carbon modes of transportation (Höckert, Rantala, Salmela & Valtonen, 2020).

One form of proximity tourism that has become increasingly popular during the global pandemic is hiking along trails. According to the Ontario Trails Council (OTC) (2020), “nearly 1.1 million people (unique visitors) used OTC for trail information last year [.] [whereas] over 2.7 million page views [were received in the year of 2020], [which is a] 58% increase over 2019” (para. 1). The Ontario Trails Council’s (n.d.) website is a great source of information for new and experienced hikers in Ontario because they have a webpage dedicated to locating trails by region and sub-regions. As a result, the data presented within their social media post (Ontario Trails Council, 2020) indicates that there has been an increased interest in proximity tourism during the pandemic, as more people are seeking to find new local trails to visit.

One trail that has become an increasingly popular destination for proximity tourism within Ontario during the global pandemic is the Bruce Trail. This trail is managed by the Bruce Trail Conservancy (BTC), and is one of the longest trails in Ontario, which stretches a total of 90 kilometers from Niagara region to Tobermory in Southern Ontario (Bruce Trail Conservancy, n.d.). The trail is divided into nine separate sections according to the region in which the trail is located and has become a popular destination for Ontarians to engage in physical activity, enhance their mental health, and connect with nature (The Great Trail, 2020). However, due to the increasing number of visitors along the trail, overcrowding has become a major issue, which can lead to a variety of problems ranging from the destruction of natural habitats to public safety risk. The purpose of this paper is to provide a media analysis of how trail usage within Ontario has been impacted by COVID-19, and outline the



Figure 1. Tweet announcement on the number of unique visitors visiting the Ontario Trails Website. (Ontario Trails Council, 2020)

motivations, limitations and barriers of trail usage during the pandemic. This paper also highlights some of the key health and safety protocols implemented along trails to encourage safe use during the pandemic, with a special emphasis placed on the Bruce Trail Conservancy's health and safety protocols for safe use of trails during COVID-19.

2. Literature Review

2.1. Trail Usage During the COVID-19 Pandemic

Under Ontario's new colour-coded COVID-19 response framework to control the spread of the virus, the government identified that "close contact" and "crowded spaces" pose a threat to the public's health and safety due to the increased chance of contracting the virus in these types of environments (Government of Ontario, 2021). As a result, sector-specific public health and workplace safety measures were put into place within different regions of Ontario to control and limit the spread of COVID-19 and to keep Ontarians safe. These safety measures included new restrictions and mandates which significantly impacted the recreation, parks and trails industry within Ontario, because they resulted in a closure of various indoor and outdoor recreation facilities (Lesser & Nienhuis, 2020). These facilities included recreation centres, pools, ski hills, fitness centres, playgrounds, picnic areas, beaches, park shelters, and sport fields and courts (Lesser & Nienhuis, 2020). As a result, more Canadians are spending their leisure time in green outdoor spaces, which have remained open to the public during the pandemic.

Notably, parks and trails have become a popular destination for locals and proximity tourists from neighbouring cities to engage in physical activity, enhance their mental health, and connect with nature. According to a national Leger survey conducted by Trans Canada Trail (TCT) on a sample of 1,500 Canadians, "close to 50% [of respondents] across all age groups" (The Great Trail of Canada, 2020a, para. 4), reported that they are using trails more frequently than before the pandemic. Moreover, the survey results also confirmed that the usage of trails within Canada will continue into the winter season as 69% of respondents between the ages of 18 and 65+ reported that they intend to continue using the trails during the winter season (The Great Trails, 2020a). As a result, when this data is compared to the Summer and Fall season of 2019, 76% of Canadians reported that they have been using trails more often since the start of the COVID-19 pandemic in 2020 (The Great Trail of Canada, 2020a).

Furthermore, in the light of the COVID-19 pandemic, which has resulted in the closure of many indoor recreation spaces, there has been an increased number of events promoting physical activity in outdoor destinations. For example, in 2020, The Great Canadian Hike (n.d.) released a national challenge which encouraged Canadians to hike along local trails and record the total kilometers that they hiked during the month of October. Over ten thousand people in Canada participated in this event, and together they hiked a total of 108,000 kilometers during that month (Great Canadian Hike, n.d.). Therefore, this data indicates that hiking and trail usage has become an increasingly popular outdoor activity in Ontario during the pandemic because this activity allows people to stay healthy, exercise and connect with nature.

2.2. Motivations of Hiking the Bruce Trails

The global pandemic caused by COVID-19 has resulted in provincial lockdowns and closures of many indoor recreation facilities, such as movie theatres, theme parks, fitness centres, and recreation centres. As a result, many Canadians in 2020 to 2021 were forced to seek outdoor spaces for recreation and leisure activities. Trails and parks have become a popular destination for leisure and physical activity during the pandemic, as discussed in the previous section (Trans Canada Trail, 2020; Ontario Trails Canada, 2020). This section will dive deeper into some of the key motivations behind the increased usage of trails during the COVID-19 pandemic with a special focus on the Bruce Trails within Ontario. These motivations include using trails for (1) physical fitness, (2) enhanced mental health and, (3) to connect with nature.

To begin, exercise and maintaining one's physical health is the most common reason for increased trail usage during the pandemic. Ever since the global pandemic began, and Ontario started closing down indoor facilities where it was challenging to maintain a safe social distance from one another, such as fitness centres, more people sought outdoor spaces, such as parks and trails to meet their fitness goals. According to a study by Trans Canada Trails (2020) 95% of "Canadians are motivated to use trails for physical exercise and fitness" (para. 5). Two of the most common forms of physical activity used along these trails are walking, hiking and running, which does not require a high level of skill to learn, and is very inexpensive. According to the flow theory by Mihaly Csikszentmihalyi, when the challenge and skill level is relatively low in an activity, it is easier for participants to engage in the activity (Cheng, Hung & Chen, 2016). As a result, hiking is often considered an introductory form of physical activity for new outdoor recreationists compared to activities such as, kayaking, mountain biking, swimming, and playing various sports such as hockey, lacrosse which are costly, and requires an intermediate skill level (Cheng, Hung & Chen, 2016). Therefore, people are more motivated to use trails because they can achieve their fitness goals through walking, hiking, and running, which are all forms of physical exercise that are inexpensive and do not require prior training.

Next, this year has been known to be a stressful year for many Canadians, due to the fear of contracting the virus, economic instability and lack of job security for many. As a result, Canadians have started to seek out nature to enhance their mental health and wellbeing. According to an article by Hanna et al., (2019), outdoor experiences are strongly connected to positive mental health and wellbeing because when an individual fully immerses themselves within an environment they often feel more relaxed and gain a stronger appreciation for nature and the place. Furthermore, Trans Canada Trails has also reported an increase in trail usage due to the mental health benefits that nature affords. According to a survey that they conducted, they discovered that "95% [of] Canadians use trails to enhance their mental health" (Trans Canada Trails, 2020, para. 4). This data indicates that Canadians are beginning to become more appreciative towards nature trails because they can provide "escape" from stressful lifestyles. Kaplan (1995) states that engaging in outdoor places, such as nature trails can aid people in recovering from a mental state of fatigue that is typically caused by overworking.

Lastly, as more people are spending their time outdoors, people are starting to gain a stronger appreciation of local, outdoor recreation spaces (Rice et al., 2020). As a result, many Canadians are seeking to connect more with nature by visiting local and well-known trails

within their region. According to a study done by the Nature Conservancy Canada (2021), “Nine out of 10 Canadians say they value nature now more than ever before” (para. 1). Furthermore, McMahon (as cited in Trans Canada Trail, 2020), the President and CEO of TCT, also states that “trail use is up across the country as Canadians seek a refuge from social isolation and a haven that connects them to nature” (para. 8). As a result, this data indicates that people are seeking out trails not just for the physical benefits, but also because nature allows users to cope with the impacts of COVID-19. Furthermore, since the Bruce Trails is a 900 km trail which stretches from Tobermory to Niagara (The Bruce Trails Conservancy, n.d.), many Canadians are travelling to popular sections of the Bruce trail to view some of the natural landscapes. In particular, the Bruce Peninsula has become a very popular destination for Canadians, due to the beautiful blue waters, and naturally forming sea cave located within The Grotto.

2.3. Limitations/ Barriers to Hiking the Bruce Trails

Although more people are spending their leisure time outdoors during the global pandemic, barriers and limitations continue to exist when it comes to the accessibility of some sections of the Bruce Trail.

Even before the global pandemic existed, parking has always been one the most common barriers when it comes to accessing specific sections of the Bruce trail. These sections include the Bruce Peninsula, and Niagara because many of the main trail heads/entrances are located in remote areas which are not accessible via public transportation. As a result, visitors are often required to have their own vehicle to access these trails. For instance, a variety of negative reviews on TripAdvisor, discuss the lack of parking in the Peninsula sections of the trail (Mjont, 2017). According to Doug368 (2018) on TripAdvisor, it was also challenging to find parking at the north end of Cyprus Lake trail in the Peninsula section. The Bruce Trail Conservancy has also acknowledged that “there is a need for more parking facilities near trailheads” (Golletz, 2021, para. 1).

Another barrier and limitation to accessing the trails is the cost of parking along specific sections of the trail, particularly in the Bruce Peninsula section. According to a variety of reviews on Tripadvisor, the cost of parking in addition to the cost of visiting specific sections of the trail that begin within the Bruce Peninsula National Park (White, 2020; Panaflex, 2020). Furthermore, the lack of public facilities such as washrooms at trailheads may also pose a barrier when it comes to accessing specific sections of the Bruce trails (Chickandbeast, 2018). The increase in visitors along the trail during the pandemic has also placed a strain on the public amenities, such as washrooms that do exist along the trails (Colletz, 2021). As a result, the cost of accessing specific sections of the trail, and the lack of public facilities may act as a barrier to revisiting the trails.

Furthermore, the pandemic has also impacted the accessibility of Bruce trails, as many sections had to reduce the parking sizes to ensure that visitors are following Public Health Guidelines on social distancing. However, the reduction in parking sizes did not prevent overcrowding on popular sections of the trail, such as the Bruce Peninsula, Blue Mountains, Niagara, and Beaver Valley sections. Which consist of a variety of beautiful naturally forming landscapes. One of the most common areas experiencing overcrowding is The Grotto in the Peninsula section, due to the iconic, naturally forming sea cave, and clear blue waters. The Decew Falls trails in the Niagara section have also been a popular

destination experiencing overcrowding, due to the beautiful waterfalls along the trail. As a result of overcrowding, the Bruce Trail Conservancy (BTC) had to place restrictions and/or close down various hiking trails hotspots. These locations include the Bruce Peninsula National Park, Neyaashiinigmiing (Cape Croker) trails in the Peninsula, Walters Creek Side Trail and a portion of the main Trail north of Townline Rd., in the Sydenham section, various of trails in the Blue Mountain section, Tews Falls Side Trail between Dundas Peak and Sydenham on the Iroquoia section, Morningstar Mill and its access to Decew Falls and Bruce Trails in the Niagara section (Bruce Trails Conservancy, 2021b). As a result, the pandemic has acted as a limitation, and barrier which prevents one from accessing specific sections of the Bruce trails.

2.4. Impacts of Increased Trail Usage During COVID-19

The surge of visitation to trails during the pandemic can create a variety of problems, which range from damaging natural habitats to public safety risks, especially during a time when people are encouraged to socially distance to prevent the spread of COVID-19. This section will explore some of the negative impacts that can result from overcrowding along trails. These impacts include environmental, sociological, human and financial resources.

As more people are engaging in proximity tourism, and particularly in hiking, the significant increase in the number of hikers along trails, can result in many negative effects on the natural environment (West Vancouver, n.d.). One of the most common environmental impacts of increased trail usage is the trampling of native vegetation, including tree roots, which can damage the tree and impact its growth (Guo, et al.). Other environmental impacts include trail braiding, soil compaction, and wildlife disturbance, introducing non-native species, and water quality degradation (Guo, et al.; Hamilton, 2006). Many of these negative impacts occur when hikers walk off trail in order to avoid crowds, or visit specific locations off the trail, such as waterfalls, fields of wildflowers or leave behind human waste, such as plastics (West Vancouver, n.d.). As a result, it is important for park and recreation committees to promote responsible hiking behaviours. For example, many trail committees, including the BTC promote the “Leave no Trace principle” which encourages hikers to follow seven key principles: (1) Plan ahead, (2) travel and camp on durable surfaces, (3) dispose of waste properly, (4) leave what you find, (5) minimize campfire impacts, (6) respect wildlife, and (7) be considerate to other visitors (Bruce Trail Conservancy, n.d., Hamilton, 2006). Hikers who follow these principles can minimize their environmental impacts when using the trails. An infographic has been attached in Appendix E to summarize how hikers can engage in sustainable trail usage by following this principle.

Furthermore, the high volume of visitors to trails, has also created a variety of sociological issues. These issues include parking issues and congestion of traffic around the

area, which can lead to disturbance to local residents and may cause unnecessary conflicts. For example, the Avon Trail in Ontario, has created a webpage article which discusses the issue of overcrowding along their trails during the COVID-19 pandemic (2020). According to their article, there has been increased congestion along the road next to the Avon Trail, as more people are visiting the trail and parking their vehicles along the road, as illustrated in Figure 2 (Avon Trail, 2020).

According to the Avon Trail (2020) Club they have noticed that during the pandemic people were “parking in areas not designed for parking” (para. 5). Similarly, the Jokers Hill hiking trail in Newmarket has also been

experiencing congested parking along their roads during the pandemic (Hale, 2020). This traffic congestion has become such an inconvenience for nearby residents “that someone in the neighbourhood has put up signs (telling non-residents to not park there)” (Hale, 2020, para. 3). As a result, the increased traffic congestion due to the increased number of hikers creates a very dangerous situation for both local residents and drivers, as people are parking in areas where they are not supposed to in order to access the trails. Therefore, the lack of parking, overcrowding and road congestion became a huge sociological impact on the Ontario Trails.



Figure 2. Traffic congestion at the Avon Trails in Woolwich, Ontario. (Avon Trail, 2020)

Finally, the impact of increased hikers on trails has also created a new demand for more human and financial resources to sustain the increased number of hikers. Without more human resources to manage the trails, overcrowding may create irreversible environmental damage along the trails, such as the widening trails, and creating new off-trail paths. Furthermore, overcrowding along trails can pose a threat to the public’s safety during the pandemic, as people are supposed to be maintaining a safe social distance from one another to prevent the spread of COVID-19. As a result, policing is required at the municipal level, in order to control crowds that occur along these trails. For example, the Niagara Parks police had to issue thirty-one tickets at Niagara Glen trails, due to people trespassing into closed trails sections on June 20, 2020 (Spiteri, 2020). They also had to issue seventy-five parking tickets due to people parking in undesignated parking spots to access the trails (Spiteri, 2020). According to Hale (2020), there has been an increase in community policing costs in Woolwich, Ontario due to the high demand for traffic control and managing trail user conflicts along Avon trails. Furthermore, more people are engaging in unsafe excursions along trails, which have been leading to an increased number of accidents (Dunn, 2020). As a result, there has been an increased need for medical resources due to injuries occurring on unsafe hiking excursions (Hale, 2020). Overall, all of these impacts are placing a greater strain on the local emergency services, such as police, and paramedics.

3. Health and Safety Trail Use Protocols

Due to the COVID-19 pandemic, many park, recreation and trail committees in Canada, including the Bruce Trail Conservancy, have had to update their health and safety protocols to meet the Public Health guidelines on preventing the spread of COVID-19.

In order to ensure the health and safety of participants using the Bruce Trails during the COVID-19 pandemic, the BTC has created a webpage on their website dedicated to providing trail users with COVID-19 updates related to trail closures, and service cancellations. They have also created a webpage which informs trail users about their “hiking responsibilities & safety in the time of COVID-19” (Bruce Trail Conservancy, 2021a, para. 1). The information on this webpage encourages Bruce trail users to “stay local”, “plan ahead”, “stay home if you are unwell”, “practice physical distancing”, “respect closures”, “expect no facilities” and to “leave no trace” (Bruce Trail Conservancy, 2021a). However, despite the BTC’s efforts in attempting to encourage safe practices during COVID-19, it is challenging to enforce these safe practices at all trail heads that are experiencing overcrowding (Werner, 2020). For example, during the early stages of the pandemic, the Bruce Trails Conservancy decided to close various of their trails in the Bruce Peninsula, Blue Mountains and Niagara sections due to overcrowding in these hot spots. However, despite the Bruce Trail Conservancy’s attempt to prevent overcrowding along these trails, people continued to trespass and hike along the trail despite the trail closures. For instance, according to an article by Benner (2020) and Walter (2020), many trail users began to use the Bruce Trail, located in the Niagara section to access the Decew Falls trails, and the Morningstar Mill trail, despite their closures. Furthermore, trespassing has also been reported along Scotts and Cannings Falls (Wells, 2020). As a result, there were various reports of trespassing on closed trail sections during the early stages of the pandemic, which raises concerns about the health and safety of trail users using these trails. Many other trails, and outdoor recreation spaces in Ontario have experienced a similar situation since it is nearly impossible for Trail Organizations to prevent and/or limit the number of people visiting specific trails. As a result, overcrowding in outdoor spaces during the pandemic continues to exist as a threat to public safety, and it is important to examine what other Recreation, Park and Trail Committees are doing to reduce or prevent the issue of overcrowding in these outdoor spaces.

3.1. *Media Analysis of What Other Trails are Doing to Manage Overcrowding*

Since the pandemic’s emergence, various parks, recreation, and trails committees have noticed an increased usage of outdoor spaces. After an analysis of various of media sources, five main strategies have been identified to reduce overcrowding in outdoor spaces: (1) Closing the area; (2) Creating one-way paths; (3) Discouraging people from lingering in one area; (4) Limiting the number of people on trails, and (5) “Eventifying” hiking to mitigate traffic to lesser-known trails.

One of the most common strategies to prevent overcrowding along trails during the pandemic was to close down busy sections, as seen with many Bruce trails located in the Bruce Peninsula and Niagara Section. This strategy was also implemented in various provinces within Canada including popular trails in Vancouver, BC (Outdoor Vancouver, 2020), and Alberta (Condon, 2020). Similarly, various Park, Recreation and Trail committees in the United States also used this strategy in an attempt to reduce overcrowding. For

example, various parks and trails in Arizona, California, and New York (Graziosi, 2020; Huynh, 2020), also had to be closed down during the pandemic due to the surge of hikers using the trails.

Another strategy used to prevent overcrowding along trails, is to enforce one-way trails. In the City of Moncton, New Brunswick, the municipal government was one of the first in Canada to implement one-way trail paths during the COVID-19 pandemic. They have added signs at the entrance and exit of various different trails in order to ensure that trails users could physically distance from one another during their hikes (Letterick, 2020). In addition to these signs, the city's director of leisure services is also asking trail users to socially distance by staying two meters apart, and to alert other people before passing them. Similarly, the city of Kelowna, in British Columbia, has enforced one-way paths along popular trail routes to allow users to help support physical distancing (Potenteau, 2020). Currently, the BTC only has one one-way trail located at the Glen Ferguson Side Trail in the Iroquoia section, which is a loop trail from Tews Falls to Dundas Peak (Bruce Trails Conservancy, 2021b).

Another strategy used to reduce traffic in busy outdoor spaces is to place a ban on the usage of popular outdoor equipment, such as barbecues, campfires, and tents to discourage people from lingering in one space. For example, during the early stages of the pandemic, the city of Barrie, Ontario, implemented an intervention which included a ban on barbecues, campfires and tents on beaches, trails and parks across the city (Phillips, 2020). This intervention by the municipal government was used to discourage trail users from lingering in one space and reduces the amount of traffic seen along outdoor hot spots in the city.

Furthermore, another strategy that many local recreation, trail, and park committees have been using is placing a limit on the number of people allowed to access outdoor spaces. For example, many local sky hills and trails in Ottawa have been placing a limit on the total number of people allowed on the trails/ ski hill (CBC News, 2021). Furthermore, in an attempt to reduce crowding along popular trails, the provincial government of B.C. implemented a "new provincial reservation system for hikers at six provincial parks" (Scott & Mangione, 2020, para. 1). This reservation system helps limit the number of people using the trails each day, because hikers need to purchase a pass in order to access these trails, and there is only a limited number of passes handed out each day. "The province has said the goal of the new system is to cut down on overcrowding, reduce environmental impacts and address safety issues, such as people parking along the sides of highways" (Scott & Mangione, 2020, para. 4). The BTC has also been attempting to limit the number of visitors at their trails by decreasing the parking spaces available to the public during the pandemic (Parks Canada, 2021).

Lastly, another strategy that is being used is “eventifying” hiking to mitigate traffic from busy trail areas to lesser-known trails. For instance, the Shelton Trails Committee’s (STC) “Out and About Challenge” located in Shelton, Connecticut, US is an excellent example of this strategy being implemented. This event was created by the STC in order to encourage trail users “to spread out and visit some of [the] lesser-known areas” (Shelton Trails Committee, 2020, para. 7), during the pandemic, to prevent overcrowding at popular trail destinations. For this event, the committee identified thirty different monuments at local parks and trails, and categorized them into three different levels, with each one progressing in difficulty. Each level consisted of ten parks/trails each. In order to complete the challenge participants had to visit all ten locations within a level, and take a photo of an avatar (e.g., doll, plastic toy, game piece) representing themselves at that location, as illustrated in Figure 3. Lastly, once the trail user completed all of the trails within the level, they were encouraged to email their photos to the Shelton Trails Committee, which would then send them a custom card recognizing the trail user’s achievement, add their name to the list of people who have complete the challenge on their website, and enter them into a draw to win a free hiking stick. Trail users who completed at least one level of the trail were also invited to a group hiking event during the Thanksgiving weekend, where they announced the winner of the draw. As a result, the committee took a creative approach on resolving the issue of overcrowding along popular trails within their city by creating an event to encourage locals to visit lesser-known parks/trails within the city.



Figure 3. *Frog and Boot Avatar at the Shelton Canal and Locks Trail in Shelton, Connecticut, USA (Shelton Trails Committee, 2020).*

4. Suggestions for Further Consideration on Health and Safety of the Bruce Trails

One suggestion to help reduce overcrowding along popular sections of the Bruce Trails is to place restrictions along these trails using some of the strategies discussed in the previous section. One of these strategies includes implementing one-way trails because it encourages hikers to walk in the same direction, thus, allowing hikers to maintain a safe social distance from one another. However, despite this strategy’s success with various of loop trails in British Columbia (Potenteau, 2020) and New Brunswick (Letterick, 2020), the usage of one-way trails is not a very feasible strategy for through-hiking trails, such as the Bruce Trails, which is a 900km trail that stretches from Tobermory to Niagara (The Bruce Trail Conservancy, n.d.). This is because it would be very challenging and nearly impossible to implement the one-way trail system along the entire stretch of the Bruce trail, as it is too long and does not loop back to a specific entrance. However, it may be possible to create more one-way trails for smaller loop segments of the Bruce trail such as the Loree Forest Loop in the Beaver Valley Section of the trails, or The Rim of Africa loop trail in the Niagara region (Bruce Trail Conservancy, n.d.).

Another restrictive strategy that the Bruce Trails can use to prevent overcrowding is to limit the number of people allowed on the trails. This can be achieved by limiting the

number of parking spaces and/or passes available to people. For example, Parks Canada achieved this goal by implementing a parking reservation system in the Bruce Peninsula Region to control access to famous hotspots like the Grotto which is located along the Bruce Trails (Parks Canada, 2021). This strategy was introduced in the year 2020 which significantly helped to relieve the traffic congestion within the park and in the following year, Parks Canada has added another location the Halfway Log Dump into the system (Parks Canada, 2021). Based on this example, a suggestion for Bruce Trail Conservancy is to implement this system in more Bruce Trail hotspots, such as along the Niagara section, and Beaver Valley section to manage the overcrowding issues and reduce the negative impacts associated with increased trail usage. The provincial government in B.C. has also successfully implemented a similar reservation system at five of their most popular parks to reduce overcrowding that occurs along those park trails (Scott & Mangione, 2020). As a result, by implementing a reservation system where guests have to reserve a day pass before entering the park and accessing the trails, the BTC can prevent overcrowding from occurring at popular trails sections.

Furthermore, another strategy that the BTC can use to help reduce overcrowding is to “eventify” hiking, in order to draw traffic from popular trail sections to lesser-known trails. There are various ways in which the BTC can “eventify” hiking, however this section will focus on two creative ideas based on pre-existing concepts that have been successful. Firstly, one way in which the BTC can “eventify” hiking is to work together with municipal park, recreation, and trail committees to promote proximity tourism along lesser-known trails within a specific city in which the Bruce Trail intersects. **Appendix A** and **Appendix B** illustrate what this event may look like if the BTC collaborated with Thorold, Ontario’s Park and Trails Committee. The event illustrated in **Appendix A** and **Appendix B** are based on the Shelton Trails Committee’s (2020) “Out and About Challenge.” This type of event can be considered a form of proximity tourism, as it encourages locals to spend time outdoors, and orient themselves to their everyday surroundings (Rantala, et al., 2020). Implementing this type of event would be an effective strategy for reducing overcrowding and mitigating the health and safety risks of crowds, since it encourages participants to stay local, and visit lesser-known outdoor spaces within their city.

Alternatively, the BTC could also create an event centred around the use of technology via their mobile app, which many trail users already own. A sample of what this type of event may look like is illustrated in **Appendix C** and **Appendix D**. This sample event uses map routes that the Niagara Bruce Trail Club has already mapped out (n.d.) on their website and encourages hikers to visit other trails that may not be as popular within the Niagara region. However, it is important to note that to make this type of event possible, the BTC will have to add a geolocation feature, and the hiking routes created by the Niagara Bruce Trail Club members onto their app. The geolocation feature is an essential component of this event because it enables the app to “check people in” once they reach a specific trail, and track their time of visit, and general location on the trail. This feature would also be beneficial in monitoring how many people are using the trails and allow the BTC to collect valuable data regarding which trails are experiencing overcrowding, and which trail sections require more parking spaces to accommodate for the large volume of hikers. There is currently a park in Norway, which has developed an app that includes a geolocation tracking feature that allows them to track the number of users along their park trails (Muñoz et al., 2019). According to Muñoz et al., (2019), this app allows park staff obtaining consent from

trail visitors to allow them to use the data collected on the app for research purposes or monitoring programs. This app also allows the park staff to create geocaching games, which “directs visitors to certain locations in the forest and asks them about those particular areas” ((Muñoz et al., 2019, p. 476), and obtain real time feedback about the park trails. However, it also important to note that the use of “mobile apps for data collection is still at the experimental stage” (Muñoz et al., 2019, p. 473). As a result, this study indicates that there are various advantages to using mobile apps to monitor and manage parks, and trails usage. With these ideas in mind, it is suggested that the BTC add a geolocation feature to their app, which is currently being redesigned and improved, with an expected release sometime in 2021 (Bruce Trail Conservancy, 2020b). This feature will not only be useful for creating events that can be used to reduce overcrowding along their trails, but it can also be used to collect valuable data about off trail usage, which may be damaging to the natural habitat.

Overall, this section illustrates four examples on how the BTC can help reduce overcrowding, and the limit the negative impacts of increased trail usage along their trails.

5. Conclusion

In conclusion, the purpose of this paper was to provide a media analysis of how trail usage within Ontario has been impacted by COVID-19 and provide some insight into how different park, recreation and trail committees have responded to increased trail usage during the pandemic. Specifically, this report focuses how increased trail usage within Ontario has impacted the Bruce Trails, and provides suggestions for the Bruce Trail Conservancy on how to manage the issue of overcrowding along popular trail sections, see **Appendix F**.

The media analysis revealed that proximity tourism has become an increasingly popular form of tourism during COVID-19 (Rantala, et al., 2020) as more people are seeking to stay local to prevent the spread of the virus. As a result, parks and trails have become a popular destination for locals and tourists from neighbouring cities within the same region to engage in physical activity, enhance their mental health, and connect with nature. However, the increased number of foot traffic along trails raises concerns about overcrowding which can also lead to negative environmental impacts and increased public safety risks. As a result, many parks and trails have created web pages on their website to inform trail users about their hiking responsibilities and how to stay safe in the time of COVID-19, as seen with the BTC (2020). However, it has been challenging for local trail committees to enforce these best practices, especially along popular parks and trails. The media analysis conducted revealed that parks, recreation and trail committees have been using five main strategies to control overcrowding along popular trails. These strategies include (1) closing the area, (2) creating one-way paths; (3) discouraging people from lingering in one area; (4) limiting the number of people allowed to enter parks and trails, and (5) “eventifying” hiking to mitigate traffic from popular parks/trails to lesser-known parks/trails. In addition to these strategies, the use of technology can also be used to open endless possibilities, as geolocation features allow park and trail managers to create geocaching games/events and obtain real time feedback about trail usage. As a result, technology can be used in combination with some of the five most common strategies to help manage the problem of overcrowding on trails.

Overall, this media analysis on trail usage during the COVID-19 pandemic illustrates tangible strategies for managing overcrowding caused by increased trail usage. As a result, this paper can be used by the BTC as a source of information to aid them in developing

creative strategies that can be used to help manage the problem of overcrowding on their trails. Ultimately, these strategies, will also allow them to understand their needs in improving trail management hence creating a better trail user experience.

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Appendix A

Sample Event Rules of How BTC Can “Eventify” Hiking Using Within the City of Thorold, ON

Thorold's Out and About Challenge Rules

1

Choose one of three levels.

- Physical difficulty increases with each level.
- The first level focuses on very easy, scenic locations.
- The third level focuses on trails that are rockier, steeper, or more difficult to access.

2

Choose an avatar to represent yourself in your photos. This can be anything you can carry (e.g. a doll, game piece, plastic toy).

3

Visit all 7 sites within that level. At each site, take a photo of your avatar in such a way that the location is recognizable.

4

When you have all seven photos for a level, email them with name (or trail name) and address to Community.Services@Thorold.ca.

5

We'll send you a **custom card** recognizing your achievement and enter your name in a year-end drawing. We'll also **post your name** (or trailname) on our website and may use some of your photos.

Appendix B

Sample Event of how BTC can “Eventify” Hiking Within the City of Thorold, ON

Thorold's Out and About Challenge

LEVEL 1: THE WANDERING TURTLE (EASY)

- 1

DeCew House Heritage Park

The First Nation's Peace Monument


- 2

DeCew Falls Loop Trail

The DeCew waterfall


- 3

Battle of Beaverdams Park

The City of Thorold Time Capsule


- 4

Mel Swart - Lake Gibson Conservation Park

The Boardwalk over the Lake


- 5

Saint John's Conservation Loop

St. Johns Conservation Area Signage


- 6

Laura Secord Trail

Old Railway Bridge


- 7

Bruce Trail Friendship Trail at Short Hills Provincial Park

The Rim of Africa Sign



Appendix C

Sample Event Rules of How BTC Can Eventify Hiking Using Niagara Bruce Trail Club's Mapped Trail Routes Within the Niagara Region.

Bruce Trails Hiking Challenge Rules

1

Download the Bruce Trails App to find a map of each of the trails.

2

Choose one of three levels within the trail section (e.g. Level 1: Niagara Section).

- The length of the trail increases with each level.
- The first level focuses on trails lasting about 1 -2 hours.
- The third level focuses on trails that may take up 4-5 hours to complete and are rockier, steeper, or more difficult to access.

3

At each location, the Bruce Trails app's geolocation will provide "check-in" as proof of that you have visited the location.

4

After you have complete all 8 trails within the level, we'll send you a custom card recognizing your achievement!

Appendix D

Sample Event of How BTC Can Eventify Hiking Using Niagara Bruce Trail Club's Mapped Trail Routes Within the Niagara Region.

Bruce Trails Hiking Challenge

LEVEL 1: NIAGARA SECTION TRAILS

<p>1 Firemen's Park Loop</p> <p>https://www.gmap-pedometer.com/?r=6919054%22%3E</p>	
<p>2 DeCew - Morningstar Loop Trail</p> <p>https://www.plotaroute.com/route/1033502?units=km</p>	
<p>3 Glenridge Quarry Loop</p> <p>https://www.plotaroute.com/route/1033505?units=km</p>	
<p>4 Jordan Loop</p> <p>https://www.plotaroute.com/route/751787?units=km</p>	
<p>5 Niagara Gorge Loop at Whirlpool stairs</p> <p>https://www.plotaroute.com/route/752189?units=km</p>	
<p>6 Lock 1 Loop at Port Weller</p> <p>https://www.plotaroute.com/route/1033458?units=km</p>	
<p>7 Short Hills - Rime of Africa</p> <p>https://www.plotaroute.com/route/1187869?units=km</p>	
<p>8 Queenston Heights</p> <p>https://www.plotaroute.com/route/745043?units=km</p>	

Appendix E

REC 280 Partner's Bruce Trail Hiking Guide Infographic

BRUCE TRAIL

HIKING GUIDE

Stay local. Get outside. Get physical
Enhance mental health. Enjoy nature. Stay safe.

ENJOY THE TRAIL AND LEAVE NO TRACE

- Leave what you find
- Minimize campfire impacts
- Respect wildlife
- Be considerate of other visitors
- Plan ahead and prepare
- Travel & camp on durable surfaces
- Dispose of waste properly

Social distance

Be mindful of other visitors and share the trail. Respect social distance guidelines and community health restrictions.

Reduce group size

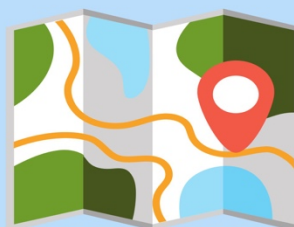
If possible, travel in smaller groups. Use trails at different times to avoid other hikers.

Stay on the trail

Traveling off trail can damage the ecosystem. Stay on the trail and help preserve the trail.

Trail directions

Be mindful of trail direction. Loop trails may be one way.



EXPLORE THE TRAIL

Canada's oldest and longest marked footpath - 900 km from Niagara to Tobermory - the Bruce Trail connects you to the wonders of the Niagara Escarpment.



brucetrail.org

Appendix F

COVID-19 Trail Usage Media Analysis Summary Infographic

