COPELAND FOREST TRAIL PLAN

DRAFT - November 2023

Copeland Forest Friends Association

Copeland Forest Trail Plan
Draft November 2023

Acknowledgements

This Trail Plan Report was prepared by the following members of the Trail Committee:

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Trail Plan Summary

Trail building in the Forest over the last 20 years has been done on an informal basis without holistic planning or approval from Copeland Forest Friends Association (CFFA) or the Ministry of Natural Resources and Forestry (MNRF).   In response to past informal trail building, increasing forest use, and concerns related to associated impacts on the environment, CFFA established a Trail Committee in 2021. The primary function of the Trail Committee has been to develop a Trail Plan to consider environmental sensitivities and desired recreation experiences in the Forest.   The CFFA Trail Committee developed this Trail Plan under the 2021 Memorandum of Understanding (MOU) with the MNRF.

The following vision statement was recognized in the development of the trail plan:

> *Copeland Forest is home to a network of environmentally sustainable, multi-use recreation trails that provide a variety of user experiences.*

The Trail Plan was developed over a 2-year period considering input obtained from: a Trail User Survey, an Ecological Assessment of the trails, in field trail "structural assessments", the review of other trail plans/trail impact studies, and input/presentations to the MNRF and CFFA user groups.

73 single track trails totally about 53 km in length were assessed.

Key issues/challenges associated with the trail network were identified as follows:

- Compacted soil on the trail;
- Increased and unchecked surface runoff of rain/meltwater;
- Soil erosion on sloped sections/fall-line trails;
- Tree root exposure;
- Forest fragmentation and the resultant isolation of wildlife species between trail sections;
- Disturbance of wildlife by presence of humans, dogs and horses; and
- Disruption of wet seepage areas either by log corduroy bridges and/or horse hooves.

About half of the existing trails are recommended to be retained with no major improvements recommended. Most of the recommended trail changes/improvements are related to mitigating wet/sensitive habitat areas or sections of trail erosion/widening. In a few cases changes are proposed due to trail redundancy including trails running parallel to one another. A summary of the nature of the recommendations is below.

Summary of Trail Recommendations	
Keep - No repairs:	36 trails
Keep - Repairs:	19 trails
Keep – Partial closure and/or detours:	14 trails
Keep – Spring closure:	3 trails (includes a double track trail)
Close Entirely:	3-4 trails (plus a few short connectors)

The recommended trail repairs and detours relate primarily to addressing trail erosion, wet areas and impacts to sensitive areas, trail narrowing, closing of redundant trails including the many short connector trails, and attempting to reduce the "ecological island" impact in the forest.

In addition to specific trail improvement recommendations, this Trail Plan also makes recommendations regarding trail naming and signage. CFFA intends to produce a map that outlines the endorsed Trail network.

Finally an implementation plan is also proposed including the recommendation to create a new Trail Management Committee that will oversee the recommended trail improvements. The CFFA Board will need to seek individuals to be part of this Committee. New sources of funds may be required to completely fulfill the Trail Plan.

1.0 Introduction

The Copeland Forest (the Forest) is situated on the traditional lands of the of the Anishnaabeg, Wendat and Haudenosaunee people. This territory is governed by Treaty #16 between the Chippewa and the Crown and the Williams Treaty.

When settlers arrived in the mid-1800s only a few farms were built on the periphery of the forest. The low-lying and wet areas were not suitable for settlements, and the hilly Oro Moraine areas were difficult to traverse. However, the land was ideally suited for logging, a mainstay that began in the late 1800s and lasted until the 1970s. The Province purchased the property in 1978, and with that the Forest transitioned to more recreational use including deer hunting, hiking, cycling as well as nature appreciation. A separate document that describes the history of the Forest is being developed by several members of the Copeland Forest Friends Association (CFFA).

Trail building in the Forest over the last 20 years has been done on an informal basis without holistic planning or approval from CFFA or the Ministry of Natural Resources and Forestry (MNRF). In response to past informal trail building, increasing forest use, and concerns related to forest ecology impact, CFFA established a Trail Committee in 2021. The primary function of the Trail Committee has been to develop a Trail Plan to consider environmental sensitivities and desired recreation experiences in the Forest. The CFFA Trail Committee developed this Trail Plan under the 2021 Memorandum of Understanding (MOU) with the MNRF. It is important to note that the Forest is different than other surrounding Simcoe Country forests. Copeland Forest is designated as an Area of Natural and Scientific Interest (ANSI), has much higher ecological sensitivity, there is no active logging, no overnight camping, and motorized vehicles are banned from use.

In developing this Trail Plan, it is important to note that the trails in the Forest need to accommodate all permitted user types including hikers, cycling and equestrian. Under the MNRF policy, specific user types cannot be banned from specific trails. Developing a trail plan to accommodate a variety of user types is challenging. Trail centres that accommodate a variety of user types often designate certain trails for specific users. It is typical to see trails designated for either: hikers only, hikers and bikers, or equestrian.

While the single track trails in the Forest have no formal status, they are identified on various public maps and trail apps such as Trailforks. Some of the trails identified on Trailforks are also either partly or entirely on private land adjacent to the Forest. These include the south end of the Forest tract that includes property owned by Horseshoe Resort and other development companies. At the east end of the Forest off Line 5N there is the Simcoe County Amos Tract which has trails running through it and which join with trails in the Forest. This Trail Plan is focused only on the trails that are located within the Copeland Forest.

The Copeland Forest is recognized in the Simcoe County Trails Strategy and the Ganaraska Trail passes through it. The trails in the Forest attract users from all over Ontario contributing to the local economy. Many people have moved to Oro-Medonte Township because of the Forest and the trails within it. It is the closest large forest to the GTHA that can provide a "wilderness" experience.

The following steps were taken to develop the Trail Plan:

- Trail User Survey completed in Summer 2022.
- Ecological Assessment of the trails by David Hawke (Fall 2022).
- In field "trail structural assessment"/meetings by Trail Committee in 2022-23.
- Review of 2017 CFFA trail assessment notes.
- Review of other trail plans/trail impact studies.
- Meeting with International Mountain Bike Association (IMBA) regarding trail "improvements".
- Presentation of Trail Plan to CFFA Board & MNRF in 2023.
- CFFA User Group presentations.

2.0 Vision for the Trail System

Early in the process to develop the Trail Plan, it was determined that the development of a vision statement would be beneficial to guide key decisions regarding the trail network. The CFFA "mission statement" was first considered which includes:

Article 2 - Mandate, Goal and Objectives

2.1 Mandate: To conserve the natural integrity of the Copeland Forest while facilitating compatible recreational use.

2.2 Goal: To implement stewardship activities that provide for the sustainability of Copeland Forest with the objective of meeting the needs of present and future generations.

2.3 Objectives:

2.31 Use scientific research to monitor the Forest and undertake stewardship activities

2.32 Support a sustainable network of trails to provide a broad range of safe recreational experiences that respect the forest.

2.33 Develop educational opportunities.

Considering the CFFA mission statement and input received through the Copeland Forest User surveys (see Section 5.0) as well as input at the 2022 CFFA AGM the following Trail Plan Vision statement was developed:

Copeland Forest is home to a network of environmentally sustainable, multi-use recreation trails that provide a variety of user experiences.

Further to the development of a vision statement, and considering the input from the Forest user survey and 2022 AGM feedback, the Trail Committee identified desired experiences to guide the development of the Trail Plan which included:

Desired Experiences

The Copeland Trails offer an invitation into nature where one can experience:

- Wild scenery and therapeutic benefit of being in nature.
- Freedom and physical challenge to engage in recreational activities.

- Refuge from industrialized places.
- Satisfaction of passing on this natural place to future generations.
- Trails that vary in difficulty and provide different views.
- Historical remnants.
- Year-round access at no cost.

3.0   Rationale for Trail Plan

Why develop a Trail Plan for Copeland Forest?

- The single track trails were informally built over the last 20 years and have never been formally recognized by MNRF or CFFA.
- Some of trails are in poor condition and/or located through sensitive habitat.
- Higher trail user volumes are expected with new local area housing development. This could lead to increased stress on the Forest and trail system.
- The trails are a valuable resource providing countless hours of recreation and health value to its users.
- Trail centres like the Forest throughout the world are now being guided by sustainable trail objectives.
- CFFA with the support of the local community taking responsibility for the maintenance of trails will help ensure their longevity for future generations.

- Having an organized and locally supported trail plan in place will show government agencies that the land is being responsibly used and taken care of, reducing government intervention.

Copeland Forest is Crown owned land and is governed under the Ontario *Public Lands Act.* Copeland Forest is recognized as a Provincial Area of Natural and Scientific Interest (ANSI) within Ecodistrict 6E-6 for its representation of swamps and for the headwaters of the Coldwater and Sturgeon Rivers, and Willow Creek. ANSIs are areas of land and water containing unique natural landscapes or features. These features have been scientifically identified as having life or earth science values related to protection, scientific study or education. There are more than 1,000 ANSIs in Ontario. Most are located on private land. Copeland Forest is a Life Science ANSI. There are only 3 crown land ANSIs in Ontario of which Copeland Forest is one. As well, parts of the forest contain an evaluated Provincially Significant Wetland (PSW) complex[1].

The only recognized management plan for Copeland Forest is the MNRF Preliminary Master Plan for the Copeland Forest Management Area that was prepared in 1984 and was intended to be a 10-year plan (to 1994). A lot has changed in the Forest since this plan was prepared. As an example, hunting was the main recreation activity in the Forest when the Plan was created.

In this preliminary Master Plan most of the Forest is zoned as either 'Integrated Water Management Zone" (the areas of wetland) or the "Integrated Land Management Zone". Only three isolated "Nature Reserve Zones" are identified, essentially islands within the wetland areas. The Management Zone (where the existing trails are located within) allow for *"a wide range of recreation activities…including numerous trail oriented activities"*. The Plan also identifies a "Development Zone" for the creation of park facilities such as camping and for forest administration facilities.

Regarding the trails, the 1984 Plan identifies the following:
- A comprehensive signage system.
- The development of trail head facilities including information for forest users.
- Allowing Horseshoe Resort to maintain a cross-country ski network.
- The need for the Ministry to monitor equestrian activity in the forest including need for more policies. As well the 1984 Plan identified that equestrian activities are to be limited from May 1 to October 30 (to limit use during spring period when trails are sensitive and outside of the hunting season and winter when trails are used for skiing).

Trails related non-consumptive recreation activities as noted in the Master Plan associated policy document include: hiking/walking, horseback riding, biking, snowshoeing and cross-country skiing. The policy document also notes that *"the trail surface will be covered with a material which is resistant to erosion"*. Furthermore, the policy document indicates that a *"comprehensive signage system will be used which will permit users to easily identify and follow any one or a combination of the loops that make up the system"*.

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[1] Jones and Morton, Life Science Inventory of Copeland Forest Resource Management Area, February, 2012

The need for more active management of trails in Copeland Forest was identified in the 2013 Copeland - MNR Report prepared by the Copeland Forest Stewardship Committee with the support of the Couchiching Conservancy.   Key trail recommendations included:
- Develop the trail user forum and organize trail maintenance activities.
- Sponsor annual or bi-annual trail user meeting and trail workshops.
- Organize spring and fall maintenance and clean up days.
- Inventory and assess single track trails.
- Map the single track trails, forest eco-system, and areas of ecological sensitivity.
- Assess and develop principles to guide creation and maintenance of single-track trails (trail density, trail buffers, erosion etc.).
- Propose a recommended network of single track trails, including plans to open and/or close trails.
- Develop trail maintenance plan.
- Produce a report and recommendations.

This 2013 plan was presented to the MNRF and general support for it was received by the Ministry. To fulfil this plan, in 2017 CFFA initiated a process to assess the single-track trail in Copeland Forest. While a formal trail plan was never prepared, some trail related recommendations were made to the MNRF in December 2017 and a work plan was prepared.

Copeland Forest was divided into 5 zones for the purpose of the study. Teams walked all the trails and documented trail length and conditions and where possible, review of plants, including invasive species. The following recommendations/study conclusions and observations were made. In many cases recommendations were generic and not tied back to specific trails.

2017 Trail Plan Recommendations
- Create two new double track trail segments near P1 parking lot. Markers 41-42 were added along with new trail.
- Existing trail from markers 8 > 43 44 > 45 were added to the ministry map.
- Continue to monitor trail conditions
- Study the wildflowers and identify areas of significance.
- Specific items for zone 1:
  - Complete the easy access trail from P3 to the Forest.
  - Develop a plan to address drainage on the dual track trail from #8 to Line 5N.
  - Review access to the Coldwater River and options for user access.
- Specific items for zone 5:
  - Remove deer feeding box.
  - Address the wet area on the Ganaraska Trail and construct boardwalk as needed.
  - Develop a plan to remove the wild parsnip and periwinkle on the main trail to the Ducks Unlimited pond.

- Continued communication with the various user groups to ensure all have opportunity for input on any changes.
- No need for any more trails.

By the end of 2018 completed trail work included additional trail connection to the P4 trail head off of Line 5N, with the support of MNRF junior rangers, the construction of a platform over a wet area by the "Trail Fairies" (a group of local volunteers who have maintained the trails, some of which also built some of the existing trails).

In fall 2021, CFFA re-established a Trail Committee to fulfill the recommendations made in the 2013 report. Most importantly this included the assessment of the informal single-track trails that had never been recognized and identify a trail system or network that would be recognized by CFFA. This Trail Plan is to include trail maintenance recommendations including the identification of trail sections that require improvement (e.g. erosion). The Trail Plan development process was reinstated by CFFA in light of ongoing trail development (primarily the reopening of old trails) and increased use of Copeland Forest. This was observed during COVID-19 and there is an expectation for increased future use with new residential development occurring in the Township.

4.0   Copeland Forest Ecological Sensitivities

4.1 Introduction

As part of the Trail Plan work, a number of third party studies were reviewed to inform the Trail Plan recommendations. Some studies were specifically related to Copeland Forest while others were more broadly based including an assessment of the impact from mountain bike trail development. All the studies align that the creation and use of trails has an ecological impact on the forest (on both the vegetation and wildlife). The impact is not restricted to one type of user and is also dependent on the type of soil/terrain that pre-exists in the forest.

4.2 Impacts of Trails and their Use

Michael Quinn and Greg Chernoff, "Mountain Biking: A Review of the Ecological Effects", February 2010

The authors reviewed existing studies of the ecological effects of cross-country mountain bike riding. Their findings can be summarized as follows:
- Trail based mountain biking is similar in its effects as other forms of summer seasonal trail use. Several studies compared mountain biking vs hiking/horses and found the impact on soil compaction were similar, if not more pronounced by the horses/hikers going downhill. The effects on soil and vegetation include erosion and compaction along with trail widening.
- Many studies reviewed indicated the soil type, terrain relief and amount of moisture in the ground were key components in determining the amount of impact; more so than the type of trail use. Damage can be increased though with cycling technique and skill level (eg, braking, skidding, cutting switchbacks).

- The initial creation of the trail is when vegetation is impacted the most. This is true regardless of the intended trail use. The authors were not able to find any studies that concluded mountain biking causes the spread of seeds/invasive plants.
- The impacts on wildlife are primarily related to increased stress due to human activity and habitat alteration due to the damaged soil. Mountain biking is a fast and relatively quiet sport and animals may be startled by the sudden approach of a bike.
- Water quality can also be impacted by trail users. Careless disposal of waste can alter the nutrient content of water and soil erosion can increase sedimentation.

4.3 Natural Science Inventories

Bobbette, R.S.W. and J.M. Webber December 1979. "Copeland Forest Resources Management Area Botanical Inventory, Vol. 1.", Huronia District Ontario M.N.R.

This report documents the results of a botanical inventory of vegetation and plant species in the Forest. Also described are aquatic conditions, geologic and climate conditions. Of note as related to trails and trail maintenance in the Forest is the consideration of water features. The Copeland Forest is the headwater for three significant local streams: The Coldwater River, the Sturgeon River and North Willow Creek. The source of these watercourses includes surface flow after snow melt and rain events and from groundwater discharge. The report notes the following:

The most active zone of ground water discharge appears to occur between 250-280m (850-950 feet) ASL, near the base of the kame moraine slope along the south and southeast. This water flow provides a continuous supply of cool, rich groundwater that flows in short streams before spreading into marshes, swamps and wet forest. This zone was wider in that it extended further upslope before extensive deforestation of the uplands reduced water tables significantly.

Active seepage areas also occur along the slopes of the Coldwater River ravine and its tributaries, but most of its headwaters and those of the other streams merge with shallow aquatic and marshland situations. At least one short stream that rises in Conc. V disappears into the porous sandy soil, to emerge again closer to the Coldwater River, and many channels into the wetlands braid, or became lost under vegetation.

Related to the seepage areas this report recommends the preservation of all riparian and seepage communities as "protection environments", and their use as low level interpretive or as exclusive natural reserve areas. In meeting with the MNRF in 2023 they confirmed that a key interest is to ensure that activities in the Forest should not impact seepage areas and the watercourses that originate within it.

Jones & Morton, 2012, "Life Science Inventory of Copeland Forest Resource Management Area"

Recognizing that there may be differing needs among users of Copeland Forest, and recognizing that increased usage may have impacts on natural features and sensitive species, the Ontario Ministry of Natural Resources (OMNR) in partnership with the Couchiching Conservancy, a private land trust from Orillia, Ontario, began discussing needs and uses with local stakeholders. From

these discussions, it was recognized that there was a need to identify sensitive areas and species that might need protective management measures in order to effectively address resource options and land management issues. This report details the results from a four-season life science inventory (April 2011- Jan 2012) of Copeland Forest. The information provided in this report was intended to provide input to support management strategies for the property.

Recreational and other human uses were studied to assess their impact on the Forest:

- Mountain biking. Newly created single-track trails are resulting in a loss of the ground flora in some areas. The proliferation of trails in part stems from bikers taking alternate routes around small obstacles. Repeated use increases the density of the trail soil leading to impact from erosion. Mountain bike use may be contributing to the spread of garlic mustard (as does other users of the forest).
- Horseback riding. Horses do sometimes walk adjacent to the trail/platforms and in muddy areas that hikers/bikers would tend to avoid. This has led to some sections of the trails being churned up and widened. As well, horses may also spread invasive/non-native plant species through their manure.
- Cross-country skiing and snowshoeing. Potential concern raised over several new seasonal trails laid out for snowshoeing and off-trail skiing that may become permanent trails if users continue to access outside of winter months. Temporary signage/trail markers should be removed in the off season.
- Hikers, runners, dog walkers.   Hikers tended to use both the main and secondary trails, while runners tended to stick to the wider trails. Dogs are often off leash in the Forest (which is permitted if they are under control). The only concern raised with this group of users is that off leash dogs in the winter could be chasing/harassing wintering deer and causing increased stressors.
- Picking wild plants. Generally, not a concern as the amounts taken do not appear to be excessive or disruptive to other plants/areas.
- Geocaching. Geocaching can encourage a lot of people to go off trail and move logs/stones to retrieve their cache. Many caches at Copeland were observed hanging on low branches or in upright stumps, so little disturbance other than some trampling directly in the area.
- Disturbance. Small area of tree cutting near the Ducks Unlimited pond was noted, perhaps for path clearing or improve sight lines for hunting. Some refuse was also seen. Evidence of recent campfires were observed in old campground areas.

Based on the above observations, the authors made the following recommendations.

- Protection of sensitive species and wildlife values
  - Limit off-trail activities and prevent new trail construction, especially around the Butternut seedlings and near winter denning areas along the stream banks at the eastern side of the forest.
  - Protect the areas of highest woodland quality and most amphibian breeding potential. These areas contain the core of the intact functional forest ecosystem, provide breeding habitat, and a seed source for the restoration of less-common

species. Consider use of signs requesting users to not leave the trail to prevent the entry/expansion of invasive species, damage to the ground and trail proliferation.
- o Consider closing some trails to mountain bikers and horses to prevent further trail proliferations, spread of invasive species and damage to the ground. (Note that MNRF policy would not support this as the trails are open to all users).
- o Meet with management from adjacent resorts to ensure commercial use meshes with overall property management goals.
- Human safety
  - o Signage. Directional signage, trail maps at entry points/intersections and route information will help orient users while in the forest.
  - o Future work. Continue to check for the presence of species at risk that were not found (or not widely encountered) in 2011 but for which there is suitable habitat. As well, quantitatively document some of the vegetation for comparison at a future date.
  - o Removal of old/decaying infrastructure that may present hazards. Old fire pits and garbage cans that remain could encourage future use. However, some historical items such as building foundations should be maintained to help maintain interest/appreciation for Copeland Forest.

4.3.3 David Hawke 2022, "An Ecological Assessment of the Copeland Forest Trails"

To support the development of a Copeland Forest Trail Plan David Hawke (a local ecologist) was retained in 2022 to undertake an ecological assessment.   This study involved walking, inventorying and mapping approximately 90 km of single and double track trails in the Forest and the preparation of a report that was released to the public and is available on the CFFA website.   The following is a high level summary of his findings.

Flora

The Copeland Forest is rich with botanical communities, notably the spring ephemerals (fawn lily, squirrel corn, hepatica, spring beauty and others) found in the hardwoods areas. Due to development projects across the Oro Moraine these hardwood forest herbaceous communities are steadily disappearing across the Township. The fern communities are also unique, with maidenhair fern by example being found in unusually large stands. Broad beech fern has been found historically within the Forest, a species which is listed as a Species at Risk. Non-native species are becoming prevalent along the trails, their seeds spread by being carried in boot and tire treads (garlic mustard) or sticking to clothing (tick-trefoils, enchanter's nightshade, sweet cicely, burdock).

Wild ginseng is a designated Species at Risk (SAR). Although the federally endangered wild ginseng was not found during this particular study, the species is known to be within Copeland Forest. The author was
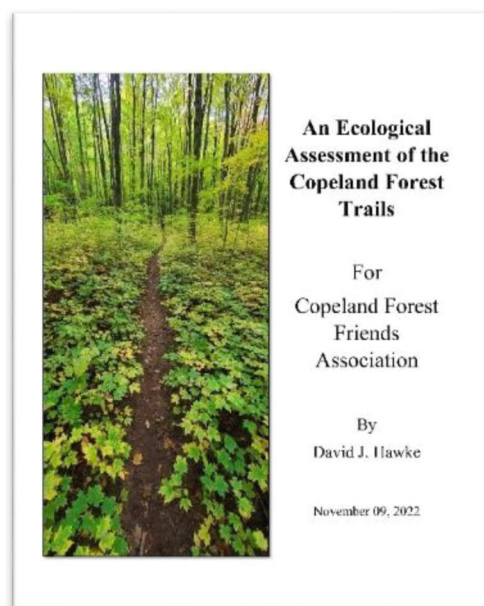
surprised at the large amount of pokeweed and spikenard encountered (both of these species are often companions to wild ginseng as they share very similar growing conditions). Other SAR includes broad beech fern and black ash trees. Woodland swamps consisting of black ash are now an imperiled habitat type. There are small swales of black ash swamps found along the bottom of the slopes. At the moment there are no trails cutting through the larger stands of black ash, yet an awareness of this habitat type can be used for avoidance in future trail planning.

Fauna

Due to the Copeland Forest being so large and so diverse in habitat types, it is the remaining stronghold for several wildlife species that have lost their native habitat elsewhere. All planning must be aware of the presence of these species and the potential impacts of trail activities. The following are known species/habitats at risk that have been found in Copeland Forest: little brown bats; blanding's turtle, red-shouldered hawk, monarch butterflies, and wood thrush. Note that the Endangered Species Act states that it is illegal to alter the habitat of a listed Species at Risk.

Wetland Areas

Copeland Forest contains several types of wetlands ranging from mixed woods seepage areas with streams to wooded swamps, to beaver ponds and vernal pools. Trails running along the shore areas of beaver ponds should generally be avoided. Vernal pools, also known as ephemeral ponds, are spring season catchments within a woodlot that are the critical breeding areas for several amphibians (frogs and salamanders) and crustaceans (fairy shrimp). Trails should avoid these sites, especially in April as these species migrate to these pools from the surrounding forest floor area. These vernal pools can extend in the summer period during wet periods.

General Assessment Findings

The assessment concluded that *while the overall health of the forest is good, past trail development and trail use have resulted in some impacts and concerns* as summarized below:

- Trail density and forest floor fragmentation. The trail network is concentrated in the eastern part of the Forest and has created many "islands" on the Forest floor where small mammals, reptiles and amphibians live. As density increases and island shrink these creatures find it more difficult to find food, shelter and space to live as they feel threatened when trying to cross open trails. Trail density is higher on the steep valley slopes and less on the flatter sections. (See figure below)

The Copeland Forest
Example of trail density in SE corner.
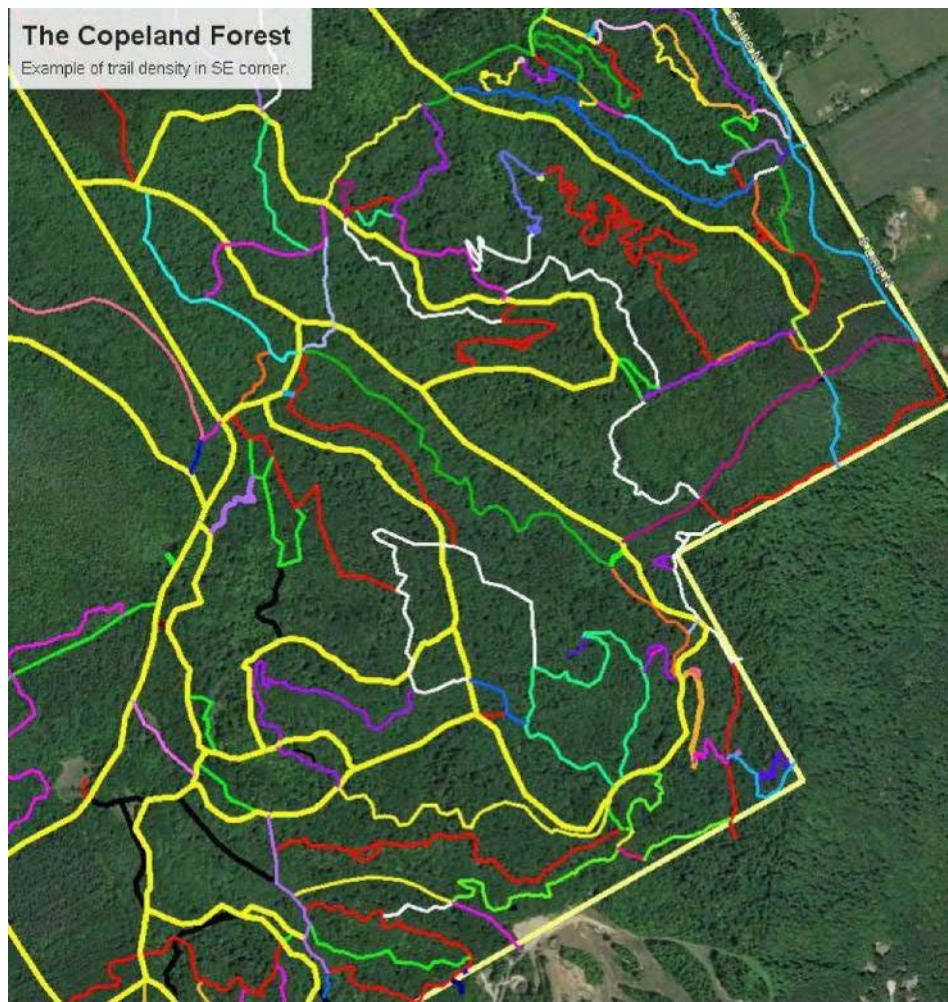
- Zone of influence. This is the area along the sides of trails where wildlife can be affected by human activity. High volume/frequent trail use can cause some wildlife to abandon the area. The Zone can vary greatly depending on the type of animal/bird. For example, some big mammals/birds need 120 meters of buffer on each side of a trail; whereas smaller mammals, birds, and reptiles need only 20 meters.
- Soil compaction on the trail tread due to foot/hoof/bike traffic. Results in several impacts including:
  - o Increased and unchecked surface runoff of rain and meltwater. When the soil is compacted, water will run downhill as there is no layer of loose leaves/branches to absorb it. This will increase the wet areas in the valleys and reduce the amount of water available for trees in the upper valley.
  - o Wildlife. Loose/soft soil creates a habitat for small wildlife such as salamanders who spend the majority of their life on the Forest floor. The compaction of soil reduces the size of their habitat, forcing them to find food and live in a smaller area.
  - o Tree root exposure. Hazards for trail users are created when roots are exposed due to soil compaction and erosion. Though tree roots can help reduce soil erosion, a tree can be killed if surrounded by compacted soil and all its roots are exposed. As

well, compacted soil makes it difficult for new roots to expand and existing roots to take on water. All of this contributed to higher stress on trees.

- Soil erosion on sloped sections of trail. Some trail sections have become eroded from use.   This includes some sections of narrow/deeply rutted routes. Trails also become widened as users try to avoid the ruts/roots (uphill travel from mountain bikes can cause this).
- Seed dispersal. Seeds have a variety of ways to disperse, including hitching a ride on clothing and bike/boot treads. There are a number of plants that are arriving/spreading that can cause harm to the forest including garlic mustard, sweet cicely, burdock, enchanter's night shade and pointed-leaved tick trefoil. These plants can crowd out the natural plant communities including spring ephemerals. In addition, horse manure can include seeds of plants that are not native to the forest.
- Displaced forest floor materials. Fallen/rotting logs and loose soil provide a natural habitat for small forest creatures. Movement of these items to shore up trails or create log-overs/corduroy platforms can displace small animals.
- Man-made structures. A number of "features" have been created in the Forest such as platforms, corduroy crossings, corner berms and jumps. Other features include riding along/over stone piles/fences.   While these add to the rider enjoyment, they can also impact waterflow and animal shelter.
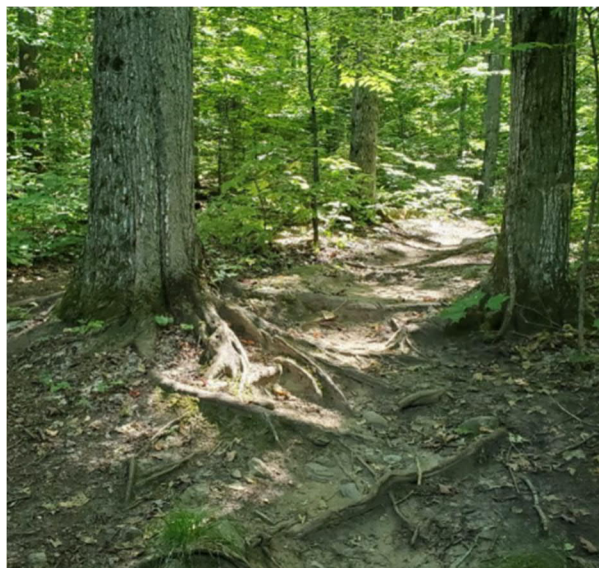
Based on the study, David Hawke has provided the following suggestions:

1. Prohibit any further trail construction until an approved trail plan can be adopted.
2. *Review suitability of horse riding on certain single track trails sections that have steep slopes or wetland crossings; address the problem of the spread of undesirable non-native plant species via horse manure on single track trails (Note that current MNRF policy is that the Forest is open to all users and specific uses cannot be banned from using specific parts of the Forest or trails).*
3. Upgrade wet crossings to lumber platforms (thus avoiding use of found limbs/logs for a corduroy crossing in wet areas).
4. Consider trail surface remediation to areas with severe erosion (e.g. water deflection ditches) or exposure of tree roots (cover or fill with aggregate).
5. Close some of the superfluous short cuts and crossovers, thus enlarging the 'islands' contained between the trail sections.
6. Consult with the other organizations that are conducting ecological studies to further delineate areas of concern (e.g. The Couchiching Conservancy Citizen Science projects; Severn Sound Environmental Association water testing; Ontario Breeding Bird Atlas).

7. Enhance educational messaging regarding uniqueness and fragility of forest ecosystems, thus reducing rogue trail and structure building.
8. Install trail markers at intersection points to aid in locating positions of interest. Install trail name signs.
9. Conduct a spring/summer survey for unique botanical communities.
10. Review practice of leaf-blowing in autumn: trail tread safety concerns versus allowing leaves to retain moisture for percolation into the soil.
11. Consider closing/redirecting trail segments near vernal ponds during salamander migration (March-April).

5.0   Copeland Forest User Feedback

5.1 Copeland Forest User Survey

5.1.1 Survey Overview

A survey of Copeland Forest users was undertaken in 2022 to help the Trail Committee better understand how the Copeland Forest trails are being used, what users most value about the trails, and any concerns forest users may have. The survey was advertised on-line including social media and posters were put out at various locations including at the main trail heads. The survey was available from late May to early July 2022. The survey included about twenty questions including some open ended questions.

The following provides a high level summary of the survey input/responses. A full description of the results are available on the CFFA website and were made available to the public in summer 2022.

5.1.2 Who Completed the Survey

About 225 surveys were completed.   In terms of where the survey respondents live, 89 (40%) live locally and if Barrie/Orillia/Springwater are included, 147 (65%) of the respondents are from the regional area. Most of the respondents are considered as regular users with 144 (64%) using the Forest at least once per week. The respondents also tend to be very familiar with the trail system as 105 (47%) indicated that they do not use a map when in the Forest. The top 3 activities include: Hiking (167, 74%), Mountain Biking (122, 54%), and Nature Appreciation (114, 50%).   The top three desired experiences when in the forest included: "To be in a natural/wilderness setting"; "To exercise"; and "To do an activity with friends/family". The Forest is used fairly consistently throughout the year with highest usage in the spring and fall.

5.1.3 What People Thought of the Trail System

When asked what type of trail is most desired, by far the most popular response was narrow trails with some steep features and challenging features. Generally most people have no barriers to using the single-track trails. When asked to rate the condition of the trails, 176 (78%) rated both the single track and double track as Good or Very Good.   When asked what issues require attention, 95 (42%) indicated that there were no major issues that need attention. Issues that were identified by other respondents included: shared use conflicts (70, 31%), erosion (65, 28%), and trail widening (48, 21%).

The most popular access points are the P2 Parking Lot and the Horseshoe Resort Nordic Centre.

5.1.4 Summary of Open Ended Questions

The survey also included several open ended questions and a substantial amount of comments and opinions were provided (about 20 pages) which are summarized below:

What trails need improvements?

- *Area north-east of where the ponds were before the washout (wet and boggy) and SE area near the old Pine Ridge.*
- *The following trails were identified as having eroded/widened sections which are in need of work: Five Point trails (Mile High and Copeland Downhill), Purple Star, Left Bank/Ridge, Achy Breaky (Rocks and Roots), Michele's Special (Maui Wowie).*

General Trail System Improvements

- *Too many intersections. The most popular single-tracks are excellent and should remain, however the short "connectors" make things confusing.*
- *Don't over manage a good thing. Much respect to the trail crew that do maintain the trails as they are in great shape. Minimal corridor trimming of overgrowth areas could be considered.*
- *While blowing the leaves off the trails helps to make the trails and rocks/roots more visible, it is contributing to trail widening.*
- *Some trails don't make much sense, have too many switch backs, not good flow for biking.*
- *Need for re-narrowing of widened trails, fix erosion issues, get rid of alternate line choices, shut down muddy trails or increase drainage, one way signage for downhill specific trails, keep trails technical and difficult.*
- *Trails too close to water edges encourages widening and people sliding down fragile slopes to satisfy curiosity.*
- *Possibly closing sections of trails during wet weather/early season to protect against further erosion. Avoid use by horses/bikers on steep sections during wet weather/when frost is coming out.*
- *For existing trails, just because they already exist, doesn't mean they are in a good location - reroute / close.*
- *Limit the number of trails. There are more then enough trails right now. Education from knowledgeable source to recommend when erosion potential is a risk.*
- *I would love to see a community clean up initiative once a year at least.*

Key Issues/Concerns

- *Horses: There were many comments received regarding the use of single track trails by horses. There is concern that use of the single track trails by horses is causing excessive erosion problems and there are safety concerns with bikes coming downhill. It was commented that horses leave gouges in the trails, particularly when the trails are wet. Several people suggested that horses should not be permitted on the steeper single track trails and they should be signed appropriately. It was suggested that double track trails are more appropriate for horses.*
- *Litter: Litter, particularly near the parking lots, was identified as a key problem. Questions related to waste containers were raised. Related to litter is dog waste and dog waste bags. People should not be leaving their bags of dog waste along the trail.*
- *Heavier Use: Much more use of trails in the last 5 years. Trails are becoming wider, more eroded in many areas. More areas where soil is turning to sand due to loss of organic material. Now seeing e-bikes and downhill mountain bikes causing straightening of trails, more rutting from skidding, resulting in the changing of the tight twisting technical trails.*
- *Commercial Use: It was expressed by some that the Forest should not be used for large organized events and commercial use.*

Signage

- *There tends to be general agreement that signage in the forest should be kept to a minimum.*
- *That the maps should include the single track trails on them.*
- *Needs to be some explanation of "right-of-way" among the various trail users.*
- *Consider designating/signing certain trails for certain uses.*
- *That there be directional signage on some trails.*
- *Would be nice to have trails marked that link up for 'loops' and 'roundtrips' of certain length (30 min, 60 min etc.).*
- *Post Trail Etiquette signage to educate users and reduce mishaps.*
- *Signage during the X-country ski season advising where people should walk. Who has permission to use what trails.*

Copeland Forest Management

- *Request to understand the relationship between Horseshoe Ski and snowshoe trails that are within Copeland as the signage implies ownership.*
- *We need to emphasize that the Mandate of the CFFA is to CONSERVE THE NATURAL INTEGRITY of the Copeland Forest while facilitating compatible recreational uses. NO more new trails need to be created or resurrected!*
- *As the popularity of Copeland Forest increases the CFFA, Horseshoe Resort, and MNR will need to become more involved in maintaining a balance between multi-use recreational activities and the environment.*
- *The area deserves more active management.*

General Comments

"A wonderful community resource."

"Copeland is good because it is a more untamed environment."

"I would accept restricted access if necessary to prevent overuse."

"Don't need trails to be perfect (been here 50 yrs.) when there were no trails … so nice when things look wild/ natural ….that's the BEST!"

"It is a wonderful place and deserves to be protected."

"This place is a jewel. My hope is through conservation that there will be no major changes. It's pretty perfect the way it is."

"Let's not love the forest to death."

"It is a privilege, not a right to create a trail in this biodiverse forest."

"I love the Copeland because I value and seek the stillness and peace of nature. I also seek solitude in the forest. I do NOT want the Copeland to be a tourist destination, nor considered an asset by local commercial businesses. Keep it wild."

"Keep the difficult trails difficult."

"I have been in Copeland for over 50 years starting as a regular visitor since I was 14. For the most part, very much same as back then other than use. Do not want to see it become commercialized or over used."

5.2 CFFA 2022 Annual General Meeting Feedback

The CFFA 2022 AGM sought feedback from attendees regarding the proposed vision and objectives of the trail as well as to understand the top trail related issues from the CFFA user groups. The following is a summary of the input provided. Appendix A provides a more detailed description of this input.

- Vision Statement
    - Ensure focus is on Ecology
    - Development of trail governance

- Top 3 Trail Issues
    - Poop – mainly dog poop in bags left behind
    - Braiding, directional, speed (bikes)
    - Balance of signage

- Improvements or Changes
    o Restoration of trails (erosion, wetlands)
    o Support for Line 3 swamp area
    o Education – dogs not on leases, etiquette, safe access to water
    o Trail closures where needed
    o Organized events for promoting awareness and membership
    o Short term versus long term plan on maintenance

- How would user group like to help?
    o Identify trails to close or open
    o Spotlight articles on user groups on web/newsletter

5.3 CFFA User Group Feedback

In August 2023, the draft Trail Plan was presented to the CFFA Residents and Hikers User groups. All members of these user groups were provided several weeks' notice of the meeting. Meeting attendees were generally supportive of the presented plan. Some comments provided at the meeting as they relate to the trails are below:

- That the Top of Slippery When Wet trail where it joins to 5th dimension/5th line valley run be kept open as it is a good way to access the other trails.
- Noting that consistent trail names will also help first responders know where to go if there is an incident. Also encourage use of "What Three Words" to help pinpoint location.
- Co-ordinates at bottom of maps in the forest – it was explained that they are Universal Transverse Mercator (UTM) coordinates and not GPS coordinates. Signs may need to be revised (sticker over them) to explain this.
- Discussion around signage - which trail am I on?
- Suggestions of a donation bin at the trail heads (similar to Kolapore Trails).
- We need to advise Ganaraska Trail prior to trail closures for their sections - sign post 4-5
- Platforms that are being built can generally accommodate one horse at a time – although lots of evidence that horses are walking beside forest platforms.
- Tree root exposure - how to remediate? Noted that the Bracebridge Mgt Area has brought in small stones/granular to cover the roots - provides protection, drainage, and stays in place.
- Who are the "Trail Blazers" who are going to keep an eye on the forest to ensure we are not impacting it?
- MNRF doesn't have any interest in logging in the Forest.
- Ducks Unlimited pond - now drained, worry that the land will dry out and encourage people to enter the forest near Craighurst.

And again on Oct 11, 2023 the draft Trail Plan was presented to CFFA Horseback riders, Mountain Bikers, Naturalist User Groups, and the Trail Fairies. Members of these user groups were provided several weeks' notice of the meeting. About 40 people attended the meeting. Some comments provided at the meeting as they relate to the trails are below:

- Requested clarification regarding trail access. Confirmed all trails are meant to be accessible to all forest users. Motorized vehicles are prohibited.
- Considerable discussion revolved around signage beginning with a request for signs with small map at start of trails and intersections. Many agreed recommended walking loops would be appreciated.
- Many encouraged the CFFA to do more to educate forest users such as signs at points of interest e.g. homestead foundations.
- A member suggested there is opportunity to raise awareness of the ecological significance of the Oro Moraine given the Copeland Forest is a key component of it. "Copeland Forest is a jewel we need to protect."
- Another suggested every sign have a QR code to make it easy for forest users to donate to support the CFFA work in the forest.
- Dufferin Forest was mentioned as a good example of small signage that encourages more walking.
- Member emphasized that Maui Wowie and Left Bank are very important areas – having limited trails in these areas will help mitigate the spread of the invasive species Garlic Mustard.
- Was mentioned that platforms are not wide enough for horses.
- A member asked if CFFA had considered 911 signage in the event of an emergency. All agreed more education and promotion of "What 3 Words" prior to entering the forest would help. The Trail Plan could/should note the best accessible areas for emergency responders.
- Question was raised regarding Horseshoe Resort and use of large machinery to make and move snow to enable Nordic skiing which has an impact in the forest. There is frustration that the emphasis seems to always be on the impact of Mountain Biking on the single track trails.
- There was a suggestion regarding removing the beaver population along 3rd Line as the trail is flooded.
- Continue to work with Horseshoe Resort to ensure the double track/Ganaraska trail is wide enough to ski, walk and snowshoe.

In addition to the above, the following comments were submitted by email to CFFA:

Fragmentation of Habitat by Trails: *"I am looking to see the entire length of the Left Bank/Ridge Run Trail slopes be designated by CFFA as an exceptionally unique and biodiverse area, worthy of being preserved and kept free of trails running vertically from the upper ridge to the valley bottom. Its variety of spring ephemerals and its unusual, lush plant life are documented (Jones Morton study). David Hawke describes the harm of dense trails on wildlife in his report. When pulling Garlic Mustard we found red-spotted newts up the slope from Post 15. They had repopulated the slope that once had a trail running down it"*.

Regeneration of Closed Trails: *"Recent conservation methods are rehabilitating old, compacted trails when they are closed. Because duff and any good soil has been long gone, the resulting trail is a virtual concrete conduit for rain and invasive seeds. No native plants will grow without help. Huge effort, research and training for the trail crew will be required. see Dave Hawke's report"*.

6.0   Trail Plan

6.1 Review and Assessment of Trail Network

The single track trails in the Forest were primarily developed from 2000-2012.   Approximately 8 of the original trails that once existed are not currently open. The now closed Glacial Pit trail that once ran down from the "Left Bank Ridge" is the most well-known of these. The total length of single track trail that exist in the Forest is open to some debate and depends on what trails are included. Sometimes trails adjacent to the Forest property are included in this estimate.   As previously noted, a total of 72 trails were assessed with a total distance of about 53 km.   It is noted that the actual length of single track within the Copeland Forest is less than 53 km as some trails run both within and outside Copeland and are included in this estimate of total trail length. Misty Bottom trail is an example where at least half the length of this trail is outside the boundaries of the Forest. Only trails that appear to be subject to ongoing use in 2022-23 were assessed.

As noted earlier, the process to determine which of the existing trails should be recognized by CFFA and included as part of the trail network involved the following steps:

- Consideration of input from the 2022 Trail User Survey.
- Consideration of past ecological studies and the 2022 Ecological Assessment by David Hawke.
- The completion of "structural assessments" of the trails by the Trail Committee.
- Review of other trail plans/trail impact studies.
- Meeting with International Mountain Bike Association (IMBA) regarding trail "improvements".
- Consideration of input from the CFFA Board, user groups and the MNRF.

An inventory of the single track trails in Copeland Forest was undertaken by Trail Committee members. Trail names identified on the Trail Forks App at the time of the assessment were used for trail identification. Information that was collected for each trail included:

- Length (based on Trail Forks App)
- Difficulty rating
- Typical width
- Grade
- Elevation
- Erosion presence
- Drainage/presence of wet areas
- Trail braiding/splitting
- Structures/condition
- Hazards
- Other Visible Trails
- General comments/Use
- Keep/Close Recommendation

- Proposed changes/improvements

From this work, recommendations were made in regards to the following:
- The identification of single track trails that are to be included in the Copeland Forest trail network.
- Trails to be closed (either permanently or seasonally).
- Trails to be improved.
- Trail sections to be closed and new detour routes created.

Appendix B contains the completed trail data matrix with the above noted information.

6.2 Recommendations Summary

Table 6.1 presents a high level summary of the trail recommendations which are outlined in detail in Appendix B. About half of the existing trails are recommended to be retained with no major improvements recommended. Most of the recommended trail changes/improvements are related to mitigating wet/sensitive habitat areas or sections of trail erosion/widening. In a few cases changes are proposed due to trail redundancy including trails running parallel to one another.

Table 6.1 – Summary of Trail Recommendations	
Keep - No repairs:	36 trails
Keep - Repairs:	19 trails
Keep – Partial closure and/or detours:	14 trails
Keep – Spring closure:	3 trails (includes a double track trail)
Close Entirely:	3-4 trails (plus a few short connectors)

The following provides a description of some of the more major changes.

6.2.1 Trails Proposed for Closure

Four existing trails are proposed for permanent closure with a total distance of 1,311m which represents only about 2.4% of the total amount of single track trail in the Forest. The trails proposed for closure and the reasons for it are provided below in Table 6.2. Note that Trailforks trail names are used in this report.   In advance of the trail closure, CFFA members and local community/users would be informed though social media and the trail signed as closed. Brush

would also be piled at the entrances to the trail. Restoration of trail tread may also occur depending on the suitability of this and volunteer capacity.

Table 6.2 – Trails Proposed for Closure	
Trail Name	Rationale for Closure
Copeland No Name (Lower section) (188 m)	This is an older double track trail located at the toe of the slope and between two valley ridges. The area tends to be wet and is adjacent to vernal pools in the spring and considered to be salamander habitat. This trail provides access to Land Shark trail and a potential exit for the Code Brown trail. See further below for proposed changes to these trails. In addition to keeping users away from sensitive lowland habitat, closing this trail will open up an eco-corridor between ridges (Mr. Twister Trail and Code Brown/Landshark).
Bomb Hole (340 m)	This is a low use trail and not considered to be fundamental to the trail network. While located on high ground and not within sensitive land, the trail is recommended for closure as the trail connects to the lowland Copeland No Name trail that is to be closed. Closing of this trail would contribute to the opening up of a corridor as noted above. A reroute of the trail back to the Mr. Twister trail is possible if there is local interest in maintaining this trail.
Schnazzleberry (523 m)	The Schnazzleberry trail is located in a low area and has extensive sections that are prone to being wet. The area that the trail passes through is sensitive habitat including for salamanders. The trail is considered to be redundant to the Rusty Mud Bucket and PAT trails.
Treehole (260m) (monitor use and confirm need for closure)	This trail passes through wet habitat/seeps and is located at the toe of the slope. It is not a high use trail but is understood to serve as an exit trail to cyclists climbing up the Sunrise trail located to the east. The platforms on this trail have been recently (August 2023) improved by the Trail Fairies but without the support of CFFA. Despite the improved platforms, there is still the potential for impact from users including horses that tend to walk along the platforms through the wet areas. The closing of this trail would open up an undisturbed corridor for wildlife movement and help to address the previously noted "islands" that have been created from trail development. As this trail is valued by some users, instead of complete closure it is recommended that the trail be removed from mapping to reduce usage and monitored for usage/impact. It is also proposed that leaves not be blown from this trail.

6.2.2 Trails Proposed for Spring Closure

Three trails in the forest are proposed for seasonal spring time closure. These trails would be signed as being closed during their closure period.   During very wet periods CFFA should also consider posting on social media requesting people stay off the trails. This is very common practice at other trail centres in Ontario and elsewhere.

Table 6.3 – Trails Proposed for Spring Closure	
Trail Name	Rationale for Seasonal Closure
Left Bank	Signage in Spring to request bikers & horse riders to stay off the trail during spring ephemerals "season" for the naturalist community to enjoy. Note that similar request were put on the Trail Fork App in 2023.
Double Track Post 4 to 5 (Parallel to Swamp Trail)	Very wet with standing water in spring. Side trails being created from people/horses attempting to go around the wet areas. Sensitive wetland habitat area in area. It is noted that this trail is part of the Ganaraska Trail which will require rerouting during periods of closure. CFFA will work with the Ganaraska Trail Association in regards to this.
Rusty Mud Bucket	Sensitive wetland habitat area.

6.2.3 Green Lagoon Trail Area Closures/Detours

The Green Lagoon Trail runs along the toe of the slope west of the Line 5N Valley Run Trail. Sections of this trail are prone to having wet sections and are proposed for drainage improvements and/or new platforms. Several trails that run down the slope connect into the Green Lagoon Trail.

The lower sections of these trails pass through low areas considered as sensitive habitat. Changes are proposed to the following trails and as shown on Figure 6.1 further below.

Slippery When Wet Trail – Two sections of the trail are proposed for changes. First, a mid-point side trail is present that in some years is blown of leaves. This side trail passes through a small valley and has vegetation growing in the trail tread indicating that this is not a high volume trail. This side trail is recommended for closure. The lower section of this trail comes off the ridge and drops into a low area before connecting with the Green Lagoon Trail. This lower section is recommended for closure and a new detour trail is to be built that remains on high ground for connection to the Green Lagoon Trail.

Land Shark Trail – This trail is mostly on high ground but extends down into low land/wet areas to connect with the Lower No Name Trail. With the proposed closure of the Lower No Name trail, the lower part of the Land Shark Trail is proposed for closure and a short (~20m) connector to Green Lagoon Trail is to be built. Also see related recommendations to Code Brown Trail below.

Code Brown Trail – The bottom section of this trail drops down into the "Lower No Name Copeland" trail valley and then rises up very steeply to join the Mr. Twister Trail. It is recommended this this lower section of the trail be closed so that the Code Brown Trail would now continue and exit via Land Shark trail. The benefit of this is that this closure would open up a significant ravine to wildlife. It is recommended that the remaining section of Land Shark trail (see above) be included as part of the Code Brown Trail.

Figure 6.1 – Green Lagoon Trail Area Modifications
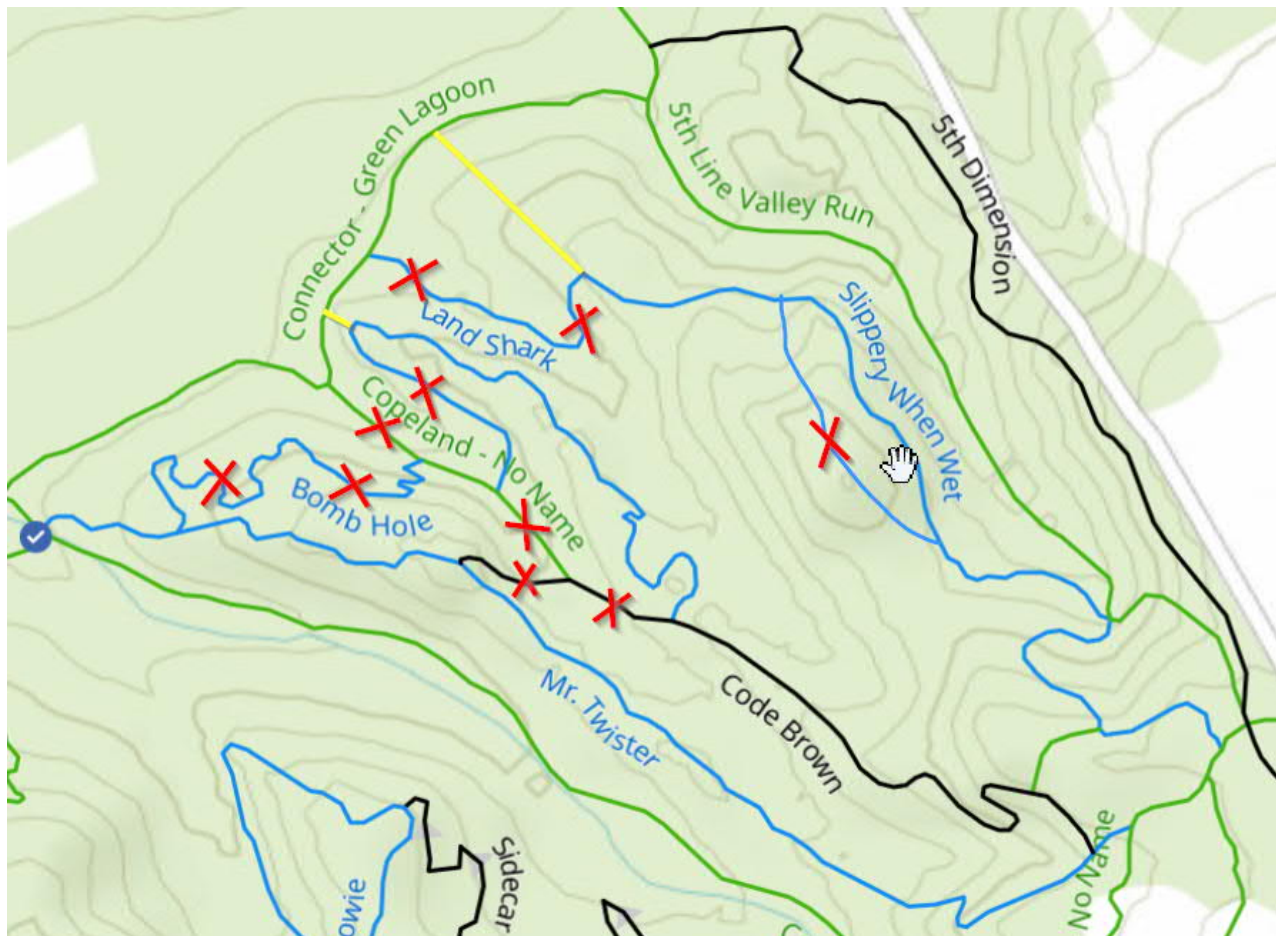
Red X = trail sections to be closed
Yellow line = approximate location of new detour trails

6.2.4 Mitigating Eroded Trail Sections

As noted earlier, and detailed in Appendix A, there are several trails sections that are proposed for improvements. Some of the more significant changes are summarized as follows:

Steep/Down trails: Fall-line trails such as 5th Dimension, Copeland Downhill, Sunset and Ricky Bobby all have developed eroded sections including gullies, widened trail, and loose soil conditions.

Dual Slalom Trail - Close/rehabilitate the upper duplicate trail section. Remove logs piled at based of rock drop. Narrow trail in sections where it has been widened.

Left Bank - Fix eroded sections, limit ability to make trail wider on climbs by lining edges. Erosion seems to be accelerating last few years. Consider need for additional measure to protect adjacent sensitive habitat. Close duplicate short steep highly eroded section in Upper Left Bank. Also see signage recommendations further below.

Mauie Wowie Trail - Proposed removal of the most northern part of the loop section. Seems little used and would open up a significant "eco island". Maintain southern part to connect in with Sidecar trail (would become extension of Sidecar into main section of Maui Wowie. Upper MW trails becomes end of Side Car (rename this section).

Mr. Twister Trail - Need for some trail narrowing at the switchbacks at the south end of the trail. Close duplicate section of eroded trail on south side of the knoll where Code Brown intersects. Use route that passes to the east side of the knoll. Complete in tandem with proposed changes to Code Brown.

Rootshoot - Close and detour the highly eroded section that extends out of the ravine (heading north). Utilize existing detour and connect with section of short new trail that would be required. Also close the two short "downhill trails" that run off the main trail into the ravine.

6.3 Trail Map and Trail Naming

Considering the Trail Plan recommendations, CFFA is creating a map of the recognized trail network. A copy of this map will be available on the CFFA website once it has been completed. The Trailforks App map will also been updated to reflect the endorsed CFFA trail system.

Many of the trails in the Forest have multiple names including names that were created by the trail builders ("old school" names) and names that have more recently appeared on the Trailforks App. In the effort to develop a consistent naming convention for the trails, the "old school" and more recent names were reviewed and a recommendation made regarding the proposed trail names. These are provided in Table 6.4. The CFFA map and the names on the Trailforks App are being updated to reflect these proposed names.

The naming of the double track trails was also reviewed and it is recommended that the current naming convention that is based on the intersection sign post numbers remain. The benefit of keeping the double track naming convention is that it creates a linkage to the sign posts within the forest and the CFFA maps that are posted at the entrance. Some of the double tracks are referred to by the Horseshoe Resort cross-country ski trail names.

Further, in the review of Trailforks' names for single track trails, we discovered several sections indicated as "Connector" or "Copeland No Name". To address redundancy and to add clarity, we propose distinct names for each of these sections. These are presented in Table 6.5.

Table 6.4 – Single Track "Old School" Names Review		
TF Name	Old School Name	Comments
= recommended names		
Around the Top	Copeland Triangle, No Braynor	
Bomb Hole	The Domestic	To be closed
Classic	Whee trail	
Copeland Downhill	Lawn Dart	
Copeland Grind	Trevor's	
Copeland Intro	Apple Trail	
Corduroy Knob	Patroller's Thrill	
Creeper	Mama Mia	
Cup of Tea	Afterglow, Five Play	Outside of CF
Downturn	Pant Ripper	
Fast Track	Pines. Privates, Anti Dave	
Fox Run	Super Dave's	
Fox Run Ridge Connector	PMS	
Fox Run Side Piece	Super Dave's Backside	
Across to the Green Lagoon	Up and Over to the Green Lagoon	
Land Shark	Bob the Bastard	To be absorbed by Code Brown
Maui Wowie	5Bs	
Mile High Connection	The Connector	
Misty Bottom	Don't Tell Ted	
Patroller's Trail	Snowshoe	Outside of CF
Phatty	Old Copeland Road	
Ricky Bobby	Dumb Ass	
Ridge Run Connector	Comeback	Recommend: Left Bank Connector
Ridge Run/Left Bank	Left Bank	
Rockopotamus	The Wall	
Rocks and Roots	Achy Breaky	
Sassafrass	Lost Cherry	
Slippery When Wet	Turkey, Chicken Shit	
Snake	Ugly Tree	
Split Rock	Pussy	
Sunrise	Bottom of Twisted Sister	
Sunset	Twisted Sister	lower section is "Elevator Shaft"
Swoopy Down	Booters	
Terry's Root	Polka Dot	
Tree Hole	Lemen Aid	To be monitored for possible closure
Wobbly Wheel	The Spine	
Upper Ridge Run/Left Bank	Group Effort	Recommend: Upper Left bank
Will it End	24/7, 9-12	
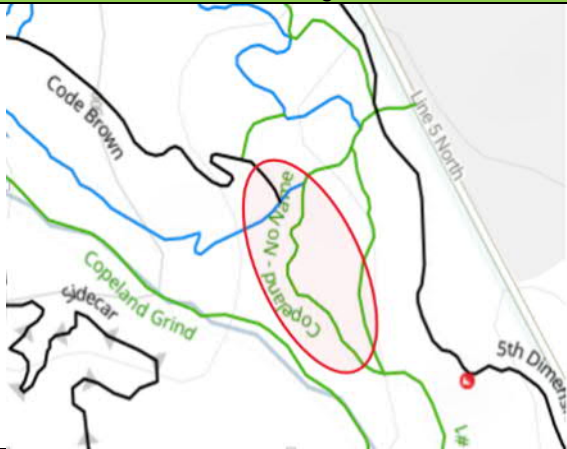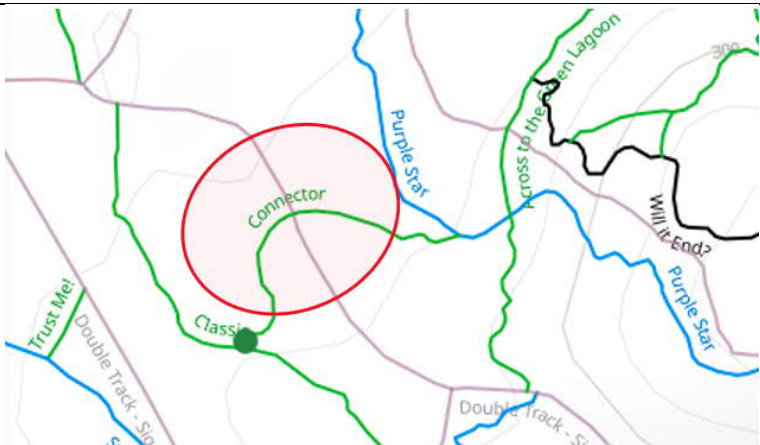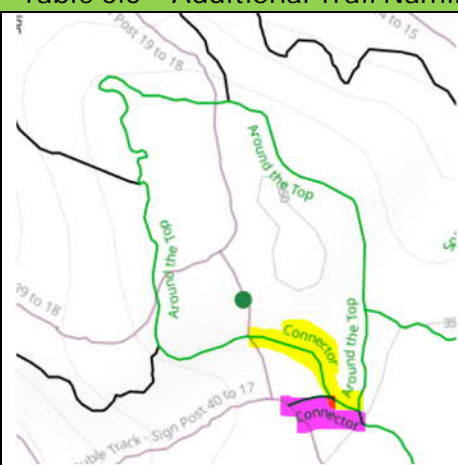
Table 6.5 – Additional Trail Naming	
"Copeland No Name" #1: Recommend "Rock Wall 1 Alternate"	
"Copeland No Name" #3: Recommend: "Rail Trail Connector West" (green circle) "Rail Trail Connector": Recommend: "Rail Trail Connector East" (red circle)	
"Connector" #1: Recommend "Classic – Purple Connector"	

Table 6.5 – Additional Trail Naming	
"Connector" #2: Recommend "Around the Top" to complete the loop (yellow highlight) "Connector" #3: Recommend Closure (pink highlight)	

6.4 Signage

Signage can play an important role in the Forest to help maintain the ecology and improve the user experience. Many of the studies, and the user survey, cited in this Trail Plan recommend various types of signs to be added to forests (in general) such as:

- Trail markers at intersection points to locate a user's position and any points of interest;
- Trail Closure signs to protect sensitive areas especially during wet periods;
- Sensitive Area signs in places where users are asked to remain on the trail to avoid trampling of plants/animals along the buffer zones; and
- Trail use/directional/warning signs to ensure safe user experience.

There are various opinions on how much signage should be in the Forest. Many people prefer to keep the Forest "wild/natural" with very minimal signage. Other concerns include restricting specific user groups from using trails during the spring (as it goes against the Ministry MOU/CFFA policy) and Warning Signs (as it may imply liability).

The Trail Committee reviewed the various types of signs suggested as well as the feedback from users and is recommending a phased approach aligned with the overall Trail Plan priority of preserving the surrounding ecology for the trails identified above for Closure/Detours.

Below are rough mock-ups of the proposed signs. They will measure 9"X12" (22.8cm x 30.5cm) – half the length of a standard traffic sign, turned 90 degrees. These signs have been reviewed and accepted by the MNRF.

Other signs such those listed below will require additional review and discussion with the user community and MNRF include:
- Trail direction – be aware of downhill traffic.
- Trail modification – use caution as trails have been updated.
- Restricted use – bikes/horses to refrain from using specific trails during spring ephemerals season so the naturalists community can enjoy.
- Warning signs – advising users to use platforms on trails to protect sensitive wet areas. Use other trails if not comfortable with platform use.

Below are some mock ups under consideration (note corners to be rounded).
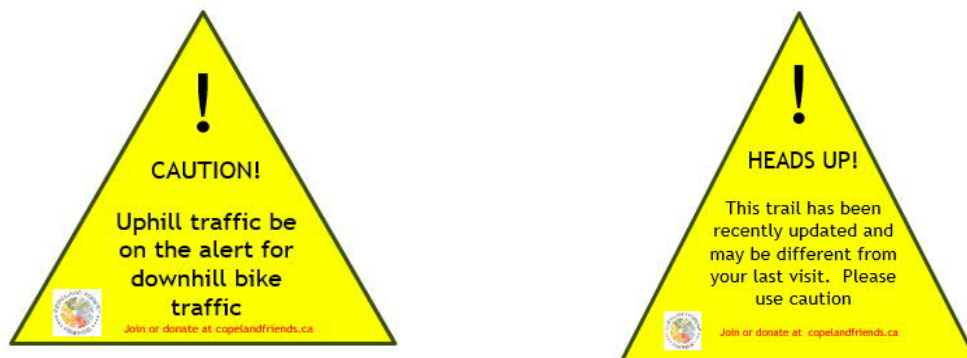
7.0   Trail Maintenance & Monitoring

Either due to environmental reasons (trails that pass through wet areas) or where existing trails sections have become highly eroded due to their design. The focus will be to maintain and repair the existing trails to make them more sustainable. Sustainable trails are more desirable since they can:

- Minimize impact to the environment.
- Meet the needs of various user groups and minimize conflict between user groups.
- Require little maintenance.

Unsustainable trails are caused by poor trail design and construction, which in turn leads to erosion. A number of factors acting in isolation or together can promote erosion, i.e. water, wind, gravity and users.

Many of the trails in the Forest were built prior to the general understanding of how to build sustainable trails. There are many sections of trails in the Forest that pass through low ground wet areas or are "fall-line" trails that are more susceptible to erosion from run-off. Trail maintenance activities such as leaf blowing can also contribute to trail erosion. Some trail sections in the Forest have become "beat-up" from use with excessive root exposure, loose soil/stones, gullies, bank slumping, widening etc.

To increase the number of sustainable trails, and to minimize erosion, an iterative approach to trail maintenance is recommended. Trail maintenance would consist of ongoing monitoring and evaluation of trails, and of maintenance activities performed by volunteers. Its purpose would be to return the trails and environment to their original and intended condition.

Trail maintenance activities would include:
- Ensuring adequate drainage.
- Repairing trail tread including eroded areas (which may include new detour sections).
- Narrowing widened trails (e.g. at steep climb/up sections).
- Repairing/improving platforms over wet areas and building new platforms where required
- Removing fallen trees.
- Cutting back encroaching vegetation.
- Signing/blocking unauthorized trails.
- Maintaining and building new platforms/boardwalks.
- Blowing leaves off the trails.
- Replacing missing or damaged CFFA signs.

Three types of maintenance are envisaged: Initial Maintenance; Ad Hoc Maintenance; and Annual Maintenance. Initial maintenance refers to the repairs, partial closures, and detours identified in the Trail Plan. This is expected to take several years to complete. This type of maintenance would be the first priority. Ad hoc maintenance would occur whenever urgent and immediate action was

required, e.g. a fallen log covering a trail after a windstorm. Annual maintenance would occur each spring and be based on the needs of the trails. The spring thaw would highlight damage from freeze/thaw cycles and any erosion issues needing monitoring or repairs that summer/fall.

Dealing with eroded trails is a priority. The prioritization of trails/sections requiring erosion mitigation could be determined on the basis of specific criteria, such as:
- Single track trails wider than 90cm (3 feet).
- Gullies/crevices in tread deeper than 7.5cm (3 inches) and longer than three feet.
- Trails with steep fall lines or wet areas that never seem to dry out.
- Roots exposed on more than 180 degrees around the circumference of a tree.

Maintenance activities would recognize that it is typically preferable to prevent trail erosion through proper trail design rather than attempting to repair it on existing trails. Guiding principles regarding trail design and maintenance from other organizations which can be considered for the Forest is available in Appendix C.   The mitigation of eroded sections of trail in the Forest is a key challenge. Heavier summer rain storms and trail damage (both double and single track) is evident. Options to address eroded sections include:

- Improve drainage / provide an outlet for water flow.
- Close the eroded section and develop a new detour for the trail.
- Platform over the eroded section.
- Add granular material to the eroded section.

Similarly, there are sections of trails that have become wider over time and are affecting the natural wildness of the forest. Trail widening tends to happen on steeper sections of trail often because erosion exposes roots/rocks and then users look for alternative routes to avoid the roots/rocks. Widening can also happen in low wet areas as users try to go around the wet area. Bringing in fallen logs to line the edges of a widened trail (to keep people off it) and limiting leaf blowing can help address this. Alternatively, again, closing widened sections and developing detours will be considered.

Further, there are 40+ platforms/boardwalks in the forest of various length, width and condition. Platforms have been built over wet areas in the attempt to keep trail users out of sensitive and susceptible wet areas. Without the platforms some of the trails could not exists and/or their use would result in greater ecological impact. As is the case for most trails in southern Ontario, the platforms were built to accommodate hikers and cyclists but not horses. Horses require wider and more robust platforms. As is observed in the forest, horses tend to walk beside the platforms through the wet areas which is not ideal. There is need to review the existing platforms and confirm standard for any new platforms being built. Replacing all the existing platforms in the forest to accommodate horses would require significant effort and cost which may not be justifiable. The alternative is to accept that horses may need to walk beside some platforms through wet areas. This may be acceptable on trails with low user volumes.

Discussion on who would be responsible for maintenance activities is described in Section 8.3 below.

Leaf Blowing

The regular blowing of fall leaves from a trail is a topic that generates significant debate. Those who support regular leaf blowing argue user safety and environmental benefit as it defines where the trail is and keeps people on the trail tread and not walking beside the compacted trail surface. Those against leaf blowing argue that keeping leaves on the trail helps prevent soil erosion and provides cover for small fauna while crossing a trail surface. In many trail areas in southern Ontario, particularly those used for mountain biking, the leaves are blown off the trails.   A variety of factors weigh into the pros/cons of leaf blowing including forest type, soil type, trail slope, user volumes etc. This link provides a good summary of the various considerations. https://www.saultcyclingclub.ca/2018/10/14/we-get-questions-leaf-blowing/

Leaves have typically been blown off trails in the Forest by the Trail Fairies. CFFA has not in the past expressed an "official" position on leaf blowing. It is recommended that leaf blowing continue in the Forest but in a more targeted manner with a focus on high volume trails. CFFA will provide a list of trails that leaf blowing should occur on. The preference is for leaves to stay in place on low volume trails and/or trails or sections of trails that are in more sensitive habitat areas.

As well, the preference is for leaf blowing to occur in the fall and that no leaf blowing occur in the more wildlife sensitive spring period.

8.0   Plan Awareness, Funding & Implementation Schedule

8.1 Plan Awareness and Support

CFFA's authority to plan and take care of the trail network in the Forest comes from its MOU with the MNRF, the provincial ministry responsible for the Forest. CFFA does not have any legal authority to enforce this Trail Plan or stop the actions of any individual in the Forest. CFFA can make the MNRF aware of activities it believes is not consistent with MNRF policies or this Trail Plan.

This Trail Plan is most effective if it has the support of the local community and the users of the Forest. We all need to take responsibility for the forest and the trail network.   It is the hope of the CFAA Board that the local community and the Forest user groups (membership) will share in the responsible use of the Forest trails. For that reason the Trail Plan is being released in draft form and to make users aware of it through various social media.   We look forward to receiving input from the local community and Forest users. It is anticipated that the Trail Plan will be reviewed on an annual basis and recommendations and priorities reviewed for input to the annual MNRF Work Plan.

8.2 Funding

Improvements and maintenance on the trails have been all done through volunteers. Equipment and materials has come from the Trail Fairies (e.g. paying for their own chainsaw fuel and maintenance), local company donations (lumber) and from CFFA.   Fulfilling the objectives of this Trail Plan will cost money including for signage, equipment, and for other trail building materials. Fund raising events including requests for donations from users may be required. A funding strategy for the Trail Plan will be developed by the CFFA Board.

8.3 Implementation and Schedule

It is anticipated that fulfilling all the changes and improvements recommended in this Trail Plan will take two to three years considering that the work will be done by volunteers. It is hoped that CFFA can work with the existing Trail Fairies as well as other users groups and community volunteers. Many people indicated that they would volunteer to make trail improvements during the 2022 user survey.   It is recommended that he CFFA Board establish a Trail Management Committee (TMC) to oversee the implementation of the Trail Plan. The following proposes roles/structure for the TMC:

TMC Roles	Responsibilities
Trail Director	One person. Responsible for directing trail improvement activities each year including the development of the annual work plan, setting priorities, and ensuring necessary support is available. Works with and directs the TMC. Communicates progress of trail plan implementation to the Board.
Trail Captains	Three persons. Supports the maintenance activities in the forest including the directing of volunteers during trail maintenance days. Provides support to the Trail Director including the setting of priorities and annual work plan development. Works with communication lead including the scheduling of planned trail works.
Communications Lead	One person. Maintains volunteer data base and leads communications regarding trail maintenance days. Responsible for social media updates including changes to the trail network. Oversees signage in the forest. Works with Trail Forks app reps regarding trail naming.
Finance/Funding Lead	One person. Responsible for costing estimate for planned works to inform the annual work plan. Oversees acquisition of necessary funds and fund raising as required. Supports purchasing/acquisition of equipment and supplies as required.
Youth	One or two persons. Provides support to trail maintenance as required. Assists in raising awareness and involvement of other local youth.

Trail improvement priorities have been made as outlined in the Trail Assessment matrix in Appendix B. It is anticipated that priorities for improvement will be confirmed as part of annual work plan preparation.

Creating a list of available volunteers to support trail maintenance will be important. Preference will be on recruiting volunteers with experience in trail building and trail maintenance. In the absence of experienced volunteers, the CFFA Board, in consultation with the TMC could hire "experts" to provide training to volunteers.

The TMC could start by prioritizing and scheduling the 14 trails identified in the Trail Plan for partial closures and detours based on the number of available volunteers and their available time. These activities would require the least work and would significantly reduce the amount of maintenance required in the future. Once this work was completed, the TMC could prioritize and schedule the 19 trails identified as needing repairs.

The TMC would alert users of any maintenance activities that would restrict trail access. Users would also be informed of the duration of these maintenance activities, and be provided with alternate routes. Users will be encouraged to report maintenance issues. All maintenance activities will be conducted with careful consideration given to mitigate environmental impact.

Finally, it may also be desirable to organize the Forest into zones and identify "zone captains" who would be responsible for trail maintenance and improvements identified in this Trail Plan.

Appendix A: 2022 AGM Input on Trail Plan Vision, Objectives and Key Issues

Mountain Bike User Group

- Support ecology first in the vision statement
- Question on whether anyone on the Board has active experience with the trails? Need for a short term plan to provide guidance to the volunteers who maintain the trails.
- How do we determine what trail maintenance activities are considered ok by the Board? – Need for more definition of this
- Noting that some trails are more sensitive than others.
- Need to consider signage to make some trails directional
- There is some erosion on the trails as result of the soil type and soil design (legacy trails)
- Questions around the impact of larger organized events in the forest
- Who will be making decision for the improvements? What criteria will be used?
- Noting the potential for an influx of riders coming to the area due to local riders doing well on the world race circuit.

Hikers User Group

1) From the perspective of your user group, do you have any comments or suggestions on the draft vision statement and desired experiences?

The statement should start with ecology and then recreational users

2) What are the top 3 trail issues facing the Copeland Forest?

- How can we educate in the forest: trail etiquette, e.g. what to do if you meet a horse or bike, or people over-foraging, trail building etc.?
- How can we strike a balance between posting useful information on signage and not wanting too many signs going up?
- How can the hunting seasons be communicated? Perhaps it could be posted on the website when hunting is allowed.

3) Issues Raised: In No particular Order

- Gun shots - when hunters are allowed in Copeland Forest during hunting season could it be posted on the Copeland website to warn people?
- The trails seem to be getting wider with so much multi-use - is it being overused? Crossing with bikes, hiking groups, horse back riders?
- Bikers making too many trails.
- Like the idea of a name for each trail but we do not want too many signs.
- Foraging - people need more education so they do not deplete the food they are picking from the forest floors i.e. mushrooms
- Cross-country ski trails - Horseshoe Resort seems to be making more and more cross-country ski trails through the forest. Do they have the right to do this?

Naturalists User Group

1. *From the perspective of your user group, do you have any comments or suggestions on the draft vision statement and desired experiences?*
   - Balances the ecological values of the forest with the desires for recreation.
   - Highest priority for all should be the protection of the ecological values of the forest
   - Pull from Copeland FFA mission statement

2. *What are the top 3 trail issues facing the Copeland forest?*
   - Density, braiding
     o Trail footprint needs to be improved, not always moved
     o Width of impact - New research shows different activities have a smaller/wider
     o Trails visible to each other leads to short-cuts linking creating new trails.
3. *What improvements or changes could the friends make to the Copeland trails to address issues you listed in Q2?*

   - Consider seasonal trail closure on sensitive trail location
   - Huronia Woodlot Association – may be able to assist with guidance
   - More signs for poop
   - Maintenance & construction planning based on ecological impacts
   - Volunteer ambassadors to recognize the ecological impact/deficiencies during trail maintenance

4. *How would this user group like to be involved in the coming months as we develop the Trail Plan?*
   - Consultation throughout the draft
   - Focus groups

Resident's User Group

   - Key experiences: Ensure protection and preservation of this natural place for the future; Trails that vary in difficulty and provide different experiences; and understanding the significance and preservation of historical remnants.
   - Top 3 issues: lack of signage; overuse of some trails; lack of trail development governance; and conflict of trail users
   - Improvements: Identify and promote minimal impact trails; consider trail closures on sensitive trails; educational materials about trails

Equestrian User Group

   - Some bridges are disrepair
   - Need for education – people don't understand horses / how to approach horses
   - Importance of water access
   - Many of the riders are willing to get involved / help with maintenance
   - How to notify if riders notice the need for repairs / trees are down etc.

Winter Sports User Group

- Ecology is important
- Poop is a concern
- Could make recommended routes for skiers and snowshoe

Appendix B - Trail Assesssment Matrix

TF Trail Name	Length (m)	Rating (A, I, B)	Usage Level (H,M,L)	Typical Width	Grade	Trail Elevation	Erosion	Drainage	Trail Braiding/ Splitting	Structure Condition	Hazards	Other Trail Visibility	General Comments/Use	Trail System Recommendation	Proposed Physical Improvements/Changes	Priority
5th Dimension	1100	A	H	30"	Downhill trail with 3 steep sections	Ridge (drops into lowland at very end)	Generally limited to the steepest sections. Short section prone to washout from road embankment above - recently repaired. Some gullying on second step drop.	Good - no wet areas	Widening at bottom of rock pile. Two short section where trail splits	None	None - other than the three steepest sections	No - runs along 5th Line Road	Well used downhill MTB trail that in relatively good condition. Although noted that it has changed a lot over the years (more root exposure). Largely ridden in downhill direction. Signature trail in CF. Nice views of valley to west towards the end. Noted old hunting stands at trail terminus. Not likely a suitable horse trail considering steepness of trail and heavy mtb use. Not noted to be used by horses.	Keep/repairs	Remove the two duplicate short sections of trail splitting. Address the section prone to gullying.	Medium
5th Line Bypass	789	B	H	20"	Gradual	High ground	Limited	Good	No	None	None	Trails to/from Rock Wall #1 & #2 are visible	High use trail coming out of P4 to access forest. In good condition.	Keep	None	
5th Line Valley Run	960	B	H	20-40"	Gradual climb as one travels south - climbs more steeply at the south end	Follows the valley - climbs up to more highland at the south end	Limited - a bit of root exposure at the south end climb	Generally good - a bit wetter at north end where trail is flattest.	No - trail splits at south end to connect with Slippery When Wet or to 5th Dimension	None	A few log overs	No	Popular climbing trail - nice to walk to look up at the ridges on both sides of the trail. Top section, between SSW Trail and 5th Dimension trails, is steep, eroded and does not appear to get a lot of use. Not great for bike climbing.	Keep with partial closure/detour	No changes for most of its length. Close top section after intersection with SWW Trail up to 5th Dimension. This is a very steep trail and prone to erosion. Keeping it would require a new more sustainable reroute.	Medium
Around the Top	1400	B	M	avg 40 cm	Flat	Top of moraine, flats	Little	Good	Minor, widening around split rock	N/a	N/a	None	Nice flat figure 8 run around the top of the moraine. Not difficult. Connects to a variety of other trails. Good shape.	Keep/repairs	Reclaim compacted side of split rock. NOTE: new connector trail see below.	Low
Beaver Fever	1100	B	L	20"	Flat	Lowland	No	Good to Poor in some sections	Minor	None	None	No	Very low use and trail is starting to grow in in sections - hard to follow in spots. Confirm if this trail should be kept.	Keep with partial closure/detour	Close/detour south-west "tail" of the trail and connect with a short new section. The trail passes through wet area and there are many deadfalls - expected to be sensitive habitat given amount of standing water in area in Spring.	Low
Bomb Hole	341	I	L	20"	Several short climbs/descents and then drops steeply down to Copeland No name through several	Ridge and drops into a low area at end	Some short sections of erosion with root exposure. Switch back section has some off-camber bench cut sections that are not supported.	Good	No	None	None	No	Trail hard to follow with leaves down - suggest low usage. Many small pits at beginning of trail which I assume the trail name comes from.	Close	Not a high use trail, not well build and requires dropping into sensitive habitat area(Copeland No Name trail). Unless possible to reroute back to connect with Mr. Twister, recommend closure which would increase size of eco islands.	High
Bridal Path	793	B	H	avg 50 cm some sections wider	Relatively flat, minor grade sloping down to the north	Lowland forest	Little, some root exposure shortly after each bridge	Good	None	two bridges, good condition	None	None	Connector trail, frequented by hikers, horse. 2nd bridge (north) can have a bit of a lip.	Keep	None	
Classic	485	B	M	40 cm	Gentle grade	Lowland forest	Little or none, minor exposed roots	Good	none	N/A	Leaning maple with root ball exposed near the top (South east) end of Classic. Right beside trail	None	Connector trail to P.A.T and Rail trail.	Keep	None	
Code Brown	509	A	M	20"	Some steep sections at the south as the trail descends down of the higher area	Ridge	Erosion focused at the switch back section	Good	Some braiding at south end near short Green connector over to SWW Trail	None	None		Challenging downhill trail with some switchbacks. Ends with a very steep climb out of a ravine (extension of Lower Copeland double track) into Mr. Twister.	Keep with partial closure/detour	Close short connector trail to Slippery When Wet at top/south end. Close bottom section of trail into Mr. Twister trail through the ravine. Trail would then connect with Land Shark trail with new short connection to Green Lagoon trail. Keeps lower valley free of trail and avoids the steep up climb at very end that connects with Mr. Twister. See Land Shark trail recommendations.	High
Bottom of DH Connector	171	B	M	avg 30 cm	Gradual downhill	Top of moraine,	None	Good	None	N/A	N/a	None	Generally in good condition. One wet area	Keep	None	
Connector Classic	219	I	H	Avg: 18 "; some spots 4'	Mostly gradual downhill at top and flat at bottom	Several moderate grades	Little or none	Good	No	Not applicable	None	None	Connector trail	Keep	None	
Connector trail to lower Purple Star	330	B	H	40 cm	Relatively flat	Lowland forest	Little or none	Good	None	N/A	None	None	Connector trail to lower Purple Star	Keep	None	
Copeland Downhill	735	A	H	30-36"	Steep	Ridge	Extreme	Poor	No	Bridge/jump		No	Basically a one way trail down. Top soil in tact on the top half. Extreme sand washout on the lower section all the way to the main trail.	Keep/repairs	Address washed out section and eroded sections. Inspect wooden feature for condition.	Medium
Copeland Grind	1300	B	H	20" to double track	Low grade change	Valley bottom	No	Good	No	None	None	No	Nice well used valley bottom trail with good views of the ridges above.	Keep	None	
Copeland Intro	603	B	H	30"	Flat	Slight drop to creek area	No	Good	Some ride arounds where log crossings present	1 bridge over creek, 1 rock pile crossings, 2 log crossings	None		Heavily used trail as it is main single track access to Copeland from the Horseshoe XC parking lot. Also includes short section that joins to Fast Track that may have been added to get fat bikes and snowshoers off the ski trails. Noting a short trail piece down to the creek before the bridge if going north.	Keep	None	
Copeland No Name (Lower)	188	B	L	20"	Low grade change	Lowland	Limited	Poor-Moderate - some wet sections	None	None	None	Landshark	Seems like an older double track trail. This is lower land trail with some wet section on it. David Hawke indicates area is wet/damp and is potential salamander habitat.	Close	Close this trail and connections with Land Shark, Bomb Hole and Code Brown.	High
Copeland No Name (Upper)	275	B	M	20"	Low grade change	High ground	Limited	Good	None	None	None	No	Is a bit redundant as it parallels the rock Wall #1 trail. TF heat map indicates it to be a less used trail that Rock Wall #1.	Keep	Maintain for now despite its redundant with Rock Wall #1 trail.	
Corduroy Knob	714	B	M	24"	Moderate	Low ground	No	Fair	No	Corduroy sections, log crossings	N/A	Can see main trail	South end of trail is on private land outside of CF. Area has been impacted by recent logging activity. Much of the trail is in lowland area that is wet. North end is on high ground. Noting two sections of logs/corduroy in wet area. Logs currently are in good shape. Noting trails that are not on TF that climb up the "knob"(Patroller's Hill) at south end on west side of the trail ("Lollipop Trail").	Keep/monitor	Monitor corduroy logs and replace with platforms when they rot. Update mapping to show "lollipop trail" on Patroller's Hill.	Low

TF Trail Name	Length (m)	Rating (A, I, B)	Usage Level (H,M,L)	Typical Width	Grade	Trail Elevation	Erosion	Drainage	Trail Braiding/ Splitting	Structure Condition	Hazards	Other Trail Visibility	General Comments/Use	Trail System Recommendation	Proposed Physical Improvements/Changes	Priority
Creeper	587	A	L/M	24"	Steep	Ridge	No	Good	No	Log crossings	N/A	N/A	Trail in generally good shape - not too steep. South end of trail is very close to edge of CF and may be on private land.	Keep	None	
Double Track Sign Post 4 to 5		B	M	Double Track	Flat	Lowland/wet	Many wet areas	Very poor	Some - people cutting trail to get around water sections	N/A	Standing water	None	This is a very wet trail with several sections of mud and standing water that passes through sensitive habitat. Also parallels Swamp Trail.	Seasonal Spring Closure	Recommend seasonal closing given wetness and proximity to sensitive habitat.	Medium
Downturn	174	A	M	40-60 cm	Steep down and up, lots of switchbacks	Back and forth on side of ridge to valley bottom	Not significant...yet	Good	Trail is very snaky/close on switchbacks and lots of potential for "Strava" lines	N/A	None	None	Short steep descent, difficult, potential for severe erosion/widening over time, very condensed on a steep side of ridge.	Keep	Monitor/review need for erosion control.	
Dual Slalom	427	A	M	30"	Steep & technical, used mostly as a downhill.	Ridge		Poor	yes	3 jumps - 2 are side by side near the beginning of the trail	3rd jump has extreme landing	no	Used primarily as a down-hill trail for mnt bikers. A section of this trail has to parallel trail sections. Severe widening in a few places. Logs have been piled at the base of a large rock with a steep drop off that has altered the route. Also leads to a runout extension. Trail has a "bike park" feel.	Keep with partial closure/detour	Close/rehabilitate the upper duplicate trail section. Remove logs piled at based of rock drop. Narrow trail in sections where it has been widened.	Medium
Duck Pond & Connector	1500	B				Lowland							Consider potential for a new trail to run along the south side of the P1/P2 single track to connect this trail with Beaver Fever - to allow a loop hiking trail.	Keep	None	
Fast Track	1100	B	H	30"	Flat	Flat	No	Good	N/A	Skinny - good condition	None	N/A	Trails down both sides of skinny. Seems redundant. Would be nice to remove second section of trail that parallels the log skinny - trail adjacent to the skinny is passable. Trail is used for fat biking and groomer needs room to pass.	Keep	Consider removing duplicate section along log skinny.	Low
Fox Run	571	A	L/M	24/30"	Steep	Ridge	Around roots	Good	Yes	N/A	N/A	N/A	Steep & challenging climb. Some rot exposure and mild erosion. Noting that the south end of the trail is on private land.	Keep	No major improvements- monitor erosion rate. May require rerouting of short section on private land at south end in future.	
Fox Run Ridge Connector	240	A	M	30"	Steep	Ridge	No	Good	No	N/A	N/A	N/A	Duplicate routes (50 m) at connection point with Fox Run was recently removed through trail works done by others.	Keep with partial closure/detour	None	
Fox Run Side Piece	291	A	L/M	24"	One way down	Ridge	No	Good	No	N/A	N/A	N/A	Rerouted and improved in early 2023 but not sanctioned by CFFA.	Keep	None	
Green Lagoon - Across to	654	I	H	24"	Several short moderate climbs	Mid - at toe of the slope in sections	Limited	Good to Poor in some sections	No	Platforms in good shape	None	As trails come in from the south	High use trail that connects with downhill trails to/from the upper slopes to the south. Main trail that provides east-west access though this section of the Forest.	Keep	No major improvements - monitor for wet areas.	
Green Lagoon - Connector	524	I	H	24"	Several short moderate climbs	Mid - at toe of the slope in sections	Limited	Good to Poor in some sections	No	Platforms in good shape	None	As trails come in from the south	High use trail that connects with downhill trails to the south. Main trail that provides east-west access though this section of the Forest.	Keep/repair	Small wet area at east end of trail at connection with 5th Line-Valley Trail. Large wet area about halfway to SWW Trail - in need improved drainage and/or a large	High
Hucksterberry Finn	111	I	H	20"	Moderate with a steep section dropping into a ravine	High ground	Minor erosion on the steep section	Good	None	None	None	Upper Decker	Seems a bit redundant with Upper Decker which parallels it. Noted steep drop so best direction is to the north. Trail offers nice views of rock wall.	Keep/monitor	While it is somewhat redundant with Upper Decker keep open for now - but monitor. Ensure that path does not develop between this trail and Upper Decker. Monitor need for both trails.	
Landshark	524	I	L	18'	Modest grade changes - no significant steep sections	Ridge	Limited to a couple of short sections	Good	None	None	Minor - a few downed logs	Minor - short section of SWW Trail	A bit redundant to Code Brown and SWW trails.	Keep with partial closure/detour	Close part of trail that drops into valley to Copeland No Name. Create new short (10 m) connection to Green Lagoon trail. Trail becomes exit for Code Brown.	High
Low Rider	1700	B	H	24"	Flat		No	Good	No	N/A	N/A	N/A	Popular fat bike trail in winter. Noted that a short section detour undertaken by Trail Fairies to avoid wet area.	Keep	None	
Maui Wowie	927	A	L	18'	Moderate grade throughout its length with several short steep sections. Steep section of switchbacks coming down from "Will it End"	Ridge and lower land areas	Generally limited - primarily due to expected low use of this trail. Switchback section might be prone to slumping if there was higher use on it.	Good	No	None	One large tree that has fallen over and is adjacent to the trail.	Limited	Low use trail that takes one into a more remote area of the forest. A bit overgrown and trail is hard to follow in sections. Provides an exit for "Sidecar". Original trail name "Five B's" acknowledges trail builders: Butler, Blackall, Booth and BB. David H. notes that partial closure would offer some slope protection and relief to ferns/wildflower - notes that trail sides have been infested with sweet cicely.	Keep with partial closure/detour	Proposed removal of the most northern part of the loop section. Seems little used and would open up a significant "eco island". Maintain southern part to connect in with Sidecar trail (would become extension of Sidecar into main section of Maui Wowie. Upper MW trails becomes end of Side Car (rename this section).	Low
Mile High (single track)	839	A	H	30"	Steep and technical	Ridge	Yes	Poor	Yes	Very rooty	N/A	No	Heavily used trail up and down, lower part rebuilt 10 years ago to add switchbacks which are now eroded as well. This trail was originally a deer trails off the ridge. Has been some rerouting over the years.	Keep/repairs	Address erosion	High
Mile High Connection	436	B	H	30"	Flat		No	Good	No	1 log crossing	N/A	No	Main trail heavily used, nothing significant.	Keep	None	
Misty Bottom	917	I	H	24"	Flat	Low ground	Yes	Fair	Yes	Bridges (2) 1 timber, 1 log	Rooty	N/A	Western part of trail is on private land. Advanced erosion and tree clearing (2022) activity in Timber Ridge property section. Trail is wet after rain. 2nd half inside Copland Forest in good condition.	Keep	Lower section in Timber Ridge property may eventually be lost from land development. If this trail is lost need to review connection/reroute of trail. No major improvements needed for section in Copeland Forest.	
Mr. Twister	787	I	M	20"	Steepest at the south end and another climb section at the north end to get up on the ridge	Ridge	Some erosion, trail widening and root exposure at the north end as it comes in to join Copeland Grind. Steep section coming off small hill at Code Brown intersection has erosion/widening.	Good	Yes	None	None	Limited	Nice moderate trail with good views of valley to the east. Generally in good condition. Switchbacks at south end (top) could benefit from some improved trail definition/narrowing. Some braiding at the south end with short route options. Near Code Brown intersection the trail splits to continue up/down the small hill with option to take a side trail that runs to the east of the small hill.	Keep/repairs with partial detour	Maintain. Need for some trail narrowing at the switchbacks at the south end of the trail. Close duplicate section of eroded trail on south side of the knoll where Code Brown intersects. Use route that passes to the east side of the knoll. Complete in tandem with proposed changes to Code Brown.	Medium
Old School Cool	1200	B	H	24"	Flat	Low ground	Limited	Good	Limited				No significant erosion, flat and dry trail	Keep	None	
P.A.T	668	I	M	18"	Flat	Several modest grades	Little or none	Good	No	Good: 2 log pyramids	None	None	Connector trail to Rail Trail at one end and Connector classic at other end.	Keep	None	

TF Trail Name	Length (m)	Rating (A, I, B)	Usage Level (H,M,L)	Typical Width	Grade	Trail Elevation	Erosion	Drainage	Trail Braiding/ Splitting	Structure Condition	Hazards	Other Trail Visibility	General Comments/Use	Trail System Recommendation	Proposed Physical Improvements/Changes	Priority
P2-P3 Trail (3 trails)	2500	B	M	24"	Flat	Low ground	Limited - some root exposure	Good	Limited	None	None	Limited	Good trails / not regularly used by mnt bikers but used by horse riders - noting that trail (500 m section from P3 to next intersection)) has been proposed by one individual as an "all access trail". She wants this trail closed to bikes and horses.	Keep	None	
Phatty	1300	B	M	Main Trail	Flat		No	Good	No	N/A	N/A	N/A	Main Trail	Keep	None	
Pines	198	B	H	20"	Low grade change	High ground	Limited	Good	No	None	None	No	A bit redundant to 5th Line Bypass trail but provides a small loop out of P4. Passes through a pine plantation area. Provides small loop for walkers out of P4. Surrounding habitat is pine plantation - not overly sensitive.	Keep	Keep but monitor on use / fututre potential for closure to open up "eco island"	
Purple Star	476	A	H	Avg: 24"; in some spots 6.5'	Steepest section is 27%	Flat near top and then steady steep slope	Many exposed roots and rocks. 2/5	Okay	At bottom of one steep section main trail drops right, and narrower trail climbs and then drops right	Logs create ramp over one boulder. 2/4 condition	None	Near bottom other trails are visible	Essentially a "gravity" trail.	Keep/repair	Noted the short "detour" section around a drop. Facilitates an easier route down at a 90 degree turn. Remove one of the shor detour routes.	Low
Purple Urkle	702	B	M	avg 40 cm, some sections wider as old double track	Easy descent from top of five points, gradual grade down	Top of moraine to Valley bottom through valley	Little to none	Good	none	N/A	Tree down across trail. Can still walk under	None	Access to SCMBC Amos track. Easiest descent from 5 points. NOTE: part of this trail may be on private property - on edge of CF.	Keep	None	
Rail Trail - east	3100	I	H	18"	Moderate with some steep sections coming into/out of the watercourse crossings and valleys.	Lowland	Limited to some of the steeper section with a bit of route exposure	Generally good	Limited	4-5 bridges of varying condition. Generally too narrow for horses.	None	No	One of the longer trails in the forest and seems well suited to all user types. Its a bit unique in how it climbs in and out of several small valleys. Some of the platforms across creeks were widened by the Trail Fairies in summer 2023. The platforms are not specifically designed to accommodate horses and so horses tend to walk through the streams/wet areas.	Keep/monitor	Monitor impact of horses walking through the streams. Modifying all the creek crossing to accommodate horses would be significant effort.	Medium
Rail Trail - west	1100	I	H	18-24"	Some up and down	Lowland	Limited - but extensive root exposure	Good	Limited	None	None	Some visibility of adjacent double track but limited	A well used trail by all users. Connection across Double track to connect with Swamp trail is not clear.	Keep	Consider improvements/signage to make connection with Rail Trail and Swamp Trail more clear. Also, there is a short 10 m section that runs along edge of ravine that may concern some users. An informal "ride around" is emerging. Monitor.	Moderate
Redneck Express	583	A	M	18"	Several short up/down sections with steepest parts in the north half.	Ridge	A couple of short eroded sections with root exposure.	Good	None	None	None	None	Has more of a wilderness feel to it than some of the other trails in CF. Less used trail with vegetation growing in along some sections.	Keep	None	
Reeb	676	B	H	20"	Gradual climb up to parking area	High ground	Limited	Good	TBC	None	None	None	High use trail coming out of P4 to access forest. In good condition.	Keep	None	
Ricky Bobby	990	A	M	24"	Moderate/steep		Yes	Good	Yes	N/A	Yes	N/A	Primarily a downhill trail but there are a couple of steep climbs in it. Generally very rooty with many eroded sections. There is an exit trail off of it that heads out of Copeland Forest.	Keep/Repairs/Possible Detour	Improvements to the eroded sections are recommended. The most eroded section is a steep climb out of a small ravine near the top. Consider trail detour through this section and rehab this steep eroded section. Monitor.	Medium
Ridge Run Connector (bottom of Ridge Run/Left Bank)	110	I	H	40 cm	Steepest section at the beginning where trail heads off from upper junction (Lower five points).	Valley bottom, crosses a small water hole	Top of trail by major intersection is eroded slightly, major root exposure at the bottom near water hole crossing and more roots exposed up to double track.	Good	Small braided section at the top near major intersection trail is also widened to more than 1m across.	N/A	None	Only double track to the west and north	Connector trail to access north east trails. New platform installed by Trail fairies in summer 2023 which has improved the safety of this crossing.	Keep	None	
Ridge Run to Sunset Connector	261	B	H	35cm and generally wider towards bottom near Post 10	Coming up from post 10 there is a mildly steep section	Lowland forest	Coming up from post 10 in steeper section there is some erosion and exposed roots	Good	Mid trail there is a spot that is being widened/slight braiding beginning	N/A	None	None	Used frequently to access Lower Five points, connector to NE part of forest	Keep/Repairs	Bring in trail edges a bit/line with logs to prevent further widening in spots	Low
Ridge Run/Left Bank	1700	A	H	40-60 cm (climbs up to 1.5 m)	Up and down, minor grades throughout with several short lived climbs/descents	Side of ridge	Some sections in excellent shape, other sections are extremely eroded with root/rock exposure. Generally the eroded sections are on short climbs.	Good	Widened sections throughout at short climbs where people have chosen various routes	N/A	N/A	Lower double track	Legacy trail, beautiful views, challenging, long, flowy trail with few intersections.	Keep/Repairs	Fix eroded sections, limit ability to make trail wider on climbs by lining edges with branches etc. Discuss any sensitivity with ecologist regarding adjacent vegetation. Noting that erosion seems to be accelerating last few years. Consider need for additional measure to protect adjacent sensitive habitat. Propose information signs at parking areas about flower species etc. No new trails to be constructed off this trail/along the ridge.	Medium
Rockopotamus	637	A	M	avg 40 cm. (up to 80 cm)	Steep climb and some steep descents throughout. Steepest sections closer to valley bottom	Ridge line climb/descent	Severe erosion in some sections. Trail has 1 ft. bank cut in several sections with loose rocks, exposed roots throughout.	Good	Slightly at the top of the ridge in several sections where people have chosen different lines around roots/rocks.	N/A	N/A	None	Beautiful ridge line climb/descent.	Keep/Repairs	Consider trail work to limit erosion from run off on steep sections. Address braided sections at the top.	Low
Rocks and Roots	702	A	H	avg. 80 cm	Generally a moderate climb/descent most of its length. Some steeper sections on trail corners	Ridge	Severe erosion in spots. Near the bottom of the trail there is a section that is about 1 foot or less from the side of a steep eroded bank dropping down to double track below (5 ft. drop).	Good	Yes, on corners from new bike lines to get over rocks/roots when climbing.	n/a	Several dead leaners/hangers that are down over trail at head height, near the bottom.	none	Good advance downhill or uphill ride.	Keep/Repairs	Fix eroded corners. Trail section at bottom that is close to an eroded bluff should be detoured away.	Low
Rockwall #1	800	B	H	20"	Several short up/down sections	Ridge	Limited	Good	Parallels top part of 5th Dimension	None	None	Intersects with several trails	Passes through an open area with Eco sensitive area signs	Keep	No significant works needed	
Rockwall #2	861	I	H	20"	Several modest up/down sections	High ground	Limited - some erosion at south end towards the 5th Line Bypass intersection.	Good	Trail is duplicated on both sides the rock wall up to the Sidecar trail entrance.	None	None	Intersects with several trails	Old rock wall is an interesting feature. David H. noted this in his report that the rock wall provides habitat for some amphibians.	Keep/partial closure to be confirmed	Close one of the duplicate trail sections that runs on both sides of the rock wall.	Medium

TF Trail Name	Length (m)	Rating (A, I, B)	Usage Level (H,M,L)	Typical Width	Grade	Trail Elevation	Erosion	Drainage	Trail Braiding/ Splitting	Structure Condition	Hazards	Other Trail Visibility	General Comments/Use	Trail System Recommendation	Proposed Physical Improvements/Changes	Priority
Rootshoot	332	I	H	20"	Moderate - with a steep section where trail climbs down/out of a small lower land area	High and low ground	High at one steep section	Generally good accept at north end after trail FL which crosses a seepage area and is a bit	One section where an alternate route has been constructed to the west.	None	None	Limited	Good intermediate trail - the steep highly eroded section on north side of the ravine. There are also two short downhill trails on south side of the ravine that run off the trail down into the ravine.	Keep with partial detour	Close and detour the highly eroded section that extends out of the ravine (heading north). Utilize existing detour and connect with section of short new trail that would be required. Also close the two short "downhill trails" that run off the main trail into the ravine.	Medium
Rusty Mud Bucket	1112	I	M	24"	Some short steep sections (15%) near Purple Star and then essentially flat as you head towards Rail Trail	Hilly near Purple Star then becoming flat	Many exposed roots in steep sections and trail widens where berms occur. 2.5/5	Flatter sections have poor drainage	Trail widens in several places in low areas due to wet sections.	Not applicable	None	Other trails are visible around Purple Star (3.8) and (3.5)	Connector trail - passes through wet areas/sensitive habitat including a wetland area to the east that trail parallels. Low use trail. David H. notes that north end of trail include salamander habitat. There are 4-5 short low sections that can be wet.	Keep - Spring period closure	In low, wet areas recommend adding platforms to limit users going around puddles that widen trail. Temporary (spring) closure recommended.	Medium
Schnazzleberry	523	I	M	18"	Essentially flat	A few minor dips	None	One very wet section - 20 m in length	No	Not applicable	None	None	Connector trail - passes through wet areas/sensitive habitat.	Close	Recommend closure as trail is redundant to Rusty Mud Bucket and PAT, includes a long wet section in spring and contains adjacent sensitive habitat. Also need for a platform through an extended wet section on the double track between Schnazzleberry and Rusty Mud Bucket.	High
Sidecar	1200	A	Low	20"	Downhill trail with several short steep drops and climbs	Ridge and Valley Land	Not significant - limited to a few section of steep climb sections - some roots visible. Expect lack of erosion is due to low usage level.	Good - no wet area	No	None		Partially - Copeland Grind visible from parts of trail but limited views.	Trail entrance not obvious. Feels like an school trail with several straight shot steep downhill sections follow by steep up hill. Not a great hiking trail and likely not suitable for horses as is. Area that the trail passes through feels more remote than other parts of the forest. Based on TF heat map, does not get a lot of use.	Keep with partial detours/reduce short steep sections that are difficult to climb in either direction	Re-route sections to minimize the several steep uphill parts to make more multi-use and improve ride flow.	Medium
Slippery When Wet	856	I	M	20"	Modest steady slope dropping south to north. No significant steep sections other than towards its end (north end) when it drops off the ridge.	Ridge (drops into lowland at very end)	Only erosion is at the north end with some gullying and root exposure.	Generally good accept at north end as it passes through a seepage area and is very wet in Spring.	Towards the end there is a route split. To the right the trail drops steeply and crosses a lowland area. Left route provides a more gradual downslope.	None	None	Landshark trail is very close at the end of the trail.	Intermediate downhill MTB trail. Felt to be somewhat narrow so suspect not heavily used. There are two sections of alternate trail that run off the main trail. As well trail exits through a very wet area at connection point with Green Lagoon trail.	Keep with partial closure/detour - detour route TBC with user group input	Close two side trails that run off the main trail. In particular the longer one at the mid point that climbs and down a small hill. (Both sections are not on TF but lower one is on Virginia's map). Close current north end where trail passes through low-lying ground and reroute for new connection with Green Lagoon Trail (either a new trail running north off end of ridge or run down the valley and then up to connect with Landshark trail.	High
Snake	176	B	H	30"	Moderate downhill to the north with one steep section	noted one steep section	Yes - significant erosion, widening and root exposure on one steep section	Good	Widening on steep section	N/A	N/A	None		Keep/maintenance	Address steep eroded section	Low
Sunrise	396	I	H	70 cm	Primarily a climb trail that is combined with Sunset to get to top of ridge. Steady climb from valley bottom with several steeper sections.	Side of ridge	Some throughout. Rocks and roots exposed, especially on the short climbs	Good	Widened section at first major bend. Lots of root exposure. People have taken various lines.	N/A	None	None	Popular side ridge climb trail to top of the moraine, used frequently. Noted that the bottom of Sunrise has a short heavily used connection trail with Bridal Path that is not on TF.	Keep - with small closure	Reduce trail width/braiding on steeper corners. As bottom access to trail is now though the short connection with Bridal Path, close the little used connection trail with Sunset.	Medium
Sunset	649	I	H	70 cm	Upper part is a two-way trail. Bottom section (Below intersection with Sunrise) is primarily a downhill trail.	Side of ridge, top of moraine	Some throughout. Rocks and roots exposed, especially on the short steep sections.	Good	Two sections are widened/braided, around difficult root section at first major uphill turn where people are making a work around (other side of tree) and mid way up there is a short 2.5 m section with a high trail and a lower trail.	N/A	N/A	None	Elevator Shaft (portion of Sunset between Sunrise trail intersections) has significant erosion, loose rocks, roots. This is a steeper descent section that usually only rode in a downhill direction.	Keep/repairs	Reduce trail width/braiding on steeper corners and erosion of trail between Sunrise trail intersections. If erosion cannot be addressed in this short section then consider closure of this section and trail would then integrate into the Sunrise trail. Need to monitor.	Low
Swamp	1700	B	H	24"	Flat	Lowland	Trail runs close to eroded bank of former pond - bank may not be stable	Fair	Braiding around some of the platforms including horses.	Some of the platforms are in need of repair	Some of the platforms. Lots of exposed roots	None	Some platform improvements made in Summer in 2023 by Trail Fairies. See comments regarding Spring closure of double track that parallels the Swamp Trail. Would mean that this trail would become main route up to the former pond from the north during the Spring.	Keep/repairs	Platform repair needed. Improvements to routing at north end for connection to double track and Rail Trail needed. May require signage. As well signage to keep people away from exposed banks/drop-off of former pond for safety reasons.	High
Swoopy Down	572	I	M/H	50 cm and much wider as you go down to valley	Gentle grade for most, slightly steeper as you approach valley bottom	Top of Moraine to nearly valley bottom, along ridge line	Near the bottom there is significant ruts, 1 ft. bank cuts, loose rock, braiding.	Good	Lower section has braided sections to avoid ruts, loose rocks	N/A	None	None	Fun intermediate way down from 5 points. Beautiful views off both sides of ridge.	Keep/repairs	Restructuring/trail remediation on sections that are heavily eroded/braided. Which are mostly at bottom/north end as it comes into the valley bottom. There is an alternate existing trail that does not seem used that would avoid rutted section. Need to close rutted section and reopen existing side trail.	Medium
The Loam Ranger	1100	B	L	20"	Flat with some small short climbs	Lowland	Minimal	Good	No	None	None	None	Not well used, entrance off double track no apparent. Trail passes along west side of former pond. No major bank slumping issues	Keep/repairs	Make entrance more apparent - remove the tree deadfall	Low
Trainspotting	432	I	L	20"	Moderate climbs	Lowland	Minimal	Good	No	Skinny - good condition	None	None	Little used - passes along south side of rail tracks.	Keep/repairs	Make entrance more apparent - remove the tree deadfall	Low
Treehole	260	I	M	30"	Climb up to double track	Drops down to a low area in the middle of it	Yes - in some sections	Poor	No	No	No	None	One of the wetter trails in the forest - in several place logs have been placed to create a "corduroy" type surface. Trail does not appear to be used heavily and not considered essential to the trail network. Understood to be an exit trail for the Sunrise Trail. Platform work undertken by Trail Fairies in late summer 2023, although not endorsed by CFFA.	Monitor for possible closure	Trail passes through a very wet area at the toe of the slope. Detouring not really feasible. Closing would open up an "eco island" in a ravine with connection to water. Recommend that the trail be removed from Trail Forks and not shown on the CFFA Trail Map to reduce user volumes. Monitor for impact.	Medium
Upper Decker	127	B	H	18"	Modest to minimal	High ground	Limited	Good - no wet area	None	None	None	Hucksterberry is visible from parts of it.	Generally duplicates Hucksterberry. Noted a connector trail that is forming between the two trails.	Keep	None. See comments for Hucksterberry Finn for possible closure	

TF Trail Name	Length (m)	Rating (A, I, B)	Usage Level (H,M,L)	Typical Width	Grade	Trail Elevation	Erosion	Drainage	Trail Braiding/ Splitting	Structure Condition	Hazards	Other Trail Visibility	General Comments/Use	Trail System Recommendation	Proposed Physical Improvements/Changes	Priority
Upper Ridge Run/Left Bank	Part of Ridge Run	A	H	avg 50 cm some sections wider	Modern downward grade until Valley bottom	Descent from top of moraine to nearly valley bottom, side ridge	Severe in spots- see recommendations	Good	None	N/A	N/A	None	One route to access Lower Ridge Run/Left bank from top of 5 points	Keep with closure of short eroded duplicate section	At north end toward Split Rock Trail there is a duplicate short/steep heavily eroded section that has a route around to the left when descending. Marked as the hard turn on the map. Close this short steep eroded section (left trail when climbing). Some steeper sections along the trail are subject to widening/erosion and should be addressed.	Medium
West Nile	130	I	M	30 cm	Up and down, minor grades	Lowland forest beside pond/ wetland	Lots of root exposure	Good	None	N/A	None	None	Very short trail, used only to see pond viewpoint, does not appear used much by bikers. Passes by very sensitive habitat	Keep	Trail is somewhat redundant to the Bridal Path but provides access to ponds for wildlife viewing.	
Will it End	612	A	M	18"	Moderate grade with some short but steep dips near the top	Steady downward descent from Purple Star	Exposed roots and rocks near the top. 1/4	Good	Some	Not applicable	None	Yes, Double Track and Michelle Special are visible	Remote trail - used in both directions	Keep	None	

Outside of Copeland

TF Trail Name	Length (m)	Rating (A, I, B)	Usage Level (H,M,L)	Typical Width	Grade	Trail Elevation	Erosion	Drainage	Trail Braiding/ Splitting	Structure Condition	Hazards	Other Trail Visibility	General Comments/Use	Trail System Recommendation	Proposed Physical Improvements/Changes	Priority
Patroller's Trail	285	B	M										Looks to be primarily outside of CF - in Timber ridge property?	Not in CF	Good shape, no significant features	
Terry's Route	211	B	H	50 cm and much wider as you go down to valley	Flat	Steep drop at the north end onto the double track	Yes some - root exposure in a couple of sections	Fair	Yes - at north end trail splits	Corduroy over a significant wet section towards south end	None	N/A	Trail is not in CF - is located on Horseshoe/Timber ridge property. Well used trail for access into CF from HS X-cnty parking area	Not in CF	Address wet area with install of a platform subject to landowner approval	
Wobbly Wombat														Not in CF		
Cup of Tea														Not in CF		
Sassafrass	179													Not in CF		

Appendix C: Trail Design/Maintenance Standards

International Mountain Bicycling Association's (IMBA)

Ensuring proper drainage is critical to maintaining sustainable trails. The frequency of drainage-related maintenance activities will depend on many factors including trail design and construction, soil type, frequency/type of use, weather, and drainage control measures employed. Ideally maintenance activities should bring the tread closer to matching existing natural drainage patterns. Any trail with drainage issues will require a customized solution. However, in general maintenance activities to ensure proper trail drainage should focus on:
- determining the source of water flow
- fixing the source of any water problem. This could include: grade reversals, elevating the tread (e.g. wooden platforms), changing tread composition (e.g. crushed rocks), re-routing parts of the trail to drier areas, or using switchbacks.
- maintaining the outslope of the trail tread through compaction so that sheet drainage flows naturally across and off the tread
- repairing tread that has been eroded by water flow, e.g. berm.

IMBA's five key elements of sustainable trail design:
- the half rule
- the 10 percent average rule
- maximum sustainable grade
- use grade reversals
- maintain 5 degree tread outslope.

The Half Rule. A trail's grade should not exceed half the grade of the side slope. If the trail grade is steeper than half of the side slope, it is considered a fall line trail and gravity will pull the water down the trail instead of across it. This leads to erosion of the trail tread.

10% Average rule. Generally, an average trail grade of 10% or less is most sustainable. This does not mean that all trail grades must be kept under 10%. Many trails will have short sections deeper than 10%, and sunny situations will allow average trail grades of more than 10%

Maximum sustainable grade. The maximum sustainable grade on a trail depends on several variables including soil type, annual rainfall, types/number of users, and trail design.

Grade Reversal. A reversal in the trail grade - usually a short dip followed by a rise - that forces water off the trail. Grade reversals are known by several different terms, including grade dip, grade break, drainage dip and rolling dip. Frequent grade reversals are critical element of sustainable trail design. Most trails will benefit from grade reversals every six to 15 m, depending on soil type and rainfall.

Tread Outslope. The actual surface portion of a trail upon which users travel is called a tread. The tread outslope refers to the grading of the tread that leaves the outside edge of the hillside lower than the inside to shed water. It should be barely noticeable, usually about 5%.

Crothers' Woods Trail Management Strategy July 2007.
Appendix C. Guiding Principles For Trail Design
1. Incorporate the five key elements of sustainable train design:
    - The half rule;
    - the 10% average rule;
    - maximum sustainable grade;
    - incorporate grade reversals, and
    - maintain five degrees outslope.
2. Use drainage features such as grade reversals, rolling great dips and kicks to efficiently shed water off the trail tread. Avoid the use of water bars.

3. Support multi-use, bi-directional trails wherever possible.

4. Designate the narrowest, lowest impact trail possible, while ensuring safety and user needs are met.

Couchiching Conservancy Guidelines For Locating & Building Footpaths & Trails

The following are some guidelines to consider when locating and building footpaths and trails:

1. Build trails through areas that will have the least impact on flora and fauna.

2. Minimize the density of trails.

3. Minimize fragmentation of habitat.

4. Avoid special or exemplary habitats.

5. Keep trails out of the water, and water out of the trails.

6. Protect tree root systems from erosion.

7. Mark trails using plant blazes or other low impact methods.

8. Consider spring closures to allow for undistributed breeding and fledging.