Hamilton Falls Natural Area Master Plan

Alternative Site Use Scenarios Report

DRAFT – June 2024

Jamaica State Park, Jamaica, Vermont

PREPARED FOR



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1: Introduction

[IN-PROCESS: This section will be completed with the final report]

The following report presents three Alternative Site Use Scenarios for the Hamilton Falls Natural Area based on vary levels activity envisioned for the site. Corresponding concept plan drawings have been created for each Site Use Scenario that portray various site improvements for Hamilton Falls, including enhancements to safety and access. While many of these improvements are consistent across the three Site use Scenarios, the relative size and assumed number of visitors within spaces may vary.

Before the Alternative Site Use Scenarios are presented in Sections 3, 4, and 5, existing conditions of Hamilton Falls are discussed, in addition to a public survey administered by Vermont Forest, Parks, and Recreation (FPR). Following the Site Use Scenarios, Section 6: Visitor Use Management Plan, discusses Goals and Objectives for managing the site, as well as future monitoring efforts needed to ensure that use of Hamilton Falls occurs sustainably through time.

2: Existing Conditions

This section of the report compiles data provided by the Department of Forests, Parks, and Recreation (FPR). This data included policy statements that guide management of the Falls, pedestrian and vehicle counters at various points around the site, in-person survey responses, and meeting minutes from stakeholder engagement sessions. Based on this data and anecdotal evidence from FPR staff and other stakeholders, VHB gathered a sense of the site's current use, which informs scenarios for site use levels and visitor use management objectives for Hamilton Falls. This information is collected in Section 2.2.

2.1 Data Sources

Three trail counters were placed along trails around the Hamilton Falls site. They were placed on disparate sections of the trail to capture usage levels at various locations of the site. One was placed along the trail to the Upper Pool, one along the trail to the Lower Pool, and one along the Switch Road Trail leading to the West River Trail and the rest of Jamaica State Park (south of the Lower Pool Trail). In addition to the trail counters, FPR placed a vehicle counter along West Windham Road to gather information regarding vehicular traffic. These counters were installed in July of 2021 and have been logging data since that time. Along with the trail counters, FPR conducted an in-person survey of site visitors during the summer months. In addition, notes from a public meeting with neighboring residents provided insight on the history of the site as well as current conditions and issues. Finally, a meeting with local first responders outlined current rescue operations at Hamilton Falls to ensure that the final concept plan supports rescue and safety efforts on site.

2.2 Background Information

Natural Area Designation and Class A Watershed

Hamilton Falls is a state-designated Natural Area and thus has certain requirements for management. The main goal of the Natural Area designation is to maintain a site's wilderness character for the use of present and future residents of Vermont.

According to the Vermont Agency of Natural Resources, Cobb Brook, which forms Hamilton Falls, was designated as a Class A(1) Watershed in 1991. Per the Vermont Water Quality Standards, the water quality of classified waters must be managed to maintain and protect the higher water quality and minimize risk to existing and designated uses.

FPR-Administered Survey

During the summers from 2021 to 2023, Seasonal Rangers conducted in-person visitor use surveys at Hamilton Falls. The survey was conducted while roving between the Upper and Lower Pool Trails and along West Windham Road. The Ranger used a question like "Have you been to the upper pool yet?" to clarify if the visitors were actually leaving. If visitors have been to both locations, or opted out of the other location, the Ranger asked if they would be willing to take a survey. Only one survey was conducted at a time. Groups leaving while a survey was being completed were omitted. A Ranger was on site conducting surveys for 18 summer days in 2021, 17 summer days in 2022, and 8 summer days in 2023.¹ Key takeaways from the survey include:

* Note: Satisfaction survey based on 7-point scale (1 Strongly Disagree/Dissatisfied, 7 Strongly Agree/Satisfied)

- Average group size = 4 people
- Number of cars per group = 1.2 cars
- Average number of people per car = 3.25 people
- Average time spent at Hamilton Falls = 1.5 hours
- Group size, number of cars per group, and average time spent is consistent across all user groups (hikers vs. parked on road)
- Majority of people gather at the Lower Pool
 - Upper Pool sees about half as much traffic
- Accessing Hamilton Falls:
 - o 37.3% from Jamaica State Park (JSP) (High satisfaction with experience, 6.9 average)
 - 42.9% from West Windham Road (WWR) (High satisfaction with experience, 6.4 average)
 - 2.8% from Turkey Mt. Rd./Legal Trail 10
 - 8.8% from Ball Mountain Dam
 - <1% Walked from Home
 - 8% No response
 - From the survey of those parked on West Windham Road:
 - o 16% of those visitors did not have an open space to park when they arrived
 - Average 11-minute wait for a designated space for those that had to wait
 - 3% parked on roadway (or admitted to it)
 - Neutral/Negative support for hiking from JSP if parking was eliminated at WWR (3.5) among visitors who parked at WWR
 - ~25% of participants stated that it would be "acceptable" to hike from JSP (response of 6 or 7)
 - Visitors are satisfied with the current amount of parking (5.9) and experience of accessing the Falls from WWR (6.8)
- The **top three primary reasons** for visiting the Falls were waterfall viewing (27.9%), enjoying nature (18.1%), and swimming (17.2%).
 - 42.3% of users engaged in swimming, 8.8% engaged in cliff jumping, and 7.9% engaged in waterfall climbing.

- 69-80% of participants indicated that high use levels at the Falls do not impact how/when they recreate on site (displacement to other areas, avoidance of peak hours, etc.)
- Overall people are satisfied with the visitor experience
 - Neutral/Satisfied responses for crowd levels and behavior of others (~5.6)
- Neutral response to closing (3.8) or expanding parking on West Windham Road (4.5)
- Neutral response to visitor management at the Falls
 - Visitors and their use of the Falls should be managed more (4.0)
 - There should be no limits to the number of people allowed at any one time (4.1)
- Neutral response to viewing platforms as improving visitor experience or replacing swimming as recreation (3.3/3.4)
 - Still may be desire for life safety or to deter swimming in certain areas.

Public Meeting

In September of 2020, FPR held a meeting to listen to concerns about site use from nearby residents. In this meeting, the site's history was discussed, as well as longstanding familiar ties to the site. Land adjacent to the Falls was sold by a private landowner to the Conservation Society of Southern Vermont, who later turned the property over to Jamaica State Park and FPR. Private owners hold the land around Cobb Brook near West Windham Road, as well as a deeded right-of-way path to the Falls. Neighborhood residents described the issues at the Falls, including years of overuse and safety concerns, noting that these issues were especially prevalent in 2020, likely due to the increase of outdoor activity during the COVID-19 pandemic. One main issue was the unsafe nature of the Falls and how to manage visitors behaving recklessly. Another issue was an uptick in litter and human waste on the site detracting from the wilderness character and placing a burden on neighboring residents. Neighbors were especially concerned about car traffic on West Windham Road disrupting or endangering residents, as well as Falls visitors parking along West Windham Road where they are not supposed to and making emergency access impossible. Some of the challenges to managing the number of visitors raised include other access routes (Ball Mountain Dam, Turkey Mountain Road), need for enforcement of parking regulations, and the need for clear signage in key places. In addition, the neighbors at the meeting presented a collection of emails and testimonies from other neighbors detailing some of these issues.

Current Rescue Operations

Rescue efforts from the Upper and Middle Pools are completed through what is referred to as a "high-line operation" where ropes are suspended across the valley or Upper Pool and are used to lift patients out of danger. Given the severity of injuries sustained by patients, helicopter crews are often relied upon to transport patients to the hospital. Though Rescue, Inc. has been the lead/primary first responder responsible for the site since 2005, multiple rescue teams of nearby towns and municipalities contribute to rescue efforts at Hamilton Falls (Rescue, Inc. leads the high-line operation, while other town rescue departments assist with administering first aid, transporting patients, scene management, etc.).

For Middle Pool rescues, patients are lifted out of the pool by a carrier basket/rope and placed down at the Lower Pool with a series of ropes suspended across the site. From there, other rescue crews are present to begin first aid and carry the patient up the Base of Falls Access Trail to the Switch Road Trail (typically 6 people total, 3 people on either side of carrier). Given the current condition of the Switch Road Trail, particularly the large water bar toward West Windham Road, ATV usage on Switch Road Trail is not feasible. From the junction of Switch Road Trail and West Windham Road, an ambulance carries the patient to a nearby field where the helicopter is waiting (emergency treatment begins in the ambulance). Upper Pool rescues differ in that patients are lifted straight up and out of the Upper Pool and carried back to West Windham Road. Rescue, Inc. indicates that rescues from the Upper Pool are less common than the Middle Pool.

Notwithstanding the skill and care needed to execute rescues of this nature, current site limitations present challenges for first responders at Hamilton Falls. Ideally, an ATV would be utilized to carry patients from the junction of the Base of Falls Trail and Switch Road Trail to West Windham Road. Additionally, the trail surface and stair features of the Base of Falls Trail would be able to accommodate two people walking side by side holding the 24" wide carrier.

The logistics of scene and vehicle management are also challenging given limited space along West Windham Road. Since the ambulance is staffed 24/7, this vehicle is generally the first to arrive on site. Following the ambulance, 15-20 personal/rescue vehicles arrive on site and block West Windham Road since there is limited space to park. Once the patient is stable in the ambulance, all other vehicles must back down West Windham Road before the ambulance can move toward the helicopter/hospital. Site circulation improvements to alleviate this issue could expediate rescue efforts once at the roadway.

Beyond issues of transport, Rescue, Inc. also indicates that there may be additional safety improvements to better anchor first responders once they are in the Middle Pool performing the rescue.

2.3 Baseline for Site Use Scenarios

In looking at the data, VHB focused primarily on summer months (May to October) when use is highest. To set a baseline for the Site Use Scenarios, VHB examined weekend counts at the Lower Pool, which averaged around 100 people per day. To account for peak use, the design team filtered the top 1/3 of weekend days and calculated the average, which resulted in roughly 200 people per day. The trail counter data showed that visitors generally come to the site between 10am and 4pm, giving a six-hour window for peak usage. Survey data showed an average visit time of 1.5 hours. This means that at peak use times, the site would need to accommodate up to 50 visitors at a time (200 / (6/1.5)). Currently, the site is not equipped to handle this sort of capacity.

Based on survey data, the vast majority (83%) of site users either park along West Windham Road (43%) or hike from Jamaica State Park (40%). In the Alternative Site Use Scenarios, visitors called out as "hikers" are assumed to be coming from Jamaica State Park but could encompass those hikers from other locations.

3: High Use Scenario

This scenario aims to sustainably accommodate high usage levels observed on site, prioritizing ease of access and visitors who are unable/unwilling to hike longer distances to recreate at the Falls. The high use scenario calls for at least 18 parking spaces. This scenario envisions up to 75 people at a time across the site.

3.1 Desired Conditions

Visitors choose their preferred method of accessing the Falls: hiking from Jamaica State Park or Ball Mountain Dam, via vehicle along West Windham Road, or biking/walking along Turkey Mountain Road. The improved site infrastructure provides adequate spaces for visitors to gather in whatever size group they arrive in and recreate safely during their visit. Sturdier and more developed trails, along with additional trails and gathering areas, accommodate the larger number of visitors, distributing people throughout the site while still protecting the natural character. Visitors are welcome to swim in the Lower Pool area and explore the lower portion of Cobb Brook in the water. Access to the Upper Pool is maintained for waterfall viewing but swimming is prohibited. Educational signage throughout the site provides environmental and safety information.

3.2 Methods

To account for increased demand for outdoor recreation, calculations for the high use scenario began with an increased level from the calculated baseline described in Section 2.3 above: high use days would see roughly 300 visitors over the six-hour window. As an extra buffer for increased use, the design team also increased the time spent on the site, assuming a 1.75-hour visit. This results in the site needing to accommodate up to 85 people at a time on peak days in the summer. However, given site limitations and the desire to maintain the site's natural character, 85 people spread across the site is too many. Concept studies showed that realistically the site can only accommodate 75 people at a time, which informed the High Use Scenario.

For parking calculations, the design team used a similar method to the baseline calculation. Looking at the West Windham Road vehicle counts, the design team filtered the top 1/3 of weekend days and calculated the average, providing a count of 69 cars. To account for the residents along West Windham Road, VHB averaged the count of cars in the winter, when the site is not being used recreationally, resulting in 12 cars being pulled from the overall count. Spacing those 57 cars out over the six-hour period with an assumed 1.75-hour turnover rate results in needing spaces for at least 17 cars at a time.

With the expanded parking area, more visitors are expected to access the site via West Windham Road. If 60% of site users park at West Windham, using the average of 3.25 people per car from the survey results, that allows for roughly 45 visitors at a time to park at West Windham and anticipates about 30 hikers from Jamaica State Park.

3.3 Concept Plan

Access and Parking

Visitors will have access to the Falls area via Jamaica State Park and increased parking along West Windham Road. Given the site's constraints, there will be two parking lots, which will accommodate many of the patrons who want to park along West Windham Road. Within these lots, 18 parking spaces are provided. Increased education and signage along the approach to the West Windham parking areas will alert visitors to the possibility of limited or no parking and offer alternative routes. In the short term (1-3 years), while visitor behaviors and usage patterns evolve, having a ranger or volunteer on site to address visitor concerns and manage parking would be needed. Further, enforcement would need to increase to prevent visitors from parking along the road in non-designated parking areas. If parking demand is met and past negative behaviors are alleviated, the need for the ranger could abate after the short term. Parking and overcrowding should be continually monitored with the understanding that active parking management strategies may be required if problems persist (see Strategies 1.2.1-1.3.2 in Visitor Use Management Plan, Section 6).

The Switch Road Trail is upgraded to serve as a primary access to the site from the parking area and from Jamaica State Park (Class 3). Additionally, a new Falls Connector Trail (Class 3) connects the Lower and Upper Pools, keeping visitors out of the roadway's viewshed and increasing the experience of the Falls by not relying on the roadway to connect different areas. In this scenario, a portable restroom with a decorative, timber-framed enclosure is provided at the Switch Road Trailhead in the southern parking lot. Wayfinding signage across the Falls site directs visitors to the restroom.

Upper Pool Area

Visitors access the Upper Pool area via a new, accessible trail that branches off the Switch Road Trail (Falls Connector Trail—Class 3). Visitors that parked at West Windham Road can also access the Upper Pool directly from the western parking area via an improved trail (West Windham Road Connector-Class 3). At the terminus of these trails, a railing-lined, stone platform and newly added benches provide a pause place among the trees, allowing visitors the chance to listen to the cascading water and preventing them from wandering into the private property nearby. Spurring off this area, a newly constructed trail and stairs lead to a viewing platform above the Upper Pool (Top of Falls Viewpoint Trail—Class 3). Here, visitors can safely admire the channel of water leading to the Upper Pool and look out over the top of the Falls without the danger of falling in. Signage on this platform again warns of the dangers of swimming in the Upper Pool and discourages that activity. In addition, another trail leads down to the ladder into the Upper Pool (Upper Pool Access Trail—Class 2), but it is only accessible through a gate with signage (risk of fatality/ swimming is prohibited). This trail allows more adventurous visitors the chance to get closer to the Upper Pool and gives rescue personnel a sturdier path to the ladder. Below the rocky area with the ladder, a low fence (material/style TBD) and signage keeps visitors from venturing down the face of the Falls to the Middle and Lower Pools, instead directing them back up to the pause place and established trail.

Lower Pool Area

Visitors approach the Lower Pool area along an upgraded trail (Base of Falls Access—Class 3). Branching off the main trail to the Lower Pool, new trails (Class 3) lead to the sheltered beach area where the calm

water and natural pools offer families with children a place to safely swim. Towards the base of the Falls, a multi-tiered stone platform offers a place to sit and appreciate the Falls, giving visitors a prime view of the cascade. This platform is formed with stones native to the site, enhancing the feeling of a Natural Area while providing infrastructure to accommodate groups of varying size. On this platform, an educational sign includes information on the Falls and details the dangers of swimming, discouraging visitors from entering the Middle and Upper Pools. Behind the platform, a retaining wall (stone, timber, and/or root wad) reinforces the bank and prevents further erosion. Visitors spread out around the Lower Pool area, utilizing boulders and the base of the Falls as sitting areas and taking in the sun and splendor of the waterfall. On peak use days, the Lower Pool will be at or near capacity, with visitors using all the available space and groups likely needing to overlap a bit. Throughout the Lower Pool area, signage deters people from climbing up the rocks and hillside towards the Middle and Upper Pool.

3.4 Visitor Use Management

The Visitor Use Management Plan is available in Section 6.1 of this document, where general strategies for managing visitor capacity and behavior are laid out. Many of the strategies apply across all site use scenarios (in different intensities depending on the situation), but there will also be issues specific to each scenario. This report explores those specific issues in Section 6.2.

4: Moderate Use Scenario

This scenario balances recreation and ease of access to the Falls with the desire to preserve a peaceful environment for experiencing nature. Access to the Falls off West Windham Road is preserved but limited to address overcrowding. This scenario calls for at least 9 parking spaces and capacity for roughly 60 people at a time across the site.

4.1 Desired Conditions

The Moderate Use Scenario balances a sense of remoteness at the Falls with the opportunity for social gathering. Upgraded trails give visitors easy access to the Lower Pool and the Upper Pool, while infrastructure improvements keep safety a priority, especially at the Upper Pool. Visitors will hike up from Jamaica State Park, and there is limited parking along West Windham Road to accommodate those with mobility issues. Swimming is prohibited in the Upper Pool, while safety improvements at the Lower Pool allow for safer recreation.

4.2 Methods

For the moderate use scenario, the design team based the desired number of visitors on the baseline calculated in Section 2.3. In this scenario, the site needs to accommodate an estimated 200 people per day, or roughly 60 people at any point, using the same six-hour window and 1.75-hour turnover rate established previously. This number of visitors is above the average for weekend days in the summer and close to the calculated baseline (see Section 2.3).

For parking in this scenario, the design team calculated the average weekend count during the summer (42 cars per day), subtracted the average winter count (12 cars per day), then applied a turnover rate based on a 1.75-hour visit. This produced a need for at least nine parking spaces.

This scenario keeps the current distribution of site access roughly the same, with 45-50% of visitors expected to park at West Windham Road and 40-45% anticipated to hike.

4.3 Concept Plan

Access and Parking

Visitors either park along West Windham Road in the designated parking or hike from Jamaica State Park/Ball Mountain Dam. A parking area set back from the road provides ten spaces for those that choose to drive to the Falls. Education and messaging will be extremely important in this scenario, with signage, park staff or volunteers, and media all being used to inform the public of the parking limits. Like the High Use scenario, having a ranger or volunteer on site to address visitor concerns and manage parking would be needed in the short term (1-3 years), while visitor behaviors and usage patterns evolve. Further, enforcement would need to increase to prevent visitors from parking along the road in non-designated parking areas. If parking demand is met and past negative behaviors are alleviated, the need for the ranger could abate after the short term. If the desired condition is still not met after a few seasons, more restrictions, like a reservation system, could be needed. Refer to the Visitor Use Management Plan for more information regarding continued monitoring and potential strategies.

The Switch Road Trail is upgraded to serve as a primary access to the site from the parking area and from Jamaica State Park (Class 3). Additionally, a new Falls Connector Trail (Class 3) connects the Lower and Upper Pools, keeping visitors out of the roadway's viewshed and increasing the experience of the Falls by not relying on the roadway to connect different areas.

Upper Pool Area

To access the Upper Pool Area, an improved, sturdy trail (Falls Connector Trail—Class 3) leads to a clearing above the Falls, where visitors can bask in the roar of the falls and the sounds of the forest. At the terminus of this trail, a railing-lined, stone platform clearing provides a pause place among the trees, allowing visitors the chance to listen to the cascading water while discouraging them from traveling further north onto the private property nearby. From this area, a newly constructed trail (Top of Falls Viewpoint Trail—Class 2) and stairs lead to a viewing platform above the Upper Pool. Here, visitors can safely admire the channel of water leading to the Upper Pool and look out over the top of the Falls without the danger of falling in. In this scenario, a Class 1 trail leads down to the ladder, but it is only accessible through a gate with signage (risk of fatality/ swimming is prohibited). All other areas off trail are revegetated to prevent new informal trails from forming. Below the rocky area with the ladder, a low fence (material/style TBD) and signage keeps visitors from venturing down the face of the Falls to the Middle and Lower Pools, instead directing them back up to the pause place and established trail.

Lower Pool Area

Visitors approach the Lower Pool area along an upgraded trail (Base of Falls Access—Class 3). Branching trails (Class 2) lead to a sheltered beach area away from the Falls, where the calm water and natural pools offer families with children a place to safely swim. Further towards the base of the Falls, a stone platform offers a place to sit and appreciate the Falls, giving visitors a prime view of the cascade. This platform is formed with stones native to the site, enhancing the feeling of a Natural Area while providing the necessary infrastructure to accommodate the intended site usage. On this platform, an educational sign includes information on the Falls and details the dangers of swimming, discouraging visitors from entering the Middle and Upper Pools. Behind the platform, a natural retaining wall (stone, timber, and/or root wad) stabilizes the bank and prevents further erosion. Visitors spread out around the Lower Pool area, utilizing boulders and the base of the Falls as sitting areas and taking in the sun and splendor of the waterfall. Throughout the area, signage deters people from climbing up the rocks and hillside towards the Middle Pool.

4.4 Visitor Use Management Plan

The Visitor Use Management Plan is available in Section 6.1 of this document, where general strategies for managing visitor capacity and behavior are laid out. Many of the strategies apply across all site use scenarios (in different intensities depending on the situation), but there will also be issues specific to each scenario. This report explores those specific issues in Section 6.2.

5: Low Use Scenario

This scenario limits access to the Falls from West Windham Road to preserve a quiet natural environment to the greatest extent possible. This scenario limits parking to 4 spaces along West Windham Road and envisions roughly 30 people at a time across the site.

5.1 Desired Conditions

The Low Use Scenario achieves a sense of solitude and remoteness at the Falls, in keeping closely with its Natural Area designation. This scenario requires a shift in visitor use and behavior to maintain the wilderness character of the site. Visitors enjoy a 6-mile round-trip hike up to the Falls from Jamaica State Park, where they can sit and enjoy the Falls without many other visitors around them. Visitors with mobility challenges can access the Falls by way of the limited parking area on West Windham Road. Forcing visitors to hike to the Falls discourages a "hangout/party" mindset and inhibits the ability to bring coolers or other large equipment. Limited site infrastructure improvements provide sturdier trails and landing areas, giving way to the natural state of the area as visitors approach the water. Swimming in Cobb Brook is prohibited in the Upper Pool and discouraged in the Lower Pool to maintain the pristine conditions of the Class A stream.

5.2 Methods

For the low use scenario, the design team chose to dramatically limit parking along West Windham Road. While eliminating parking entirely may be the easiest to enforce, such action is considered inconsistent with FPR's Diversity, Equity, and Inclusion principles and access goals for the site. While this reduction in parking will limit the number of people that can access the site, dramatically restricting parking along West Windham Road makes it easier for the public to understand how to access the site and easy for the Town Sherriff to enforce when people are improperly parked. Over time, sensible visitors will assume that the four spaces are likely unavailable and change their use patterns to match the desired access method for the Falls (hiking).

To determine a desired number of visitors for the low use scenario, the design team started with the calculated baseline (200 visitors/day) and the percentage of visitors hiking from Jamaica State Park (40%), resulting in 80 visitors per day. To account for those displaced from parking at West Windham Road, VHB added 25% of the visitors currently parking there (based on those who indicated that hiking would be "acceptable"), resulting in a total of 103 visitors per day. Spacing this number out over the six-hour period with a 1.75-hour turnover results in roughly 30 people at a time across the site.

5.3 Concept Plan

Access and Parking

Visitors park their vehicles at Jamaica State Park (or Ball Mountain Dam/Turkey Mt. Road) and hike to the Falls area from there. Parking along West Windham Road is limited to four spaces to balance providing access to the Falls, creating a true sense of remoteness, and alleviating traffic issues for neighbors.

Because most visitors are being asked to hike to the Falls, these spaces are intended to serve visitors with mobility challenges that would otherwise be unable to visit the Falls and should be signed/designated as such. If in the future these spaces are misused, or significant numbers of "wasted" trips are observed where people turn around after not finding parking, future action may be necessary to alleviate negative impacts on neighbors and the site (see Section 6.2 Future Monitoring).

With very limited parking along West Windham Road, visitors are less likely to come to the Falls with the intent of partying and staying for a long time, thus alleviating traffic pressure and other negative behaviors that concerned nearby residents and long-time visitors. Education and messaging will be extremely important in this scenario, with signage, park staff or volunteers, and media all being used to inform the public of the change. If, after a few seasons, the desired condition is still not met more restrictions, like a reservation system for accessing the Falls and/or parking area, may be needed (See Chapter 6 for more information). The Switch Road Trail is upgraded, providing safe, sturdy access to the parking area and the West River Trail to Jamaica State Park (Class 3). Additionally, a new Falls Connector Trail (Class 3) connects the Lower and Upper Pools, keeping visitors out of the roadway's viewshed and increasing the experience of the Falls by not relying on the roadway to connect different areas.

Upper Pool Area

In the Upper Pool Area, an improved, sturdy trail (Falls Connector Trail—Class 3) leads to newly constructed stairs descending to a viewing platform above the Upper Pool. Here, visitors can safely admire the channel of water leading to the Upper Pool and look out over the top of the Falls without the danger of falling in. Branching from the Falls Connector Trail, a Class 1 trail leads down to an overlook area on the rocks above the Upper Pool, where visitors can see the top of the cascade and view the Lower Pool and Cobb Brook beyond. This viewing area is only accessible through a gate with signage (risk of fatality/ swimming is prohibited). A low fence (material/style TBD) demarcates the edge of visitor access, keeping people from attempting to access the Lower Pool via an informal trail down a steep hill. These limited improvements enhance a sense of solitude, heightening the desired character of the Natural Area.

Lower Pool Area

In the Lower Pool Area, visitors will enjoy sturdier trails than the current condition. The Base of Falls Access Trail (Class 2) will guide visitors to a small platform, offering a place to sit and appreciate the Falls from a safe distance across the Lower Pool, offering a prime photo location. At this platform, a small sign discouraging them from entering the water by highlighting the site's pristine water quality and warning visitors of the dangers of swimming. Additionally, the sign reinforces the history of fatalities at the Falls and the danger of venturing further up the stream into the Middle and Upper Pools. The small beach area toward the south end of the Lower Pool area is maintained, giving visitors access to the water in a safer place, with a Class 1 trail leading to it that branches off the Base of Falls Access Trail. Apart from the trails, the area is revegetated with native plants to prevent informal paths from forming and provide habitat for wildlife.

5.4 Visitor Use Management Plan

The Visitor Use Management Plan is available in Section 6.1 of this document, where general strategies for managing visitor capacity and behavior are laid out. Many of the strategies apply across all site use scenarios (in different intensities depending on the situation), but there will also be issues specific to each scenario. This report explores those specific issues in Section 6.2.

6: Visitor Use Management Plan

Managing how visitors access the site and managing their behavior on site will be an important piece of maintaining the wilderness character and experience of the Hamilton Falls Natural Area. The strategies laid out in Section 6. 1 apply to all scenarios, although the intensities of those strategies may differ based on a specific scenario's desired conditions. Section 6.2 explores potential issues within specific scenarios and strategies for monitoring and overcoming them.

6.1 Baseline Management Goals and Strategies

Goal 1: Visitor Experience and Education

A visit to Hamilton Falls is an opportunity to experience the beauty of the site in its pristine condition.

Management Objective		Management Strategies	
1. Promote positive behaviors in the Natural Area.	1.1.1	Provide signage describing sensitive natural features, especially where revegetation is occurring to keep most visitors on the designated trails and discourage "social trails."	
	1.1.2	Provide signage describing the Class A Watershed and how to keep waters clean, encouraging responsible use of sunscreen, bug spray, and more.	
	1.1.3	Provide signage denoting "Pack In, Pack Out" policies and how littering in the wilderness can harm ecosystems.	
2. Lessen impact on neighbors along West Windham Road.	1.2.1	Strongly encourage visitors to park only at Jamaica State Park in all materials referencing the Falls.	
	1.2.2	Increase enforcement along West Windham Road in the near term.	
	1.2.3	Install large, obvious signage in the parking area highlighting other parking and access options for the Falls.	
	1.2.4	Work with the Town to install boulders within the Right-of-Way of West Windham Road in areas where visitors are likely to park along the roadway.	
	1.2.5	Design parking lots (in High and Moderate Use) to allow traffic to flow through, keeping cars off West Windham Road, even if they are waiting for a spot, and providing safe	

		turnaround if the parking area is full. Design parking lots so that a gate system could be installed at a future date, if needed.	
	1.2.6	Create and maintain a new Falls Connector Trail that connects Switch Road Trail and the Upper Pool area to move visitors out of the viewshed of the roadway and improve the visitor experience. Provide wayfinding signage to encourage use of the trail.	
3. Keep crowds at Falls at manageable levels (see Section 6.2 for additional strategies that may be required beyond the baseline.)	1.3.1	Promote benefits of visiting Falls at off-pea hours and informs potential visitors about limited access/parking through online presence and social media.	
	1.3.2	Announce the limited parking at West Windham Road using a variable messaging board (VMB) at Burpee Pond Road. Consider additional messaging that highlights alternative methods to access the Falls. Consider implementation of other VMBs further up road from access point.	
	1.3.3	In the near term (1-3+ years), station a Park Ranger or volunteer at West Windham Road Parking Area to inform visitors of new parking policies and alternative ways to access the Falls (June-October, Weekends Only). Keep the Ranger/volunteer on site while visitor behaviors shift and adjust to the new site/access conditions. Time will be required to shift visitor expectations and behavior.	

Goal 2: Safety

Recreating at Hamilton Falls is a safe experience for all. Dangers of recreating at the Falls are clearly communicated and site infrastructure promotes safe actions and behavior.

Management Objective		Management Strategies	
	2.1.1	Improve and maintain trails to meet FPR standards for safety and durability (see Tables 1 and 2 at end of this section.)	
1. Trails are safe and sturdy to walk on and match the anticipated level of use.	2.1.2	Provide an accessible route from Switch Road Trail to the Upper Pool for those with mobility challenges.	
	12.1.3	Create/install viewing platforms, pause places, and railings at specific points to guide visitors to safe viewing areas, while keeping them safe from fall risk (railings, strategic placement along fall areas, etc.)	
	2.2.1	Provide signage describing the dangers of wading, swimming, cliff jumping/climbing around Upper and Lower Pools.	
2. Keep Falls visitors safe while	2.2.2	Install signage on Upper Pool ladder denoting it as an "Emergency Ladder."	
recreating in water or interacting with the Falls	2.3.3	Install fences and barriers to prevent access to the Middle Pool and Upper Pool, along with signage describing the dangers of swimming/climbing/off-trail hiking in these locations (material/style TBD).	
3. Improve safety by moving pedestrians off West Windham Road.	2.3.1	Create a trail from the parking lot that leads to Switch Road Trail (High and Moderate Use Scenarios Only).	
	2.3.2	Create a new Falls Connector Trail that provides off-road access to the Upper Pool from Switch Road Trail.	
	2.4.1	Resurface and maintain Switch Road Trail from West Windham Road to the Lower Pool spur to permit ATV rescue operations. Install a gate the top of the trail at West Windham Road to restrict unauthorized use of ATVs on the trail.	
4. Improve rescue efforts at the Falls.	2.4.2	Widen stair features along the Base of Falls Connector Trail to accommodate the 6- person carry of the basket in rescue operations.	
	2.4.3	Create a designated area for the ambulance staging area for swift exit after rescue.	
	2.4.4	Improve safety for first responders by providing anchors within the Middle Pool.	

Goal 3: Environmental Quality

The environment of Hamilton Falls is prioritized, keeping the natural beauty and environmental health of the site at the forefront of management decisions.

Management Objective		Management Strategies		
1. Maintain the Class A(1) stream designation.	3.1.1	Monitor water quality in Cobb Brook both in the Lower Pool and downstream regularly. Pursue more intensive management strategi as needed.		
	3.1.2	Provide signage describing the Class A Watershed and how to keep waters clean.		
	3.1.3	Upgrade and monitor trail conditions to ensure that channelized drainage does not lead to excessive erosion and discharge into the brook. Upgrade Switch Road Trail to remove downhill berm. Armor trail drainage areas where appropriate.		
	3.2.1	Utilize planting to screen parking from the roadway and trail and prevent informal trails.		
2. Site retains wilderness character.	3.2.2	Encourage the use of native material in site infrastructure where appropriate. Where feasible, utilize natural materials in place of man-made/artificial materials.		
 Provide and protect habitat for animals and natural ecosystem processes. 	3.3.1	Revegetation throughout site provides new habitat and decreases erosion.		
	3.3.2	Utilize a physical barrier, such as string, to demarcate the "revegetation area" and provide signage.		
	4.4.1	Upgrade and monitor trail conditions to ensure that channelized drainage does not lead to excessive erosion and discharge into the brook. Armor trail drainage areas where appropriate.		
4. Manage erosion on site.		Upgrade the trail and trail structures to meet anticipated usage levels and FPR standards (see Tables 1 and 2 at end of this section).		
	4.4.2	Create passing zones at trail junctions and along the trail to minimize trail widening.		
	4.4.3	Upgrade Switch Road Trail to remove the downhill berm and to "sheet flow" water across the trail instead of being channelized and eroding the bank above the viewing platform at the Lower Pool.		
	4.4.4	Close informal trails and formalize trail alignments by placing large, woody debris over trail surfaces and revegetating the area		

	with understory material. Provide a physical barrier (string, logs, etc.) and educational signage where appropriate.
4.4.5	Above the viewing platform, create a timber/rootwad revetment to stabilize the eroding hillside. Consider utilizing native stone material for added longevity of the structure.

Table 1: General Trail Class Descriptions

	Trail Class 1 Minimally Developed	Trail Class 2 Moderately Developed	Trail Class 3 Developed
Design Tread Width	<36"	+/- 36″	36"-60"
Design Surface	Predominately native materials	Typically native materials	Native or imported materials
Tread and Flow	Intermittent and often indistinct	Continuous and discernable, but narrow and rough	Continuous and obvious
Obstacles	Common, naturally occurring, often substantial, and intended to provide increased challenge	May be common, substantial, and intended to provide increased challenge	May be common, but not substantial or intended to provide challenge
Constructed Features and Trail Elements	Minimal to non- existent. Drainage typically handled without structures	Of limited size, scale, and quantity; typically constructed of native materials. Drainage structures adequate to protect trail infrastructure and resources	May be common and substantial; constructed of imported or native materials.

Table 2: Trail Class for Each Trail in Each Site Use Scenario

	High Use	Moderate Use	Low Use
Switch Road Trail	Class 3	Class 3	Class 3
Falls Connector Trail	Class 3	Class 3	Class 3
Top of Falls Viewing Platform	Class 3	Class 2	n/a
Upper Pool Ladder Access	Class 2	Class 1	Class 1
West Windham Road Connector	Class 3	n/a	n/a
Base of Falls Viewing Access	Class 3	Class 3	Class 2
Lower Pool Beach Area	Class 3	Class 2	Class 1

6.2 Future Monitoring

The strategies in this section are laid out to address potential issues with specific scenarios or anticipated challenges faced by high usage levels at the Falls. NOTE: Specific/measurable threshold parameters to be developed out of continued research and further conversation with FPR/community during the planning process or out of future monitoring/study.

Parking and Access

Indicator(a): High Use Scenario parking capacity.

- Threshold 1: Cars are observed parked in West Windham Road Right-of-Way over 25% of weekends.
 - Further Action: Increase enforcement from Sheriff.
 - Further Action: If adjacent to private property, coordinate with private property owners to have boulders placed along the roadway edge to deter parking.
- > <u>Threshold 2a</u>: Parking lot is full or overfull on 25% of weekend days during the summer.
- > <u>Threshold 2b</u>: Over 60% of Falls visitors are observed parking at West Windham Road.
 - Further Actions: These actions are intended to follow sequentially as the issue persists.
 - Education campaign to remind visitors to use alternative means of access.
 - Institute a reservation system for parking (Near term: Ranger checks reservation during high usage days (summer weekends).
- Install gates at parking lots that are accessed by ticket/reservation.

Indicator(b): Moderate Use Scenario parking capacity.

- Threshold 1: Cars are observed parked in West Windham Road Right-of-Way during high-use days.
 - Further Action: Increase enforcement from Sheriff.
 - Further Action: If adjacent to private property, coordinate with private property owners to have boulders placed along the roadway edge to deter parking.
- > Threshold 2a: Parking lot is full or overfull on 50% of weekend days during the summer.
- > Threshold 2b: Over 45% of Falls visitors are observed parking at West Windham Road.
 - Further Actions: These actions are intended to follow sequentially as the issue persists.
 - Institute a reservation system for parking (Near term: Ranger checks reservation during high usage days (summer weekends, holidays).
 - Install gates at parking lots that are accessed by ticket/reservation.

Indicator(c): Low Use Scenario parking capacity.

- > <u>Threshold 1</u>: Cars are observed parked in West Windham Road Right-of-Way at any time.
 - Further Actions: These actions are intended to follow sequentially as the issue persists.
 - Increase enforcement from Sheriff. Consider working with Town to add towing as a punishment for repeat offenders or similar.
 - Erect more signs to warn visitors about enforcement and spread word via online and traditional media.
 - Work with the Town to install boulders along the roadway edge adjacent to State property to prevent/deter parking.
 - If adjacent to private property, coordinate with private property owners to have boulders placed along the roadway edge to deter parking.

- > <u>Threshold 2</u>: Parking lot is full or overfull on 50% of weekend days during the summer.
 - Further Actions: These actions are intended to follow sequentially as the issue persists.
 - Education campaign to remind visitors to use alternative means of access.
 - Institute a reservation system for parking (Near term: Ranger checks reservation during high usage days (summer weekends, holidays).
 - Redesign parking lot to create gated access to the parking lot that can be accessed ticket/reservation.
 - Consider expanding the parking lot to accommodate more visitors along West Windham Road, if such a change is consistent with the future vision of the Falls.

Safety

Indicator: Upper Pool Ladder Access (All Scenarios)

- Threshold 1: Visitors are observed going around the viewing platform to follow the existing trail along water's edge to access rock overlook area instead of newly constructed trail.
 - Further Action: Install rope/sign, or durable features blocking existing trail and directing visitors towards designated access. Increase revegetation efforts along existing trail.
- Threshold 2: Erosion worsens along water's edge above rock overlook area. Developing specific, measurable threshold would be a goal of future planning.

Indicator: People accessing Middle Pool (All Scenarios)

- Threshold 1: Visitors are observed climbing up rock face or swimming in Upper Pool multiple times during the summer months.
 - Further Actions:
 - Park Ranger instructs visitors about the dangers of swimming in these pools (if applicable).
 - Install more robust fencing and signage along the edge of the Upper Pool and along access to Middle Pool. Consider options for fencing off the rock face from the Lower Pool.
- > <u>Threshold 2</u>: Rescue operations are needed at site in Upper or Middle Pool.
 - Further Actions:
 - Employ strategies to lower site usage, including closing parking or instituting a reservation system.
 - Post Park Ranger and/or lifeguard on site during high use days (summer weekends, holidays).

Overcrowding (All Scenarios)

Indicator: Crowd levels at Lower Pool on high use weekends.

- Threshold 1: Excessive trash and other evidence of overuse after high use weekends is observed.
 - Further Actions:
 - Install signage around the Lower Pool and in parking areas reminding visitors of Natural Area designation and Pack In, Pack Out policy.
 - Prohibit coolers, speakers, alcohol, etc. to encourage respectful, quiet appreciation of the site.

- Threshold 2: People at One Time (PAOT) observed to be over the desired condition for a specific scenario. Park staff will need to be on hand to monitor these levels.
 - Further Action: Institute a reservation system to limit number of visitors at any given time. Park Staff would need to monitor whether people have reservations on site, and penalties or fines would need to be instituted to prevent people from ignoring reservation system.

Indicator: Migration of visitors/swimmers upstream of the Upper Pool, across Cobb Brook, or onto private property.

- Threshold 1: Visitors are observed migrating upstream toward the existing open "beach" area near private property.
 - Further Action: North of the Upper Pool pause place, near the desired beach area, Install a secondary line of fencing that demarcates private property. Span either side of the abutter access trail with fencing and provide signage.
 - Further Action: Coordinate with the private property owner and relocate the "Family Path" to make it less enticing to visitors. Revegitate former trail.
- Threshold 2: Visitors are observed crossing Cobb Brook north of the Upper Pool to access open space or climb on the rock face.
 - Further Action: Install fencing on the north side of Cobb Brook that prevents movement to the rock face. Install signage in the area highlighting the area's danger and private ownership.

Water Quality/Restrooms (Moderate and Low Scenarios)

Indicator: Improper sanitary waste disposal (diapers, toilet paper, etc.) and public urination (or defecation).

- Threshold 1: Improper sanitary waste is observed at the Falls over 25% of weekend days during the summer or one nuisance complaint of improper waste disposal or activity occur throughout the summer.
 - Further Action: Provide signage at the Lower Pool promoting water quality and resources for backcountry health/best practices (use of bug spray/sunscreen, backcountry restrooms, sanitation, etc.). Promote proper backcountry practices in park literature and online.
- Threshold 2: Improper sanitary waste is observed at the Falls over 50% of weekend days during the summer or three nuisance complaints of improper waste disposal or activity occur throughout the summer.
 - Further Action 2: Provide a portable restroom at the Switch Road Trail/West Windham Road Trailhead (or other location). Provide signage at the Upper and Lower Pools regarding the availability and location of restrooms. Provide a timber frame enclosure for the portable restroom so the amenity does not detract from the overall surroundings.

Excessive Social Paths and Vegetation Loss (All Scenarios)

Indicator: Number of social paths on site and bare soil.

- Threshold 1: 25% of an area is bare soil due to social paths forming on site due to visitors going off-trail.
 - Further Actions:
 - Revegetate/brush-in those areas OR
 - Upgrade select social paths to Trail Class 1 if the trail leads to an appropriate gathering space or supports goals for the Falls.