

A full-page background image showing a mountain biker in a green jersey and helmet riding a trail through a forest. The ground is covered in moss and rocks. White topographic contour lines are overlaid on the lower right portion of the image. The text is in white, sans-serif font.

Mountain Bike Guidelines:

Advice & Guidance to
CRD Regional Parks

MOUNTAIN BIKE ADVISORY COMMITTEE

December 7, 2020

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Tracey Moss
Manager, Visitor Services & Community Engagement
CRD Regional Parks

Dear Tracey,

On behalf of the Mountain Bike Advisory Committee, it is my sincere pleasure to submit our advice and guidance to the CRD for the development of mountain bike guidelines for regional parks. Participating in six meetings and multiple online surveys, the MBAC worked incredibly hard over the past 8 weeks to prepare this advice and guidance. Developed through exceptional collaboration and extensive deliberation, this report represents the consensus of the committee. We were able to reach agreement on all advice and guidance and no minority reports were required. Though the committee was unable to address all topics of importance to mountain biking in regional parks, we studied and have prepared effective advice and guidance on the following topics:

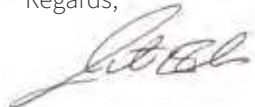
- ▶ Considering the existing supply of mountain bike experiences throughout the Capital Region, and thinking about current and future demands and trends, what type of mountain bike experiences (discipline, level of difficulty, LTAD etc.) are most needed and most appropriate to be provided in regional parks?
- ▶ What is the preferred service delivery model for the planning, design, construction, management and monitoring of mountain bike trails and mountain bike use in regional parks (direct, indirect, enablement)?
- ▶ What criteria should the CRD use to determine in which regional parks it is appropriate to support mountain biking, and therefore mountain bike trails?
- ▶ How can mountain biking and mountain bike trails be integrated with and managed to avoid / minimize negative impacts on other approved recreational users of regional parks?
- ▶ Rogue, or unauthorized trail building, is on the rise in regional parks. What promising practices can be implemented to avoid or limit unauthorized trail building?
- ▶ The popularity of electric mountain bikes (e-MTB) continues to grow. Are e-MTBs appropriate in regional parks and how should they be managed?
- ▶ How can mountain biking and mountain bike trails be managed to avoid/minimize impacts to ecological, Indigenous, and cultural heritage values in regional parks?
- ▶ What criteria should the CRD use to determine which existing authorized and unauthorized trails are appropriate to permit sanctioned mountain biking and provide a desired mountain biking experience?
- ▶ What, if any, existing design guideline manuals or documents should be adopted and implemented by the CRD to guide the planning and design of mountain bike trails and related trail infrastructure?

We strongly encourage CRD Regional Parks to consider our advice and guidance and integrate it into the CRD's Mountain Bike Guidelines for Regional Parks. Though we recognize that the guidelines will provide direction for implementation during management planning, we encourage the CRD to recognize the urgency of the situation for mountain biking and pursue meaningful quick wins that can be advanced outside of the management planning processes.

The committee appreciates the opportunity to provide our advice and guidance and we look forward to reviewing the draft guidelines and many of the committee members look forward to strengthening their partnerships and relationships with the CRD. It has been a true pleasure working with the MBAC and members should be commended for their impressive participation and spirit of collaboration and understanding.

Please do not hesitate to contact me if you require any clarity about our advice and guidance.

Regards,



Justin Ellis
MBAC Chair

1 INTRODUCTION

Mountain biking, as a recreational activity, a sport and a tourism product has and continues to experience rapid growth throughout the Country, the province, and the Capital Region (the region). Mountain biking is enjoyed by a wide diversity of people of all ages, abilities and genders for the physical, mental and social benefits the activity provides and for the opportunity it creates to connect riders with nature while generating excitement, challenge and competition. The Capital Region's temperate climate together with its growing network of trails and appealing terrain have made the region a sought-after year-round mountain bike destination that attracts riders of all abilities from across the country. In fact, the Capital Region has attracted and generated some of the country's top mountain bike athletes and Olympians and is now home to Canada's national mountain bike team.

The region is blessed with an incredible network of 31 regional parks totalling 13,187 hectares and 3 regional trails totalling nearly 101 kms in length. Regional parks and trails have been established to protect and restore the region's biodiversity, ecosystems and landscapes while providing a range of compatible and accessible non-motorized outdoor recreation activities for people of all ages and abilities that foster enjoyment of and appreciation and respect for the region's natural environment.

In response to the intensifying demand for mountain biking in regional parks, and recognizing the need to balance mountain biking demands with other visitation demands and environmental, Indigenous and cultural values in regional parks, the Capital Regional District (CRD) is developing mountain bike guidelines for regional parks. These guidelines will be used to inform regional park planning, management, operations and capital investment decisions that ensure all park values are considered.

1.1 Mountain Bike Advisory Committee

To inform the development of the Mountain Bike Guidelines, the Capital Regional District Board established the Mountain Bike Advisory Committee (MBAC) on May 27, 2020. In accordance with the MBAC's Terms of Reference, the purpose of the MBAC was "to bring together a group of people with interest in recreation in the Capital Region and a knowledge of the regional park system in order to provide advice and guidance to Regional Parks staff for use in developing mountain biking guidelines for regional parks".

The scope of the MBAC's advice and guidance was focused on:

- ▶ Mountain biking,
- ▶ Regional Parks in the Capital Region,
- ▶ Regional parks system-wide advice, and
- ▶ Reviewing & commenting on the draft guidelines.

The following areas were out of scope for the committee:

- ▶ Site-specific concerns,
- ▶ Development of infrastructure in regional parks,
- ▶ Operational budgeting,
- ▶ Labour relations matters,
- ▶ Direction on other types of recreation not associated with mountain biking, and
- ▶ Capital Regional District Board-approved park management plans.

The committee was composed of representatives from mountain biking organizations, other outdoor recreational interests, the conservation and naturalist community, First Nations and the CRD Regional Parks Committee. The MBAC was chaired by RC Strategies – an independent professional facilitation and recreation management and trails planning firm. Members of the committee included:

Member	Organization
Alon Soraya	South Island Mountain Bike Society
Hazel Prince	Dirty Girlz Mountain Bike Club
Heather Rose	Sooke Bike Club
Daniel Cammiade	Nature Trails Society
Isabelle Charles	Beecher Bay First Nation
Doris Leong	Trail Runner
Tara J Fenwick	Outdoor Club of Victoria & Victoria Club Tread
Torrey Archer	The Land Conservancy
Barb von Sacken	Habitat Acquisition Trust
Colin Plant	CRD Board Chair
Justin Ellis	MBAC Chair – RC Strategies



1.1.1 DECISION MAKING PROCESS

While guided by the CRD Board Procedures Bylaw, the committee committed to reaching its recommendations by consensus. Consensus was defined as unanimous agreement by all committee members or lack of expressed objection and a desire to block the recommendation by any committee member. MBAC members were afforded the opportunity to prepare minority reports on any matters where most committee members supported a recommendation while an individual or minority of members did not but did not wish to block the recommendation from proceeding. The recommendations contained within this report reflect the consensus of the MBAC.

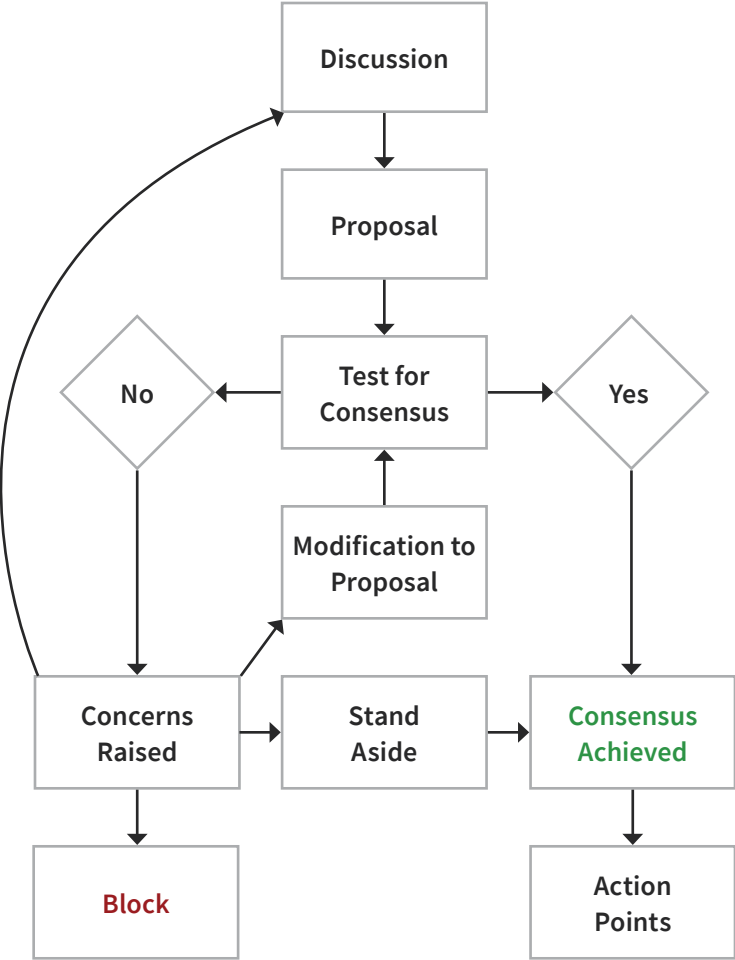


Figure 1. Consensus Decision-Making Process



1.1.2 PROCESS FOR GENERATING ADVICE & GUIDANCE

The committee began its deliberations on September 30, 2020. In total, members participated in six three-hour long meetings and took part in two online surveys. At the first meeting, MBAC identified and prioritized the discussion topics on which advice and guidance would be provided. The next three meetings were used to deliberate and prepare draft advice and guidance on each of the priority discussion topics. The final two meetings focused on refining, finalizing, and achieving consensus on the advice and guidance contained within this report.

Meeting Date	Discussion Topics
September 30, 2020	<ul style="list-style-type: none">▶ Committee terms of reference & procedures▶ Introduction to mountain biking▶ Introduction to Regional Parks▶ Confirmation & prioritization of discussion topics
October 7, 2020	<ul style="list-style-type: none">▶ Most needed & most appropriate mountain bike experiences in regional parks▶ Delivery role of Regional Parks staff in mountain biking▶ Criteria to determine which regional parks are appropriate to support mountain biking in
October 21, 2020	<ul style="list-style-type: none">▶ Integrating mountain biking with other approved recreational users▶ Promising practices to avoid or limit rogue trail building▶ Appropriateness and management of electric mountain bikes
November 4, 2020	<ul style="list-style-type: none">▶ Avoiding and minimizing the impacts of mountain biking on environmental, Indigenous, and cultural values▶ Criteria to determine when authorized and unsanctioned trails should permit mountain biking▶ Adoption of existing planning and design manuals
November 18, 2020	<ul style="list-style-type: none">▶ Review draft advice and guidance report
December 2, 2020	<ul style="list-style-type: none">▶ Finalize advice and guidance report

The range of discussion topics that could have been addressed by the MBAC far exceeded the time available to the committee. As such, the MBAC deliberately prioritized which topics they would provide advice and guidance on. To do so, the Chair tabled 23 potential discussion topics with the committee (see Appendix A) and, using an online survey, sought input on which topics were of greatest priority. The results of the survey (Appendix B) were presented to the MBAC and priorities were agreed to. Through consensus, the following discussion topics were selected as the greatest priorities:

- ▶ Considering the existing supply of mountain bike experiences throughout the Capital Region, and thinking about current and future demands and trends, what type of mountain bike experiences (discipline, level of difficulty, LTAD etc.) are most needed and most appropriate to be provided in regional parks?
- ▶ The CRD can play a variety of roles in the delivery of mountain biking in regional parks. What is the preferred service delivery model for the planning, design, construction, management and monitoring of mountain bike trails and mountain bike use in regional parks (direct, indirect, enablement)?
- ▶ What criteria should the CRD use to determine in which regional parks it is appropriate to support mountain biking, and therefore mountain bike trails?
- ▶ How can mountain biking and mountain bike trails be integrated with and managed to avoid / minimize negative impacts on other approved recreational users of regional parks?
- ▶ Rogue, or unauthorized trail building, is on the rise in regional parks. What promising practices can be implemented to avoid or limit unauthorized trail building?
- ▶ The popularity of e-MTB (electric mountain bikes) continues to grow. Are e-MTBs appropriate in regional parks and how should they be managed?
- ▶ How can mountain biking and mountain bike trails be managed to avoid/minimize impacts to ecological, Indigenous, and cultural heritage values in regional parks?
- ▶ What criteria should the CRD use to determine which existing authorized and unauthorized trails are appropriate to permit sanctioned mountain biking and provide a desired mountain biking experience?
- ▶ What, if any, existing design guideline manuals or documents should be adopted and implemented by the CRD to guide the planning and design of mountain bike trails and relative trail infrastructure (e.g. technical trail features)?

Recognizing their limited time, the MBAC identified additional topics that were deemed to be important. Though the committee was unable to provide advice and guidance on these topics, the MBAC recommends that the CRD address the following additional topics in the draft Mountain Bike Guidelines for Regional Parks:

- ▶ How should mountain bike trails and mountain biking be monitored in regional parks?
- ▶ What research should be undertaken to understand mountain biking (e.g., visitation, origins, satisfaction, impacts) in regional parks?
- ▶ How can risks/impacts to personal and public safety from mountain biking be managed in regional parks?
- ▶ Should, and if so, how should commercial mountain biking businesses be managed and promoted in regional parks?
- ▶ Should, and if so, how should mountain-bike-based special events (e.g., races), group rides, etc., be managed and promoted in regional parks?

A blue mountain bike is parked on a rocky, moss-covered ridge. The bike is positioned in the foreground, facing away from the viewer towards a vast landscape. The background features a dense forest of evergreen and deciduous trees, with rolling hills visible in the distance under a sky filled with large, white clouds. The overall scene is bright and scenic, suggesting a high-altitude or mountain environment.

2 MOUNTAIN BIKING

Before developing advice and guidance regarding mountain biking in regional parks, the MBAC worked to develop a foundational understanding of mountain biking, mountain bikes, mountain bike disciplines and mountain bike experiences.

2.1 What is Mountain Biking?

Mountain biking is an outdoor recreation activity involving riding bicycles off-road, often over rough terrain, using specially designed mountain bikes. Mountain bikes share similarities with other bikes but incorporate features designed to enhance durability and performance in rough terrain

(https://en.wikipedia.org/wiki/Mountain_biking).

Mountain biking is an umbrella term that is used to refer to a variety of more specific mountain biking disciplines. Each of these disciplines seek out different terrain, trail design characteristics, technical trail features and supporting infrastructure. Though mountain bike disciplines have and continue to evolve, the most typical mountain biking disciplines referenced today include:

- ▶ Cross-country (and gravel riding & cyclocross which use cross-country trails)
- ▶ All-mountain
- ▶ Downhill
- ▶ Adaptive Mountain Biking

ADAPTIVE MOUNTAIN BIKE TRAILS (aMTB)

Trails that are designed to support adapted mountain bikes for riders who cannot ride a standard mountain bike. These trails are purposefully designed to support these riders' physical, intellectual, neurological and sensory abilities.



Cross-Country



All Mountain (Tourism Cowichan)



Downhill



Adaptive Mountain Biking (Loam Wolf)

Though not technically considered mountain biking, gravel riding and cyclocross are riding disciplines that seek out easier (green and blue) cross-country mountain bike trails from time to time.

With the exception of adaptive mountain biking, most mountain bike disciplines seek “single-track” purpose-built mountain bike optimized trails. In general, these single-track trails can be designed to provide a “flow” experience or a “technical” experience. The term “flow” trail is used to describe a trail,

usually machine made, that is smooth, and uses the rider’s momentum to minimize pedaling and braking. These trails emphasize rhythm and typically contain berms, rollers and potentially jumps (Figure 3) (Mountain Bikers of Santa Cruz). Flow trails are among the most desired trails amongst riders. A “technical” trail is one that integrates rough terrain, roots, rocks, obstacles and can require a greater degree of skill to ride. These trails rely less on momentum and rhythm and require pedaling and braking (Figure 4).



Figure 2. Single-track Trail



Figure 3. Flow Trail (Mike Kazimer)



Figure 4. Technical Trail (Bike Radar)

2.2 Understanding a Mountain Bike Experience

A mountain bike experience is defined as the ability for a rider to take part in their desired discipline, on a trail that provides their desired level of difficulty within a desired recreation setting and landscape (Figure 5). Each of these elements is essential to defining the mountain biking experience. Changes to any single element changes the entire mountain bike experience and, in turn, the riders that will be interested in it. For example, all-mountain riding on a blue trail in the remote backcountry of the mountains is an entirely different experience than all-mountain riding on a double black diamond trail in an urban environment in the grasslands. It is essential that current and future trails be purposefully designed with specific riders or markets and their desired experiences in mind. To enable this, the MBAC strongly encourages the CRD to adopt this definition and use it to help define and communicate mountain bike experiences, understand mountain bike demands and plan and design mountain bike trails.

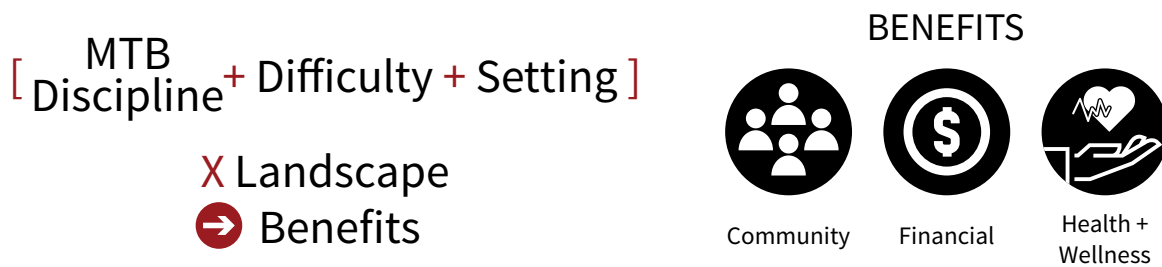


Figure 5. Elements of a Mountain Bike Experience

The MBAC understands, and would like the CRD to recognize, that quality mountain bike trails and experiences do not “just happen”. It requires a clear understanding of the rider’s objectives and intentional planning and design. A quality mountain bike experience occurs when the trail design delivers the rider objectives at the difficulty the rider seeks within the setting and landscape most desired by the rider.

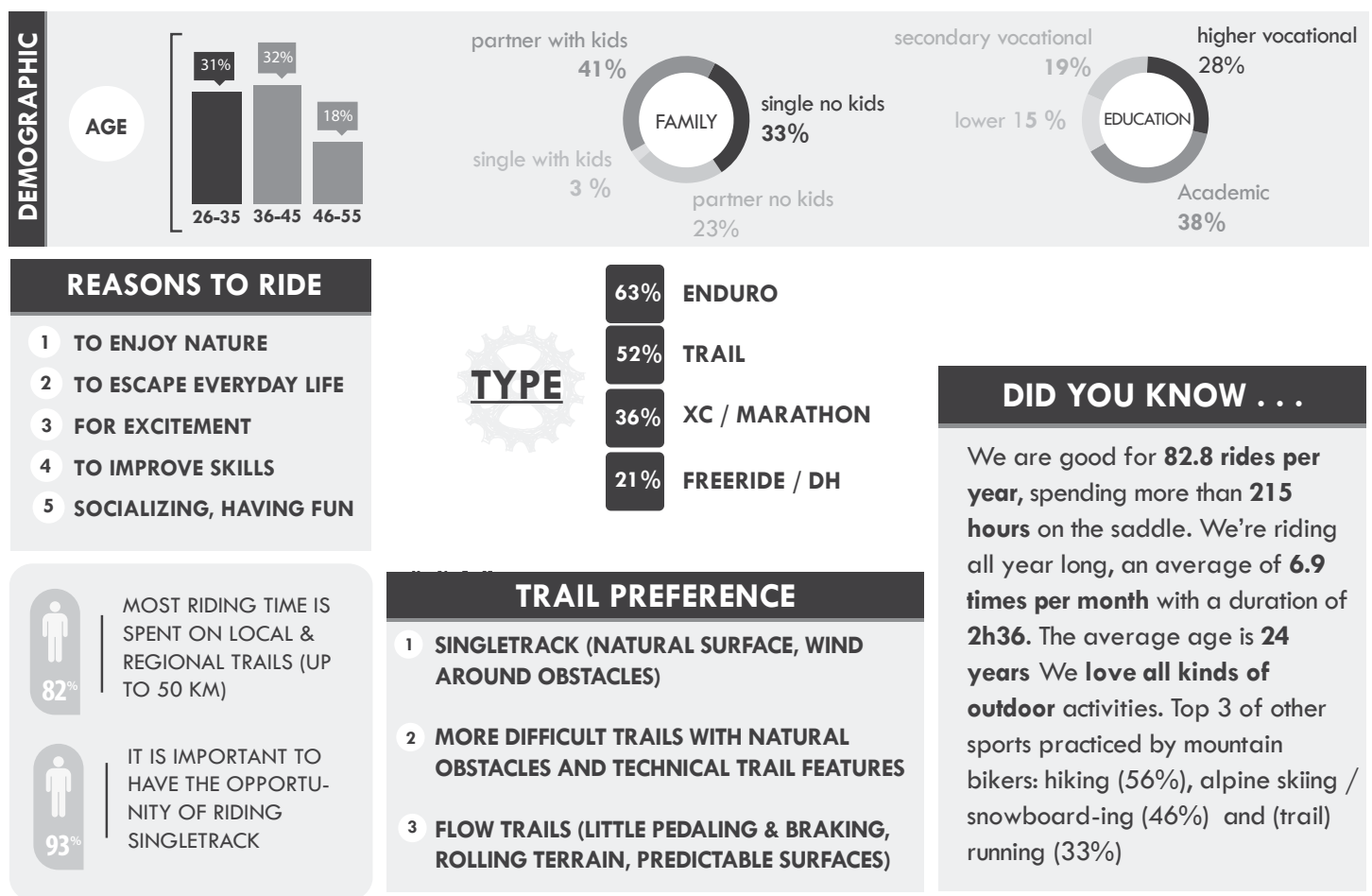
“Quality is never an accident; it is always the result of high intention, sincere effort, intelligent direction and skillful execution; it represents the wise choice of many alternatives”

— William A Foster

2.3 Who are Mountain Bikers?

Primary research on mountain bikers in the Capital Region is not available. However, the MBAC reviewed literature from IMBAⁱ and the Mountain Bike Tourism Association of BCⁱⁱ. Insights from available literature indicate:

- ▶ Mountain biking participation is about half of hiking participation, but much larger than other trail activities
- ▶ 9:1 (male v female participation) but, female participation is growing significantly
- ▶ 47% make \$100k or more, 84% make above \$50k
- ▶ 84% of riders ride between 10-30km / day, 4.81 hrs is the average ride time / day (tourism)



Trail user objectives are the “why” a rider chooses a trail. Different trails provide different combinations of user objectives. But, these objectives can be hard to describe. The MBAC believes it is important to create a common shared language between riders and the CRD so that the user objectives for trails can be clearly defined. And, by defining these objectives trail designers and CRD staff can deliberately include trail features and designs that will deliver the user objectives. The most common mountain bike user objective terms include:

TRAIL USER OBJECTIVES	DESCRIPTION
Nature	Connection to nature. This can be anything from being among a few trees in the middle of the city to remote backcountry. Nature is an important factor for many riders.
Escape	Something that takes you away from your daily grind, allows you to get lost in the experience of riding. Often means getting away from the urban environment, but a bike park, even indoors, can provide this as well.
Solitude	Getting away from the urban environment and people; being active, alone, and quiet in the outdoors.
Challenge	Seeking to improve technical abilities, to solve a difficult problem, “clean” a trail feature or segment; sense of accomplishment.
Risk	Exposure to danger or harm, or loss; intentional interaction with uncertainty. The perception of risk creates a thrill for many trail users. It can be a positive or negative part of the trail experience, depending on user expectations and risk tolerance.
Play/Playfulness	Engaging in the activity purely for the enjoyment, bringing a childlike wonder to the pursuit, no destination. On a trail, this often means seeing features to enhance, alter the experience, rather than simply riding from point to point. Playfulness is a hugely important characteristic in mountain bike trails, and distinguishes trail experiences from many other trail user goals (hikers, equestrians).
Exercise	Health and fitness are part of the sport. For some this is a primary goal, for others a bonus, for some an obstacle. Defining the physical fitness needed for a particular ride is important in setting user expectations appropriately. Recognition that some riders have high skill and low fitness (and vice versa) plays a role in trail planning.
Efficiency	Getting to a destination or accomplishing a task with the least amount of time or effort expended. Road climbs are very efficient, as are trails that ascend directly to a destination. Efficiency sometimes means compromising sustainability and fun/play. Hiking trails tend to be much more efficient than biking trails.
Education	Sometimes learning is the objective, such as is the case with interpretive trails for natural, cultural, or historical topics.

Figure 6. Mountain Biker User Objectives adopted from BLM Quality Trails

2.4 Benefits of Mountain Biking

Mountain biking can drive significant health, community, economic, and environmental benefits for residents that take part in the activity and communities that enable the activity to flourish. Some of the most common benefits from mountain biking and mountain bike trails include:



Quality of Life & Health

- ▶ Improve physical and mental health and reduce health care costs.
- ▶ Build positive self-esteem and confidence.
- ▶ Increase social interaction and connection.
- ▶ Enhance individuals' sense of achievement.
- ▶ Provide opportunities for skill development, challenge and competition, achievement, and leadership.



Economic

- ▶ Stimulate increased visitor spending through mountain bike tourism in the local economy – especially important in rural areas.
- ▶ Grow and diversify local economies through tourism, gear purchase and services.
- ▶ Create new direct and indirect jobs as new enterprises are developed to support mountain biking, skill development, and mountain biking infrastructure.
- ▶ Generate local and provincial taxation revenues.
- ▶ Help communities attract and retain employers and skilled labour seeking lifestyle communities.



Community

- ▶ Strengthen family relationships as families ride together.
- ▶ Build community and friendships as the riding community expands.
- ▶ Stimulate investment in community infrastructure, amenities and facilities that benefit both residents.
- ▶ Elevate resident awareness and community pride as riders become stewards of their trails and ambassadors for their community.
- ▶ Mobilize volunteerism and passion for regional parks.



Environmental & Cultural

- ▶ Deepen rider's understanding and appreciation of the unique Indigenous and non-Indigenous history, culture, and heritage in regional parks.
- ▶ Build a strong culture of conservation and appreciation of nature as riders learn about and appreciate the wildlife, ecosystems, and ecosystem processes in regional parks.
- ▶ Raise the profile of and local advocacy for regional parks as riders establish deeper connections to the parks.
- ▶ Enhance the rationale for expanding new parks based both on their conservation importance and the economic impact that can come from sustainable mountain biking.
- ▶ Improve the management of recreational use and mitigate impacts from recreational use by attracting visitors to high quality, sustainably designed trails which will help to keep riders out of, off, or away from sensitive areas.

2.5 Mountain Biking Trends

Mountain biking, and indeed outdoor recreation, has evolved rapidly over the past decade and all indications suggest that mountain biking will continue to evolve. The MBAC would like to stress that the guidelines should be developed to address the issues and challenges of today while considering the trends and potential future needs of tomorrow. As such, the MBAC would like the CRD to consider the following future trends and drivers as the guidelines are developed.

COVID-19

The COVID-19 pandemic has led to dramatic increases in participation in outdoor recreation, including mountain biking. People have turned to outdoor recreation to manage personal stress, undertake physical activity, and enjoy the company of their friends and family in a physically distanced way. Participation at levels well above pre-pandemic periods are expected to be the norm for the foreseeable future. Participation levels may intensify even more as the tourism industry actively turns to promoting and growing domestic outdoor recreation and adventure tourism in an attempt to offset lost revenues and business due to closures and loss of long-haul domestic and international travel. Even as the pandemic is controlled, outdoor recreation professionals anticipate that participation levels in activities such as mountain biking will remain higher than pre-pandemic levels as many new people have been introduced to the activity and will keep with it.

Bike Evolution & Price Points

Mountain bikes have and will only become more capable of navigating the terrain and obstacles encountered on the trail meaning the level of challenge sought in trails will also evolve. Manufacturers will continue to develop lighter, stronger, and more efficient bikes. More capable bikes will be made

available at much more affordable prices expanding the markets away from high-end products that are only affordable by the very wealthy or sponsored riders and into the mid to low cost markets that are accessible to a much broader range of recreational riders.

Expanding Participation

Mountain bike organizations, riding schools, active transportation are all helping to expand the demographic of mountain bikers. Once skewed towards males, we are seeing the rapid expansion of mountain bike participation by women, youth and by all ages and a much wider array of income levels. The evolving demographics of mountain bikers will continue to increase mountain bike participation and ensuing demands for more trails and greater active management to avoid crowding.

Communication Technology

Mountain bikers have proven to be enthusiastic adopters of communication technology. Websites, apps, and other social media tools are a mainstay of the mountain bike community. Whether it be using technology for mobilizing volunteers and advocacy, reaching the community with stewardship education, helping find the right trails for their desired experiences or keeping them on the right trail, the mountain bike

community is among the most advanced recreational community in their use of technology.

Climate Change

Climate change will have significant implications, some good and some bad, on mountain biking. In many locations, climate change is increasing the length of the riding season as some jurisdictions experience later starts to winter and an earlier spring. But more intense summer temperatures and greater forest fire smoke are creating more difficult and potentially unsafe riding conditions. In addition, warmer summers may create greater wildfire risk which may lead to more closures of forested areas to help prevent wildfires. These collective actions may shift riding patterns and cause intense riding periods to be focused on early and late season margins and potentially elevate crowding and conflict and will also shift when trail maintenance is able to be completed. The extreme weather events will also bring challenges for mountain bike trail design and maintenance. Major storms may deliver more intense precipitation events elevating impacts such as erosion to the trail tread. These events will demand more time and more money to respond to. This will make marginally or poorly designed trails entirely unsustainable.



Trail Development Capacity

There has been a rapid and exponential growth in the number of professional and volunteer mountain bike trail organizations, planners, designers and builders – both trained and untrained. Unlike other recreational activities, mountain biking is experiencing a relative surge in volunteerism with an interest in helping build and maintain trails. In fact, the mountain bike community has developed an underlying social expectation that to ride one must also help maintain and should be a part of a local mountain bike organization. This expanded generation of trail organizations and builders are focused on creating mountain bike-optimized designs and features that exponentially increase the enjoyment of trails.

Outdoor Recreation Culture

Today's youth, our newest generation of outdoor recreation enthusiasts for whom these guidelines are truly being developed, have always known the outdoor recreation sector to include mountain biking whereas for the older generations, some may still consider mountain biking to be "new". Mountain biking is now mainstream and part of the range of activities that are expected and anticipated to be available to outdoor recreation enthusiasts in parks and recreation areas.

Mountain Biking is Economic Development

One need not look any further than British Columbia and Vancouver Island to know that mountain biking can be an important economic development strategy. Communities and destination marketing organizations across the province, including Indigenous communities, see the potential for mountain biking to help grow, strengthen, and diversify economies especially in rural communities. And these communities know that quality trails are the foundation of this tourism economy. This trend will certainly continue and is likely to expand greatly. The Capital Region is no different. The region holds tremendous potential that has yet to be unlocked and organizations such as Tourism Greater Victoria are working to expand nature based and adventure tourism especially considering recent COVID-19 implications.



A full-page background image showing a mountain biker in the foreground, riding down a dirt trail. The biker is wearing a helmet, a backpack, and is leaning forward. The trail is surrounded by green vegetation and trees. In the background, there is a large body of water (a lake or bay) and distant mountains under a clear sky. The text '3 MOUNTAIN BIKING IN THE CAPITAL REGION & REGIONAL PARKS' is overlaid in white, with the number '3' underlined in red.

3 MOUNTAIN BIKING IN THE CAPITAL REGION & REGIONAL PARKS

The delivery of mountain biking trails and opportunities in the Capital Region occurs through an intertwined delivery system made up of various landowners and managers. Each of these land managers and owners have different land management objectives and priorities for those lands. In general, the system is comprised of:

- ▶ Regional Parks (e.g. Mount Work, Harbourview)
- ▶ Private Forestry Lands (e.g. Tansky Recreation Site)
- ▶ Private Resort Lands (e.g. Bear Mountain)
- ▶ Municipal Lands (e.g. Jordie Lunn Bike Park)
- ▶ BC Provincial Parks (e.g. Goldstream Bike Park)

There is both an opportunity and a need to purposefully coordinate the delivery of mountain biking across this system of land managers. Improved and deliberate coordination will help ensure the region provides the right mix of mountain bike trail experiences in the right locations and in a way that aligns with the objectives of the respective lands. Recognizing the diverse management objectives and realities of each land manager in the system, it is also important to know that the mountain bike community does not expect a single land manager to meet all the demands of the mountain bike community on one particular land base. Instead, the MBAC believes that a broader systems approach to planning this network is needed and will enable the most suitable mountain bike experiences to be developed on the lands that are most appropriate and hold the greatest potential to support those experiences.

Regional parks have become popular mountain bike destinations and are looked at as an important land base to support the future of mountain biking for a variety of reasons:

- ▶ Incredible scenery and beauty of regional parks,
- ▶ Regional parks contain a variety of terrain that is appealing and suitable for mountain biking,
- ▶ The proximity of regional parks to regional population centers and connectivity to transit and regional trails make these lands relatively easy to access, and
- ▶ Most of the land in the Capital Region is owned by private forestry companies meaning there is limited public land parcels on which mountain biking can be supported.

The regional parks system provides visitors with 315 km of authorized trails. But only 67 km, or 21%, of the authorized trail system have been assigned a difficulty rating specifically for mountain biking indicating that these trails are intended to deliver a quality mountain bike experience. Currently, two of the existing 31 regional parks (just 6% of all regional parks) – Mount Work and Sea to Sea – provide authorized mountain bike opportunities through a purpose-built mountain bike optimized trail network (Figure 7). Most of these mountain bike optimized trails also accommodate other activities such as hiking.

What is a Trail?

A trail is a type of infrastructure that is purposefully designed, constructed, and used to facilitate one or more recreational activities. To be a recognized trail, the route must be:

- ▶ Approved by the landowner / manager,
- ▶ Mapped,
- ▶ Marked (e.g. signage), and
- ▶ Actively managed and maintained.

If one of the above criteria are missing, the route is not a trail. It is linear access.

The CRD should adopt this definition of a “trail”.

What is a Mountain Bike Optimized Trail?

A trail that permits multiple activities (multi-use) but has been designed specifically to, and contains natural and built features that, optimize the trail experience for mountain bikers.

315 km of authorized trail in regional parks





2 of 31 regional parks provide mountain bike optimized trails

21% of authorized trails in regional parks have been assigned a difficulty rating for mountain biking

According to TrailForks, Mount Work Regional Park provides riding for all levels of difficulty though the network heavily favours blue and black diamond rated trails that provide for technical riding and limited flow (Table 1). Though all of these trails exist within Mount Work Regional Park, the mountain bike community identifies two distinct sub-areas in the park including 1) Hartland Mountain Bike Park and 2) Mount Work Regional Park. In Mount Work, the management plan has designated a specific zone in the park for mountain biking, horse riding and hiking. The trails in this portion of the park are developed, maintained, managed, and monitored by the South Island Mountain Bike Society through a license agreement with the CRD.

Sea to Sea Regional Park, which is referred to as the Harbourview riding area, contains a number of mountain bike trails with most segments favouring the more difficult black diamond trails which provide technical riding and limited flow. Unlike Mount Work, a license agreement does not exist between the Sooke Mountain Bike Club and the CRD for the development, maintenance, management, and monitoring of the mountain bike trails in this area and many of the trails are not regularly maintained.

Table 1. Proportion of Trail by Trail Difficulty Rating (TrailForks)

Park & Riding Area	Proportion of Trail by Trail Difficulty Rating (TrailForks)			
	 Green	 Blue	 Black	 Double Black
Hartland Mountain Bike Park	0%	45.3%	41.3%	13.3%
Sea to Sea Regional Park - Harbourview	4.2%	29%	54%	8.3%

Source: TrailForks
* For further detail and characteristics on each trail difficulty rating, please see Appendix C

GROWING PRESSURE & DEMANDS

Hosting over 7 million visits annually, the MBAC understands that regional parks are facing growing pressure and demands from both the mountain biking community and other outdoor recreation activities. The demand for mountain biking and the provision of a diverse supply of high-quality purpose-built mountain bike optimized trails in the Capital Region has grown dramatically since the original network of mountain bike trails in regional parks were developed or sanctioned. The MBAC believes there is a need to expand the quantity, diversity, and quality of mountain bike experiences within regional parks. At the same time, MBAC recognizes that visitation to regional parks by other trail users and visitors has also grown. And, this increase in visitation, which has only been intensified through the COVID-19 pandemic, is happening at a time when land development pressures and the loss of ecosystems and biodiversity in the region have elevated the need for protected areas to protect the Capital Region’s biodiversity, ecosystems, and ecosystem processes.

Recognizing the pressures and demands that regional parks face, the advice and guidance prepared by MBAC has considered how the supply of mountain bike experiences can be enhanced and evolved to better meet the needs of the mountain bike community but in ways that will minimize impacts to and conflicts with other visitors and the important Indigenous, biodiversity and ecosystem values that regional parks are helping to protect.

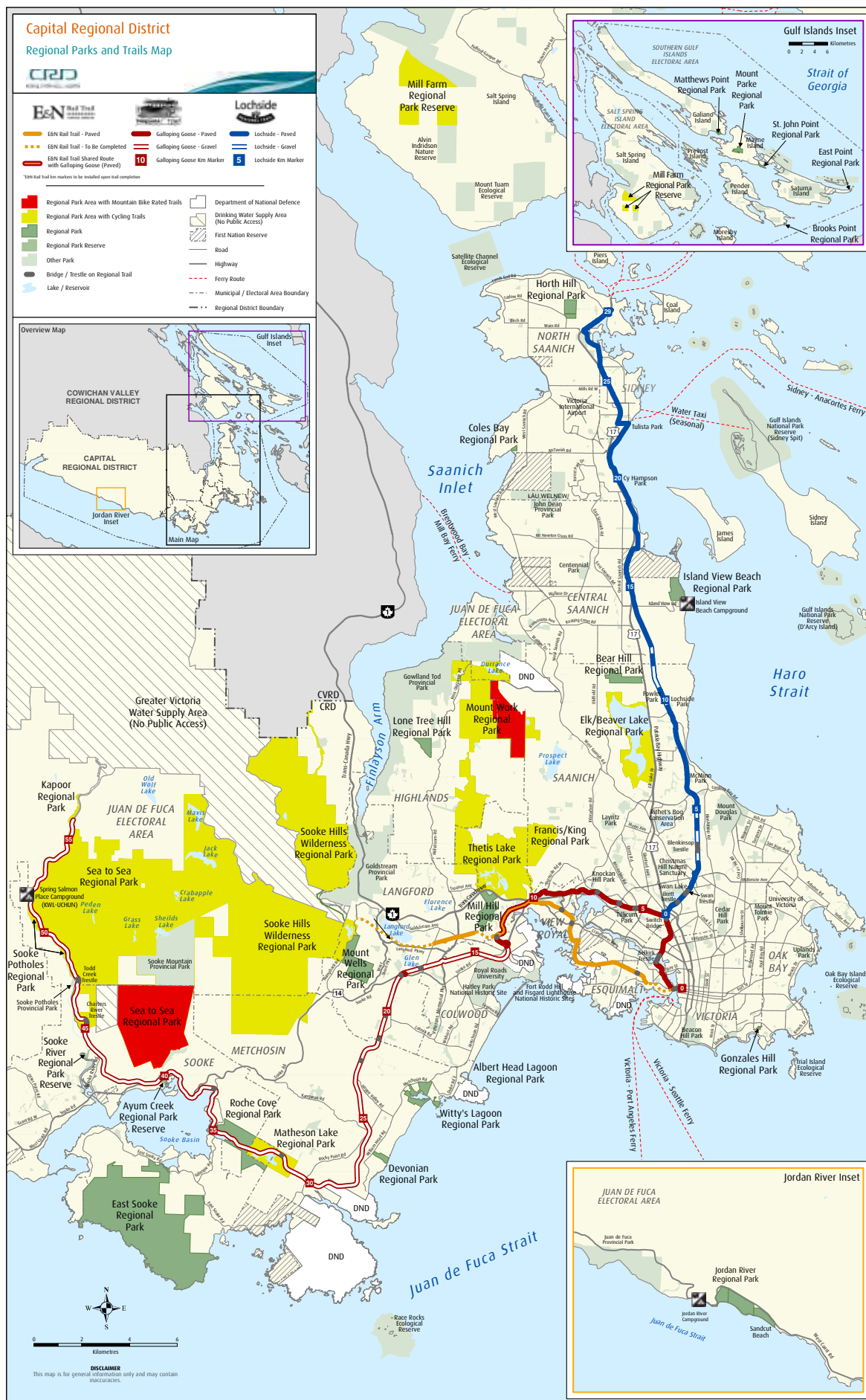


Figure 7. CRD Regional Parks – Biking & Cycling Opportunities

4 ADVICE & GUIDANCE



Photo Cred: Dirty Girlz Bike Club

The following sections present the advice and guidance from the MBAC to the CRD. Each of the priority focus topics discussed by the MBAC have been organized under one of the following four topic themes:

- ▶ Mountain Biking Experiences
- ▶ Regional Parks Classification & Zoning
- ▶ Service Delivery Model
- ▶ Planning, Design & Management

An introduction and supporting context are provided for each discussion topic which is followed by clear recommendations to the CRD. The MBAC respectfully requests that the CRD consider and integrate this advice and guidance in the development of Mountain Bike Guidelines for Regional Parks.

4.1 Mountain Biking Experiences

4.1.1 GAPS IN MOUNTAIN BIKE EXPERIENCES IN THE GREATER VICTORIA REGION

Context

As indicated earlier, mountain biking is a remarkably diverse activity. Residents of and visitors to the Capital Region are seeking a wide range of mountain biking experiences. Though specific research into the mountain biking demands in the region are not available, mountain bike organizations have been clear that the supply of existing experiences have not necessarily evolved in line with demands. There are three primary reasons for this:

- ▶ The approval of new trail construction has been constrained,
- ▶ The unsanctioned trails that have been built may not align with the experiences that are of highest demand by the broader range of riders, and
- ▶ Terrain in the Capital Region and in regional parks makes development of less difficult trail experiences and flow trails more challenging but not impossible.

The committee would also like to identify that, currently, there are no purpose-built adaptive mountain bike trails or opportunities in the region for riders who cannot ride a standard mountain bike.

It is the opinion of the MBAC that the current supply of mountain-bike optimized trails does not meet the region's current needs, is not positioned to meet anticipated future needs and is not positioned to capture the true tourism potential that mountain biking can bring to the Capital Region and our economy. The committee believes that deliberate efforts should be taken to increase the supply and diversity of purpose-built mountain bike optimized trails in the Capital Region in general and in regional parks more specifically.

Advice & Guidance

To address the gaps in the diversity and volume of trail experiences in the Capital Region generally, the MBAC recommends that:

1. The system of mountain bike trail providers as a whole, should focus on developing new trails that provide the following mountain bike trail experiences:
 - ▶ All-mountain flow and tech trails at the green, blue and double black diamond levels of difficulty as well as supporting green and blue climbing trails.
 - ▶ Cross-country (including gravel riding / cyclocross) at the green and blue levels of difficulty.
 - ▶ Downhill trails with shuttle opportunities ranging from blue to double black levels of difficulty.
 - ▶ Adaptive Mountain Bike (aMTB) at the green and blue levels of difficulty.

4.1.2 MOST APPROPRIATE MOUNTAIN BIKE EXPERIENCES IN REGIONAL PARKS

Context

Though there are gaps in the current supply of mountain biking experiences in the Capital Region, the MBAC recognizes that mountain biking is delivered through a regional system comprised of different providers and land managers. The committee agrees that a single provider cannot, and should not attempt to be, all things to all riders. Providers, whether it be Regional Parks or others, should provide the experiences that are best enabled by their lands and aligned with their respective mandates. As such, the MBAC is not suggesting that regional parks should attempt to address all mountain bike experience gaps identified above. The committee recognizes the conservation and outdoor recreation mandate of regional parks and acknowledges that the overarching role of the public sector in the provision of recreation, including mountain biking, is to maximize the “public good”. The committee recognizes that the investment of public tax revenues must occur in a way that will maximize the benefit, directly or indirectly, to the majority of the residents in the Capital Region rather than a small few. To this point, the committee understands that as the level of excellence in any recreational activity, including mountain biking, increases, the number of people engaged in the activity, and therefore the public good derived from investments in delivering the activity, typically decreases (Figure 8). Sport for Life’s “Long-term Athlete Development Model” (Figure 9) was adopted by the committee as a framework for informing recommendations about the “level of play”. In accordance with the above, the MBAC has identified the mountain bike experiences, level of difficulty and level of play that should be the priority focus in regional parks.

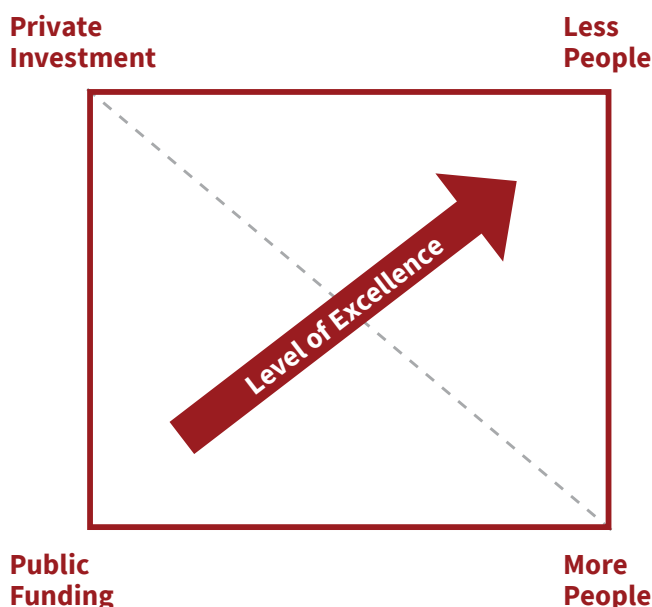


Figure 8. Public Funding & Level of Excellence Model

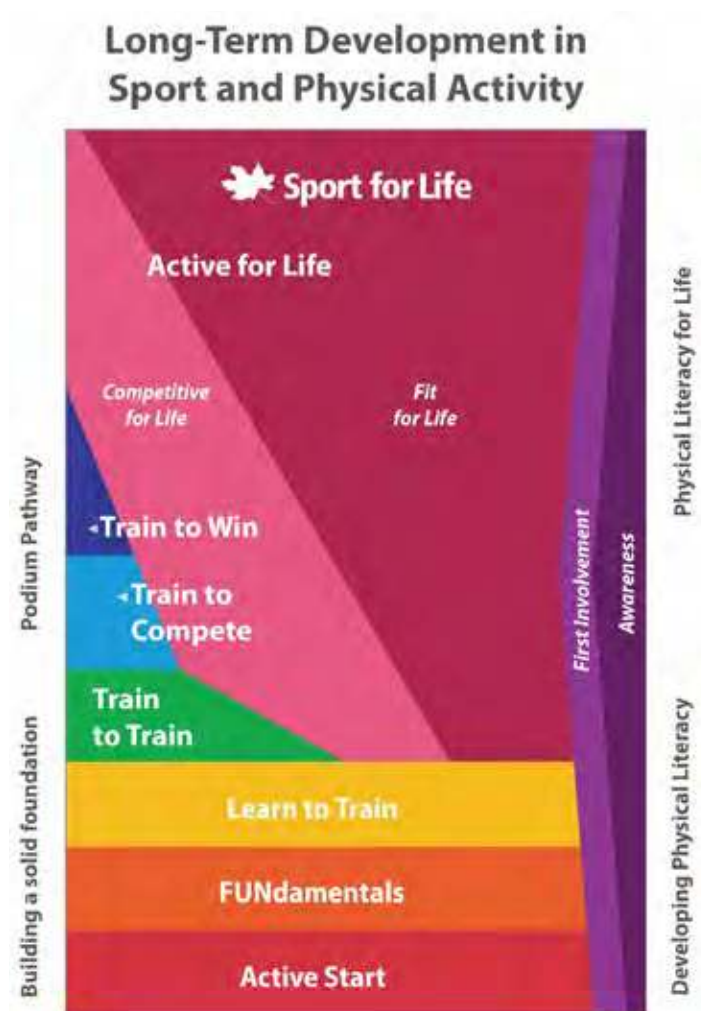


Figure 9. Sport for Life Long-term Athlete Development Model

Advice & Guidance

The MBAC recommends that:

- 1.** The CRD should enable the development of mountain bike optimized trails, including technical trail features and visitor infrastructure, that support the following disciplines:
 - ▶ All-mountain flow trails at the green, blue and double black diamond levels of difficulty as well as supporting green and blue climbing trails.
 - ▶ Cross-country (including gravel riding / cyclocross) at the green and blue levels of difficulty (see recommendation #4 as well).
 - ▶ Adaptive Mountain Bike (aMTB) at the green and blue levels of difficulty.
- 2.** The CRD should prioritize providing, or enabling the provision of, mountain bike trails and programs that will:
 - ▶ Help introduce new mountain bikers to the activity,
 - ▶ Enable riders to develop the fundamentals and learn to train, and will
 - ▶ Keep riders active and fit for life through mountain biking.

The committee supports the region as being the national hub for elite mountain bike training and recognizes that many of the trails developed in Regional Parks are also likely to be used by these athletes for training. However, the MBAC recognizes that CRD priority is unlikely to focus on providing higher level of service trails and facilities that are focused on meeting the expectations of national and international racing standards or programs to develop elite athletes.

- 3.** Regional Parks develop a new, or update the existing, trail classification system to include “activity-optimized” trails as a new classification in addition to typical single use and multi-use class trails and that the classification also include level of difficulty and recreation setting.
- 4.** Regional Parks actively seek opportunities to support the creation and connection of long-distance interconnected natural surfaced single track loops throughout the region that support bike packing, connect riders to existing mountain bike trail destinations and to other adjacent jurisdictions.



Multi Use Trails – allow two or more distinct activities to occur on a single trail but the experience and amenities have not been optimized for any particular activity type.

Single Use Trails – allow only one recreation activity and have been designed to optimize the experience for that activity.

Activity Optimized Trails – allow two or more distinct activities to occur on the trail but have been designed and incorporate activity optimized features that elevate the experience for only one of the activities.

5. Though the MBAC acknowledges the growth in popularity of downhill riding, dirt jumping and gravity parks, the MBAC recommends that these activities are less appropriate to be developed within regional parks due to their intensive footprints and elevated levels of risk and liability. These experiences are important and needed and more appropriate for municipal park settings or private resort lands.
6. During the update of the CRD Regional Parks Strategic Plan, Regional Parks should identify and include the mountain biking experience gaps, as identified in this report, as high outdoor recreation priorities for regional parks to address and affirm the commitment to supporting these experiences in appropriate parks and appropriate locations within parks. In addition, the suitability of land to deliver and support new mountain bike trails should be added as an additional criterion in Regional Parks' parkland acquisition criteria.
7. CRD work with the mountain bike organizations to prepare Trail Management Objectives for each new mountain-bike optimized trail, and where necessary, existing mountain bike optimized trails in order to clearly define the trail user objectives, level of difficulty, technical trail features to be included, trail classification, permitted uses, design parameters and inspection and maintenance standards. The CRD should require TMOs to be submitted as part of all trail development applications.

Trail Management Objective...

Documents and synthesizes, in a single form, the management intention for the trail in a clear, consistent and understandable way. TMOs should guide all future trail planning, design, construction, maintenance, and management decisions for the trail and are used to help public land managers understand, communicate and, ultimately, approve the development of the trail





4.2 Regional Parks Classification & Zoning

Context

Upon acquisition, each regional park is assigned a park classification (see Appendix DD.1). This classification indicates the high-level management priority and focus for the park. Through the management plan process, zoning (see Appendix DD.2) is used to refine and provide more specific management direction for certain areas within a park. Neither the park classification nor the park zones provide clear direction on what specific recreational activities are deemed to be compatible in the park / zone which are considered incompatible. Without this clarity, it is difficult for the mountain bike community, other recreational users and Regional Parks staff to make clear decisions about the permissibility of mountain biking and where future mountain bike trails could be developed.

Advice & Guidance

To improve clarity and clearly communicate appropriate uses in regional parks and park management zones, the MBAC recommends that:

1. Regional Parks prepare a matrix or framework that provides system wide direction on what activities, trail configurations and visitor amenities are deemed to be compatible, compatible with conditions or incompatible with the management intent of each park management zone. Specific to mountain biking, the framework should clearly articulate which mountain bike disciplines, which trail system configuration (e.g. destination areas with higher density of trails versus single or low density trail network), which technical trail features and which supporting visitor infrastructure is deemed compatible with each management zone. Table 2 is provided as an example and, where necessary, should be refined by Regional Parks and included in the Mountain Bike Guidelines.

TECHNICAL TRAIL FEATURES (TTFs)...

Are constructed or natural obstacles that are purposefully integrated or built into a trail to deliver specific user objectives and require riders to negotiate them. There are 3 categories of TTFs:

Natural	Enhanced	Constructed	
<ul style="list-style-type: none">▶ Drop▶ Rock face / slab▶ Rock roll▶ Exposure▶ Roots▶ Natural rock garden	<ul style="list-style-type: none">▶ Rock garden▶ Dirt Berm▶ Switch berm▶ Small rollers▶ Log ride▶ Table top▶ Step up / down	<ul style="list-style-type: none">▶ Wooden Berm▶ Bridge (<i>that is used for play vs trail infrastructure</i>)▶ Wall ride	<ul style="list-style-type: none">▶ Skinny▶ Jump▶ Gap Jump▶ Roller coaster▶ Pump track

Table 2. An Example of Compatible, Permitted and Not Permitted Mountain Bike Uses by Park Management Zone

		PARK MANAGEMENT ZONE					
		Environmental Protection	Cultural Heritage Protection	Regional Wilderness	Natural Environment	Outdoor Recreation	Park Services
DISCIPLINE	Cross country						
	All mountain						
	a-MTB						
	Regional Connections						
TRAIL SYSTEM CONFIGURATION	Dense Network						
	Dispersed Network						
	Single Trail						
TTF'S	Natural						
	Enhanced						
	Constructed						
AMENITIES	Signage						
	Bike wash station						
	Parking						
	Washroom (un-serviced)						
	Washroom (serviced)						
	Day use / picnic areas						
	Bike Play Park / Skills Training Area						

Compatible Use	Uses that are considered to be consistent with the intent of the park management zone under normal trail design and visitor management practices.
Permitted	Uses that may be compatible with the intent of the park management zone under certain circumstances and under special conditions and controls where necessary.
Not Permitted Use	Uses that are not compatible with the intent of the park management zone.

4.3 Service Delivery Model

Context

As demonstrated in jurisdictions such as Cumberland, North Cowichan, Regional District of Nanaimo and on Crown Lands, mountain bike trails and mountain biking opportunities can be delivered through a variety of service delivery models. The MBAC believes that it is imperative that a clear mountain biking service delivery model be established for regional parks.

To inform the MBAC's recommendations, the committee discussed delivery models that are applied in other jurisdictions as well as the mandate of Regional Parks as a public sector recreation provider. Land managers, such as Regional Parks, can and do play a variety of roles in the delivery of mountain biking including:

- ▶ **Direct Provider** – the land manager identifies community needs and plans, designs, constructs and operates mountain bike trails and delivers programs and services through public funding.
- ▶ **Enabler / Indirect Provider (e.g. community development)** – the land manager initiates and enters into mutually beneficial and collaborative partnerships and alliances and may provide various supports such as capacity building, leadership, facilitation and / or funding to community groups and organizations that plan, design, construct and operate mountain bike trails.
- ▶ **Cost Share (Patron)** – the land manager provides financial support through a formal cost share agreement to an existing entity such as another government agency who already offers mountain biking opportunities in their jurisdiction but not in the land manager's jurisdiction.

In accordance with other jurisdictions, the role that the CRD chooses to play in the service delivery model could vary depending on the following service areas:

- ▶ Trail planning,
- ▶ Trail design,
- ▶ Trail construction,
- ▶ Trail maintenance,
- ▶ Trail and visitor monitoring, and
- ▶ Visitor management.

The current service delivery model for mountain biking in regional parks is unclear, inconsistent between parks (e.g. Mountain Work Hartland Area versus Harbourview) and is leading to confusion and frustration for the mountain bike community and CRD staff. It is also directly challenging the ability for the region to meet the current demands for mountain biking and is resulting in growing unauthorized trail building and undesirable environmental and other impacts.

Benefits of a Clarified & Consistent Service Delivery Model

- ▶ Certainty for the mountain bike community, the CRD and staff
- ▶ Improved partnerships and relationships
- ▶ Ability to leverage limited financial and staff capacity
- ▶ Enhanced capacity to deliver on regional mountain bike needs
- ▶ Stronger stewardship commitment and connection to regional parks
- ▶ Improved management, maintenance, and sustainability
- ▶ Reduced conflicts and public complaints
- ▶ Improved quality of trails and riding experiences
- ▶ Improved environmental integrity

Advice & Guidance

Recognizing that Regional Parks will remain a direct provider of policy development, regional park management planning and trail development application review and approvals, the MBAC recommends that:

- 1.** The CRD deliberately adopt an “Indirect Provider” role for the following service areas relating mountain bike optimized trails (Figure 10):
 - ▶ Trail planning
 - ▶ Trail design
 - ▶ Trail construction
 - ▶ Trail maintenance
 - ▶ Trail monitoring
- 2.** The CRD deliberately adopt a direct provider role, with support from mountain bike organizations, for:
 - ▶ Planning, design, construction, and maintenance of supporting visitor infrastructure (e.g. parking lots, bike wash stations, day use areas, washrooms)
 - ▶ Visitor management activities specific to mountain biking.
- 3.** The CRD establish a consistent license agreement template, performance criteria and process for enabling mountain bike organizations to assume the service delivery roles outlined above.
- 4.** The CRD consider the establishment of a dependable and sustainable granting program to support mountain bike organizations with implementing the service delivery roles outlined above (e.g. contracting professional trail designers) and act as partners in leveraging other funding sources as is done in other jurisdictions such as the Cowichan Trails Stewardship Society in North Cowichan, District of Squamish, Whistler.
- 5.** The CRD provide trail planning, management, and monitoring training for volunteer organizations who enter into a license agreement and others who are authorized to provide trail maintenance activities to build and maintain capacity. And, Regional Parks staff and volunteer leaders participate in trail design, construction and maintenance training provided by third party industry experts.

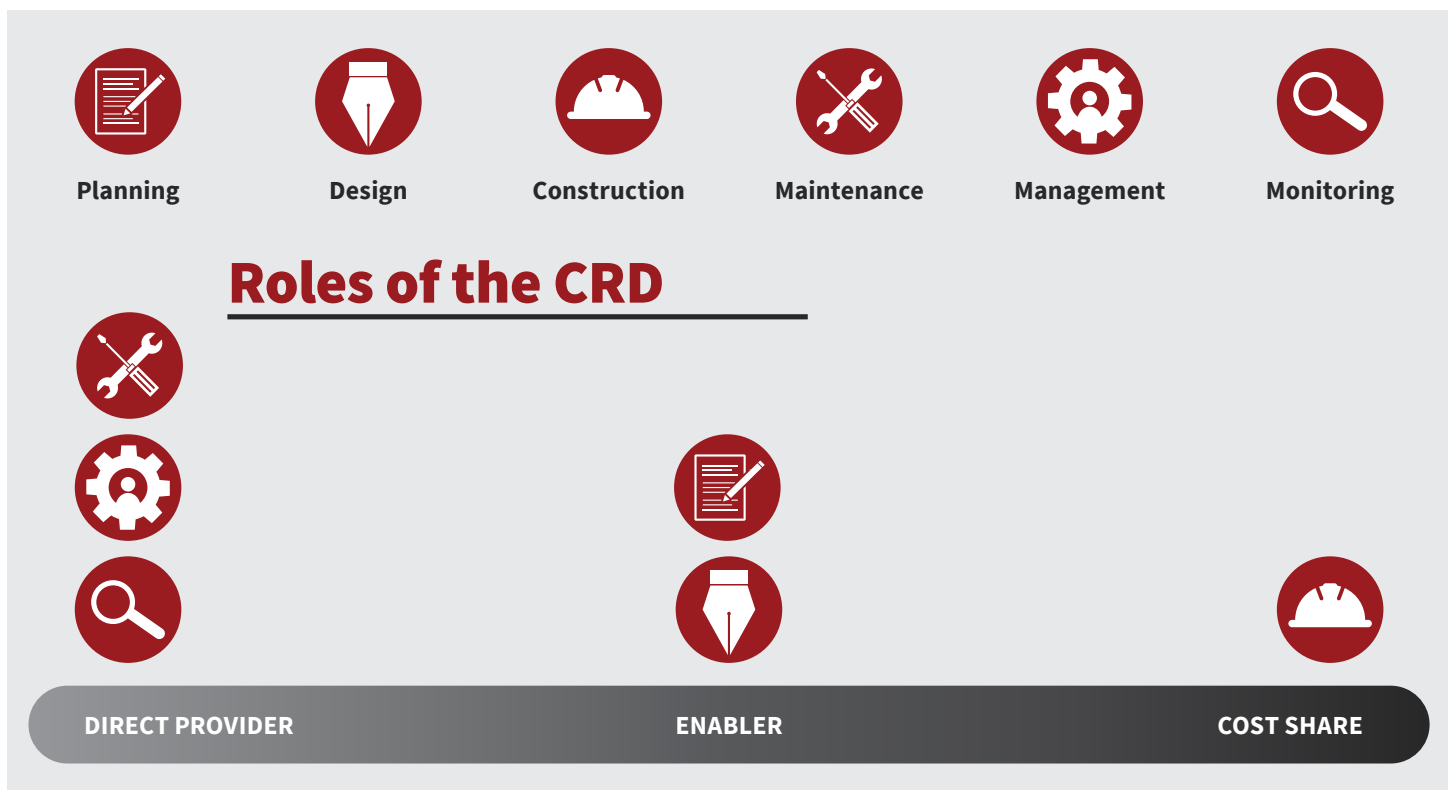


Figure 10. Recommended Service Delivery Role of the CRD

4.4 Planning, Design & Management

4.4.1 AVOIDING & MINIMIZING ECOLOGICAL, INDIGENOUS & CULTURAL IMPACTS

Context

All outdoor recreation activities, including mountain biking, create undesirable environmental impacts and, potentially, adverse effects on areas of cultural and spiritual significance to local Indigenous communities. It is the opinion of the MBAC that each outdoor recreation activity has an obligation and responsibility to take steps to avoid and mitigate the adverse effects of their activity regardless of how their activity might compare to others. Prior to developing advice, the MBAC worked to understand what impacts occur from mountain biking, why they occur, what elements influence the severity and extent of the impacts and how the impacts of mountain biking compare with other typical recreation activities permitted in regional parks. It is essential that the mountain bike guidelines be founded upon the best available research and insights into how mountain biking impacts environmental, Indigenous, and cultural values and how those compare with other activities that are already supported in regional parks.

The committee examined a range of literature reviews on the impacts of outdoor recreation generally and mountain biking more specifically^{iii iv v}. Though the science into the impacts of mountain biking continues to evolve, the literature clearly suggests that mountain biking, like any outdoor recreation activity, can adversely impact:

- ▶ Soil – erosion, compaction
- ▶ Vegetation – damage, loss, introduction and spread of invasive species
- ▶ Water – sedimentation, pollution, contamination
- ▶ Wildlife – distribution and abundance, disturbance and anti-predator response, mortality, habituation, shift species populations to generalist species and away from specialist species
- ▶ Ecological processes and habitat – habitat loss, fragmentation, increase edge effects
- ▶ Indigenous values & traditional uses – interference with traditional and spiritual practices, loss / damage / theft of traditional values

Though many of impacts outlined above occur directly on the trail and within the immediate trail corridor, the committee understands that some impacts can also extend well beyond the trail corridor (e.g. wildlife disturbance, edge effects, species displacement). The MBAC recognizes that mountain biking in the Capital Region is a year-round activity which leaves little seasonal reprieve for wildlife in popular areas. And, the MBAC recognizes that night-riding has grown in popularity placing even greater pressures on wildlife that depend on night time for feeding, foraging and movement or for species that have altered their behaviours to favour evening periods where they can avoid human disturbance.

The literature indicates that the severity and extent of environmental impacts from mountain biking specifically, and outdoor recreation more generally, can vary. Several factors combine to influence the overall severity and extent of the impacts including:

- ▶ Type of activity and behaviours of visitors,
- ▶ Intensity, duration, and timing of the use,
- ▶ Weather including precipitation,
- ▶ Soil type, slopes, vegetation, and ecosystem types the activity occurs in,
- ▶ Species that inhabit the area the activity occurs in, and
- ▶ Design and siting of infrastructure and implementation of management practices

A sustainable trail...

is a trail that allows the visitors to optimize their experience while creating the least amount of adverse impacts to the environment and cultural values, minimal visitor conflicts and safety concerns and requires only routine maintenance. Trails that do not do this are not sustainable.

In general, the committee understands that the activity type, visitor behaviour and location of use is a greater determinant of the severity and extent of environmental and Indigenous and cultural impacts than volume of use. The literature reviewed by the committee suggests that:

- ▶ Equestrian use creates the greatest impacts to the trail tread conditions (e.g. soil loss, erosion),
- ▶ Hiking and Mountain biking (including class 1 e-bikes) appear to have similar impacts on trail tread conditions,
- ▶ Equestrian use creates the least disturbance to wildlife, and
- ▶ Mountain biking and other quiet but fast-moving activities (e.g. trail running) create greater disturbance of wildlife due to the element of surprise^{vi}.

Many park managers may conclude that with greater visitation comes greater impacts. The committee would like to stress that the literature indicates that, though increased use can lead to increased environmental impacts, the magnitude of the increased impacts can be quite small particularly when well designed and maintained trails and infrastructure are in place (Figure 11). The greatest degree of impacts to soil and vegetation occurs in the early stages of use (e.g. during the construction of the trail) with impacts levelling off over time. This said, the committee recognizes that impacts to wildlife may follow a different pattern pending the nature of species in the park and the transport and spread of invasive species are also likely to be tied more closely to the volume of use and visitor behaviours.

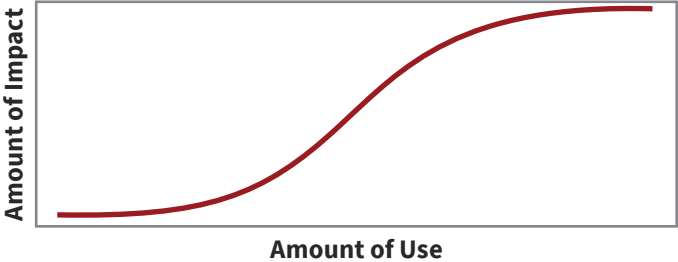


Figure 11. Sigmoid curve that characterizes the relationship between amount of recreation use and resultant intensity of environmental impact

Though the committee acknowledges that mountain biking creates adverse impact, it is the opinion of the MBAC that occurrence of an adverse impact doesn’t necessarily mean that the impact results in a significant ecological effect. Leading recreation ecology researchers suggest that overall significance of an impact(s) is a function of a) the impact characteristics (e.g. extent, longevity, intensity) and b) the characteristics of the attribute (e.g. rarity, irreplaceability) that is being impacted^{vii} (Figure 12). With all recreation comes adverse impacts. Therefore, it is essential for the CRD to define and understand what degree of impacts are unacceptable and exceed the limits of acceptable change. It is the MBAC’s understanding that, at this point in time, the CRD does not have a process for determining which degree of impacts are within the organization’s tolerances or limits of acceptable change for a particular park and, therefore, which extent of impacts are deemed to exceed the limits of acceptable change.

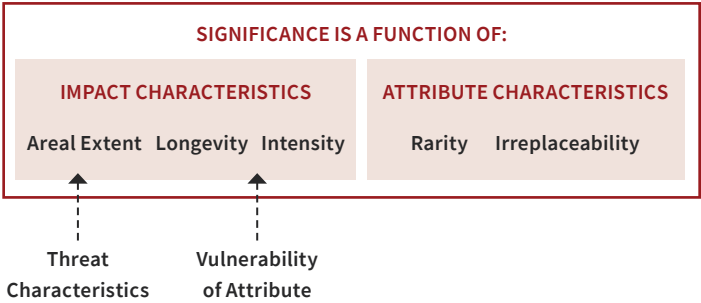


Figure 12. Criteria that help to define the significance of an ecological effect (Cole & Landres 1996)

Advice & Guidance

Based on the above outlined understanding, the committee has prepared the following recommendations on how the impacts of mountain biking on environmental, Indigenous, and cultural values in regional parks can be avoided or minimized. The MBAC recommends that:

1. The CRD adopt, or develop, a visitor use management framework (<https://visitorusemanagement.nps.gov/VUM/Framework>) to establish clear indicators, triggers and thresholds that define the limits of acceptable change for recreation impacts. The CRD should select and integrate these indicators, triggers, and thresholds of the limits of acceptable change into park management plans and establish a clear structure of what direct and indirect management actions will be taken as / if triggers are reached in relation to the indicators.
2. The CRD ensure all future trails, including the authorization of currently unauthorized trails, are sited to minimize their impacts on environmentally sensitive areas (e.g. species at risk habitat, nesting / den sites, riparian areas, sensitive soils, steep slopes, watercourses, wetlands, unfragmented intact habitat), and areas that are culturally and spiritually important to local Indigenous communities to the extent possible. It is important the CRD balance the protection of environmentally sensitive areas against the need to locate mountain bike trails where they will provide riders with a quality trail experience. Failure to create a quality trail experience due to overly strict environmental limitations is likely to lead to riders seeking their desired experience off-trail. This reality makes it essential that skilled environmental professionals work together with skilled trail planners and designers to achieve this delicate balance. The CRD should maintain, or undertake, appropriate biophysical inventories, archeological overview assessments and archeological impacts assessments to fully understand the environmental and archeological values in areas proposed for trail development as required by the CRD's current policies and provincial, regional, and municipal legislation and bylaws.

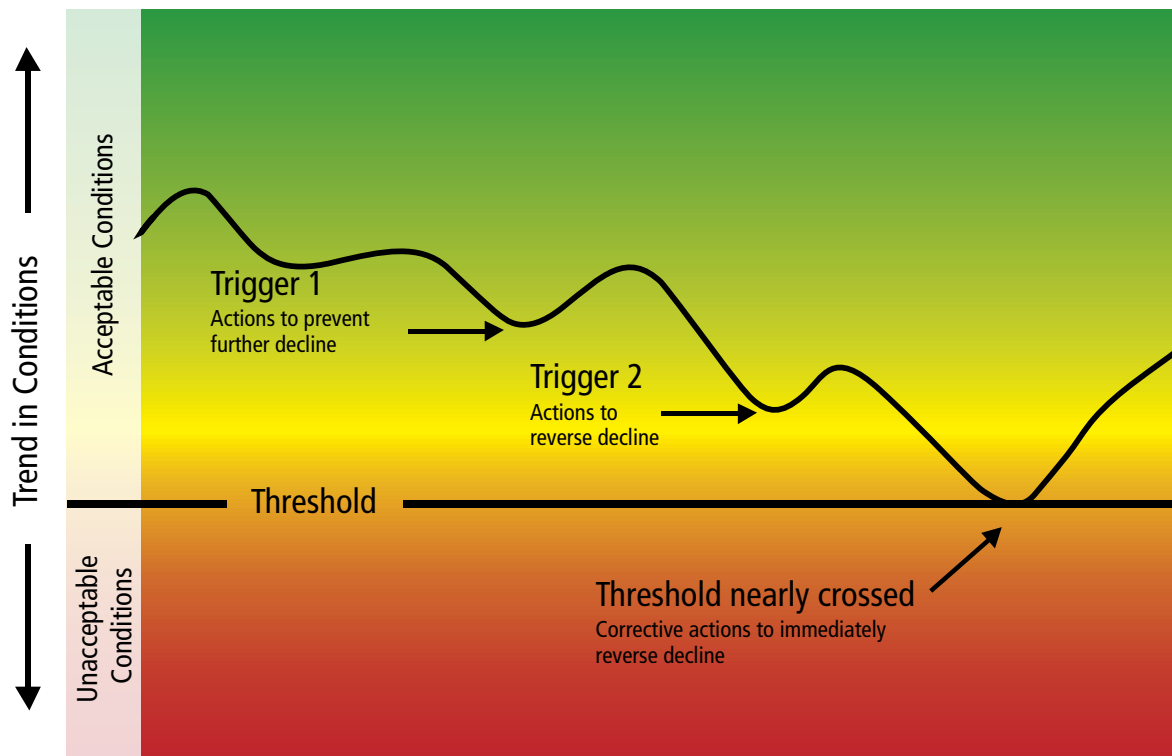
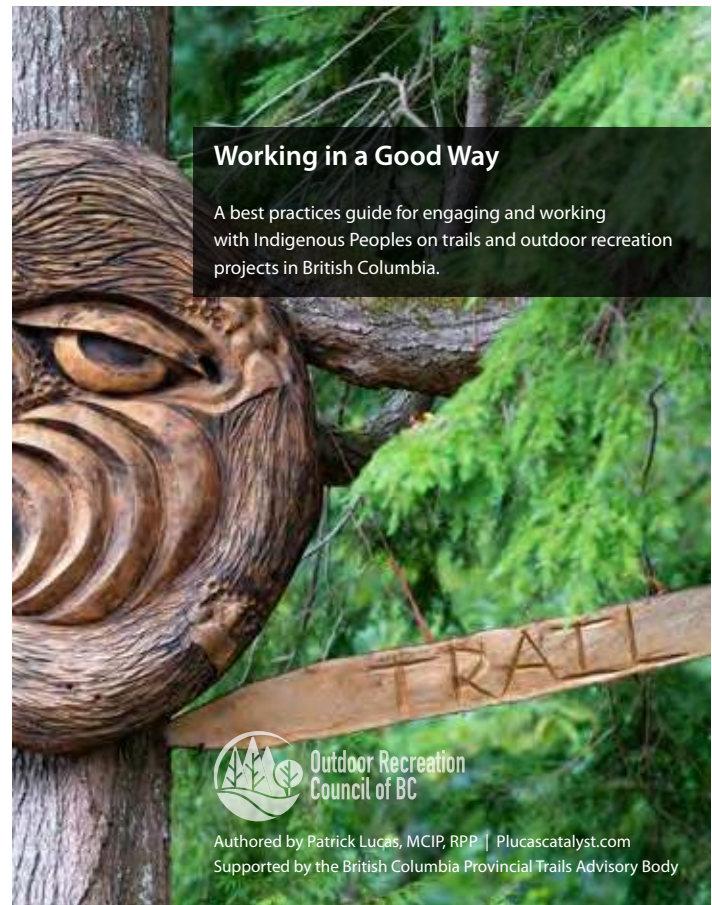


Figure 13. Example Relationship between Triggers and Threshold for Visitor Management Indicators

3. Engage local Indigenous communities with overlapping territories early in the trail planning and design process to ensure Indigenous values in the area of interest are understood, actions to mitigate impacts to Indigenous values can be jointly determined and opportunities to support reconciliation and visitor education about local Indigenous communities (e.g. education and interpretation) directly on the trails can be identified. The CRD should encourage mountain bike organizations to adopt and follow the best practices outlined in the Outdoor Recreation Council of BC's "Working in a Good Way" guide during trail planning.

4. Recognizing the CRD's desire to minimize further linear disturbance and fragmentation, the CRD should thoroughly evaluate whether existing linear disturbance (e.g. historic industrial access roads) and unauthorized trails are suitable to become mountain bike trails. The past practice of the CRD is to utilize existing linear access as the foundation for a park's trail system. However, it is the opinion of the MBAC that this practice is often not the most sustainable nor does it provide the desired mountain biking experience. Past linear access was not designed to provide long-term quality recreational experiences nor were they designed in accordance with sustainable trail design practices. The CRD should incorporate existing linear disturbances into the mountain bike trail system cautiously and only when the access:

- ▶ Will deliver a quality mountain bike trail experience and can be upgraded to contain features that optimize the route for mountain biking,
- ▶ Meets, or can be easily upgraded to meet, sustainable trail design guidelines (e.g. tread widths, slopes, grades, half rule, sight lines),
- ▶ Is intended to serve as a connection between purpose-built mountain bike trails rather than a destination trail or a climb trail, and when
- ▶ Creating a new purpose-built trail is simply not feasible or will create unacceptable environmental or cultural impacts.





5. The CRD work with the mountain bike community to apply an integrated mix of direct and indirect visitor management actions to manage the adverse impacts of mountain biking and mountain bikers. The CRD should recognize that direct management actions are effective at creating short-term changes in visitor behaviours especially for those that are uncaring and intentionally non-compliant. However, indirect management actions have been demonstrated to be more successful in shifting the long-term behaviours of recreation enthusiasts - especially those who are unskilled, uninformed and careless - and are known to result in better relationships with land managers and a stronger stewardship ethic. The following direct and indirect management strategies should be integrated into park management plans and visitor management plans and implemented by the CRD and mountain bike organizations:

Indirect Management Actions:

- Provide the right volume and mix (discipline and difficulty level) of purpose-built mountain bike trails to meet the range of mountain bike experiences demanded in the region and appropriate in regional parks (section 4.1.2). Ensure all trails are designed and maintained in accordance with established sustainable mountain bike trail design guidelines (see section 4.4.6).
- Through the proposed volunteer license agreement process (see section 4.3), enable, encourage and ensure that mountain bike organizations are regularly inspecting and maintaining their respective trails to avoid and minimize environmental impacts. Enable these organizations to re-route existing trails that are deemed to be unsustainable.
- Adopt and utilize the Leave No Trace program (www.leavenotrace.ca / www.lnt.org) as the foundation of the CRD's visitor education and skills and ethics program. Building on Leave No Trace, develop and implement education messaging and materials that reach visitors at every stage of the "visitor journey" (see Figure 14) and at key decision making points during their rides (e.g. parking lot, environmentally sensitive areas, unauthorized trails, day use areas, places where multiple activities mix). Engage key mountain bike influencers and organizations to distribute the educational messages to the mountain bike community through social media, mountain bike websites, mobile applications, and stewardship days. Train CRD staff and mountain bike club leaders as Leave No Trace trainers and encourage the staff and club leaders to deliver awareness workshops.



Figure 14. Visitor Journey Process (adapted from Destination Canada)

- Develop a clear mountain bike focused signage typology including trail classification (e.g. discipline, difficulty) signage, trailhead / kiosk, visitor education and information signage, regulatory signage, wayfinding and way markers, warning / safety signage, technical trail feature signage and interpretive signage as well as signage siting guidelines. Support the mountain bike organizations in the development and implementation of deliberate signage plans for mountain bike optimized trails and mountain bike areas (e.g. Mount Work).

- Working with recreation organizations in the region, develop and implement a Regional Parks Trail Guardian or Steward program to help maintain a stewardship presence on the trails, promote Leave No Trace practices and good etiquette to visitors and to monitor visitor use.



Trail Classification & Wayfinding Sign



Trailhead Kiosk

Direct Management Actions:

- ▶ Review, and if needed, update the CRD Parks Bylaw to ensure undesirable visitor behaviours that create environmental impacts and visitor conflicts are prohibited and enforceable and any seasonal or temporal closures are enforceable.
- ▶ Apply seasonal and time of day trail closures where needed to prohibit mountain biking in specific areas or on specific trails during sensitive periods for wildlife.
- ▶ Apply weather-based closures during inclement weather or seasons where the trails become overly susceptible to degradation and impacts from visitation.
- ▶ During management planning, identify existing trails that could be decommissioned (e.g. unsustainable, poor quality) to reduce linear disturbance. Pursue decommissioning and restoration to minimize the potential that the trail will continue to be used and continue to create impacts (e.g. erosion).
- ▶ Rapidly decommission unauthorized trails as they are constructed. However, ensure that all decommissioning actions and rationales are communicated to the mountain bike organizations and to the public in advance of decommissioning. Erect signage warning of decommissioning and ensure that appropriate decommissioning practices are applied to minimize safety risks to riders and other park visitors.
- ▶ Maintain CRD bylaw officer presence in mountain bike areas to promote compliance and pursue enforcement as a last resort, for the most serious of offences and for repeat offenders.

6. The CRD develop a trail and visitor impact monitoring training program and train the mountain bike organizations on how to monitor and report on changes in the visitor management indicators established in the management plans / visitor management plans. The program should also include practices on how to monitor visitation on the mountain bike trails (e.g. Traf-x counters, cameras).
7. The CRD work with established recreational organizations (e.g. hiking, mountain biking, equestrian, trail running etc.) and conservation organizations to develop annual opportunities for these organizations to interact, share education and develop an understanding of each others' interests, perspectives and concerns about recreation and conservation priorities in regional parks.

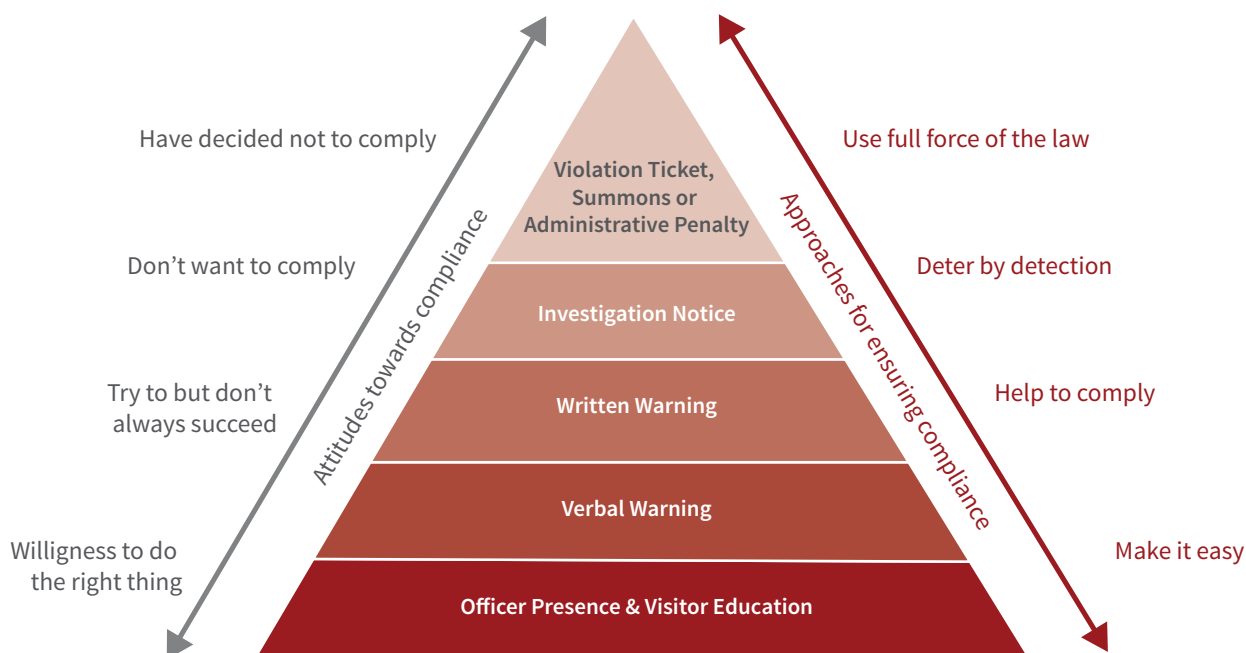


Figure 15. Compliance Pyramid Adapted from John Braithwaite

4.4.2 INTEGRATING MOUNTAIN BIKING WITH OTHER TRAIL ACTIVITIES

Context

Conflicts between recreational activities and between visitors of the same activity can create significant adverse effects on the quality of visitor experiences. It is essential that all recreation activities, including mountain biking, be planned, their infrastructure designed, and the visitors managed to mitigate the potential for conflicts between visitors and activities. The MBAC understands that conflict in outdoor recreation settings is best defined as “goal interference attributed to another’s behavior”^{viii}. Conflicts can occur between visitors of the same activity (e.g. varying skill levels, e-assist versus non e-assist, riders with dogs versus riders without dogs) and visitors undertaking different activities. Conflicts can even occur when no physical interaction takes place between visitors (e.g. perception of impacts, opinion on what is or is not appropriate).

The MBAC understands that conflicts are most often related to differences in:

- ▶ Activity styles (e.g. mode of travel, degree of technology, noise, smells),
- ▶ Focus of and goals for the outing,
- ▶ Visitor behaviours,
- ▶ Expectations of visitors (what is expected vs experienced),
- ▶ Attitudes towards and perceptions about the environment,
- ▶ Personal norms (beliefs on what is right or wrong),
- ▶ Level of tolerance toward other activities, and the
- ▶ “Last Settler Syndrome” where the first users of an area want that area to remain the way it was when they first arrived.

Important Note

The degree to which one recreational activity experiences conflict is often asymmetrical to how another recreational activity experiences it.

From the MBAC’s experience, the most common conflicts occurring between mountain bikers and other regional park users include:

- ▶ Speed and control of mountain bikers can create actual and perceived safety issues,
- ▶ Poor etiquette by a few creates perceptions for the many (e.g. yielding right of way, large groups dominating the trail, nudity, profanity, noise),
- ▶ Off-trail travel,
- ▶ Riding in, or a trail being developed (unsanctioned and sanctioned) in, areas that are or are perceived to be environmentally sensitive is creating perceptions that there is a lack of education, understanding and appreciation of nature,
- ▶ Failing to follow COVID-19 physical distancing guidelines,
- ▶ Some riders are unwelcoming to other visitors, are territorial or entitled and do not understand what other activities are permitted on trails that are used for mountain biking,
- ▶ Using trails that do not permit mountain biking,
- ▶ Scaring/startling horses, and
- ▶ Dogs on the trails.

The MBAC recognizes that visitors respond to actual and perceived conflicts in different ways. In response to conflicts, visitors may:

- ▶ Change their personal expectation of what is acceptable,
- ▶ Change their visitation behaviours and patterns (e.g. visit less often, visit at different times), or they may be
- ▶ Displaced from the area and go somewhere else for their recreation.

The MBAC believes it is incredibly important to minimize conflicts and negative encounters given that the outdoor recreation community is small and even a single negative experience can have a stronger impact and last longer than a positive experience. It is important to recognize that when negative interactions occur, some people can hold onto the memory of those conflicts and experiences and share them widely with others which can foster negative perceptions.

The MBAC recognizes and wishes to stress that the degree to which one recreational activity experiences the conflict is often asymmetrical to how another recreational activity experiences it. For example, the MBAC recognizes that some hikers, as an example, may experience greater negative impacts to their experience because of encounters with mountain biking than mountain bikers may experience because of encounters with hiking. The MBAC understands that just because one activity may be willing to share a trail(s) with another, it does not mean that the quality of the experience for those other activities will be maintained. At the same time, MBAC does not believe that providing single use trails is realistic or warranted in most cases. It is the opinion of the MBAC that the CRD and trail users need to find ways to ensure activities can co-exist on multi-use trails though some trails may be, and should be, deliberately optimized for specific activities.

Advice & Guidance

To avoid and mitigate the risk of conflicts between mountain biking and other approved recreation activities in regional parks, the MBAC recommends that:

1. The CRD work with the mountain bike community and other recreational users to develop an etiquette education program as part of a broader regional parks visitor education program (see section 4.4.1).
2. Ensure all trails are designed in accordance with established guidelines for safety, sustainability, and quality (section 4.4.6). In areas where multiple activities cannot mix safely, develop bypass routes to minimize conflicts.
3. Provide and maintain well placed and appropriate regulatory, education, wayfinding, and interpretive signage. Ensure that signage clearly communicates the trail classification, permitted uses, level of difficulty, etiquette and responsible skills and ethics and visitor preparedness. Ensure signs are purposefully sited to reach riders at key decision-making points and, where appropriate, incorporate QR codes to link riders to further information.

4. Adopt, utilize and promote an existing mobile device application to help riders identify sanctioned trails from unsanctioned trails, connect riders with trails that will meet their desired experiences, support wayfinding while on the trail, educate riders on responsible skills and ethics and etiquette and connect riders to mountain bike organizations.
5. Ensure CRD bylaws regulate unauthorized trail use and unsafe, reckless, and undesirable behaviours.



4.4.3 FORMALIZING MOUNTAIN BIKING ON AUTHORIZED AND UNAUTHORIZED TRAILS

Context

The committee recognizes that, as management plans are updated, new trail development proposals are prepared and regional initiatives to create interconnected mountain bike opportunities continue, the CRD is going to be asked to consider a) approving mountain biking as a permitted use on specific trails that currently prohibit mountain biking and / or b) to formally sanction and endorse specific unsanctioned trails. The MBAC believes that these decisions need to be made cautiously and transparently. The committee discussed and developed several transparent criteria that can be used to inform and structure decisions about which existing trails should permit mountain biking and which unauthorized trails should be formalized as sanctioned trails.

Advice & Guidance

1. The MBAC recommends that the CRD adopt the following criteria to enable an objective evaluation of whether an existing trail could be a good candidate to permit mountain biking or an unsanctioned trail may be a good candidate to be formalized as a sanctioned trail where:
 - ▶ Mountain biking on the proposed trail is consistent with permitted uses in the park's classes and park zone that the trail occurs within.
 - ▶ The trail provides, or enables the provision, of mountain bike experiences that are recognized as gaps in the region (4.1.1) or would provide a quality mountain bike experience.
 - ▶ The trail generally adheres to established mountain bike trail and technical trail feature design guidelines (see section 4.4.6) while recognizing the unique biophysical conditions in the Capital Region.
 - ▶ Permitting mountain biking does not create unacceptable safety risks for mountain bikers or other trail users.
 - ▶ The trail improves the interconnectivity between established mountain bike trail networks in the region.
 - ▶ The trail serves as a quality climb trail to access approved mountain-bike optimized trails.
 - ▶ Permitting mountain biking does not introduce new, or exacerbate existing, unacceptable impacts to environmentally sensitive areas or further habitat fragmentation.
 - ▶ Permitting mountain biking does not introduce new, or exacerbate existing, unacceptable impacts to sites of spiritual and cultural importance to local Indigenous communities.

4.4.4 UNAUTHORIZED TRAIL BUILDING

Context

The construction of unauthorized trails, also known as “rogue trails”, is a management challenge in most jurisdictions. The MBAC recognizes, and would like to make it clear, that the development of unauthorized trails is not confined solely to the mountain bike community. In addition to mountain bikers, unauthorized trails and social trails are frequently created, whether intentionally or unintentionally, by many different activity types including hiking, horse back riding, dog walking, off-road vehicle use, among others. Regardless of which activity is creating trails, the MBAC recognizes the importance of and need to limit unauthorized trail development.

Unauthorized trail development can lead to a wide range of undesirable impacts such as:

- ▶ Increased risk & liability for the CRD and the trail builder,
- ▶ Elevated rider safety concerns especially when trails are not designed to accepted guidelines,
- ▶ Potential environmental, Indigenous, and cultural / historic resource impacts as unauthorized trail locations have not been studied for environmental and Indigenous or cultural values,
- ▶ The supply of trails becomes aligned more with what the builder wants to build rather than the trail experiences that are most needed in region to meet rider demands,
- ▶ Tenure conflicts,
- ▶ Conflicts with other recreational activities and visitors,
- ▶ Degraded relationship and trust between the land managers and the mountain bike community,
- ▶ Taking limited money and resourcing away from sanctioned trail building to fund the decommissioning and restoration of unsanctioned trails, and
- ▶ Degrading the mountain bike community's social license and support from non-mountain bikers for advancing sanctioned mountain biking.

The MBAC's and the CRD's experience shows that unauthorized trail building can be led by people of all ages and for a wide range of reasons. Though there is no known empirical research into why people build unauthorized mountain bike trails, anecdotal discussions between MBAC members and the riding community suggest the following:

- ▶ There is a perception that there is a significant amount of land in regional parks and the watershed,
- ▶ The process for developing sanctioned mountain bike trails does not exist, is unclear and uncertain and is slow and the likelihood of approval is uncertain. Some have a sense of hopelessness whereby they believe that there will not be any more authorized trails in the parks – they have given up on the sanctioned trail building,
- ▶ The current supply and diversity of mountain bike trails is insufficient to meet current needs especially as more historical unsanctioned trails are being decommissioned,
- ▶ There have been very few new mountain bike trails and riders are beginning to get bored of the current supply,
- ▶ The mountain bike community in the Capital Region is witnessing the success and growth of other mountain bike destinations on the Island and around BC and have a vision for what “mountain biking could be” here in the region,
- ▶ The current location and distribution of trails may not be sited close to where riders are living (e.g. youth want to be able to ride from where they live and access trail without the need for cars, even if the trails are small),
- ▶ There are issues with overcrowding on trails and in parking lots in the current riding areas and more capacity is needed, and
- ▶ Creating new experiences that are enjoyed by so many creates a great sense of satisfaction, enjoyment & reward for the builders.



Figure 16. European Mountain Bike Survey, 2015



Advice & Guidance

Though the MBAC understands that mountain biking, and indeed some of the top mountain bike destinations in the Province, exist because of a significant unsanctioned trail building movement that occurred over the past decade, the MBAC would like to be clear with the riding community that unauthorized trail building is not supported by the organized mountain bike community and, due to the impacts it can create, the MBAC supports the CRD in taking reasonable actions to safely decommission unsanctioned trails after the guidelines are released and following the implementation of a process to review if those trails should become sanctioned. A “shovel first and beg forgiveness” approach is not an approach that will advance mountain biking in the Capital Region and certainly in regional parks.

To avoid or limit the building of unauthorized mountain bike trails in regional parks, the MBAC recommends that:

1. CRD work with the entire mountain bike community to develop a sufficient volume and diversity of trails that meet users’ needs as outlined earlier in these recommendations.
2. Establish a clear, transparent and easy to follow mountain bike trail development application and approval process that will enable the development of new, redevelopment of existing or sanctioning of existing unauthorized trails in regional parks in line with park management plans. This process should be clearly communicated to local mountain bike organizations and should be appropriately resourced to enable timely reviews and decisions.
3. Building on best practices in other jurisdictions, the CRD should provide a clear and consistent mechanism for allowing and supporting volunteer organizations to build and maintain mountain bike trails as long as those organizations can demonstrate the capacity to do so. This will allow the mountain bike organizations to engage many of the unauthorized trails builders and direct their talents and passion toward sanctioned projects.
4. Once a clear development and approval process is in place, judiciously pursue compliance assurance (officer presence, verbal / written warnings, enforcement) tactics against frequent offenders.

5. Engage and partner with mountain bike organizations to proactively:

- ▶ Educate the riding community on the impacts of and actively discourage unsanctioned trail building,
- ▶ Support, promote and educate the riding community on the application and approval process and sanctioned trail building, and
- ▶ Provide training on sustainable and quality trail design, construction, and maintenance.

4.4.5 ELECTRIC MOUNTAIN BIKES

Context

An electric bicycle is a bicycle with an electric motor mounted either at the bottom bracket (mid-drive) or at either wheel hub, which provides power to the bicycle’s drivetrain. Electric bicycles use an electric motor to either assist with propulsion or fully propel the user. The MBAC recognizes that the popularity of electric bicycles and electric mountain bikes has grown rapidly over the past 5 years and that electric bicycles are an emerging activity with many similarities and some important differences to conventional mountain biking.

The committee understands that the CRD has not developed an explicit policy regarding the classification of or use of electric bicycles in regional parks or regional trails. Currently, the CRD has adopted the definition of a Motor Assisted Cycle (MAC) as defined by the *British Columbia Motor Vehicle Act’s Motor Assisted Cycle Regulation*. Motor Assisted Cycle:

- ▶ Have continuous power output ratings that in total do not exceed 500 watts,
- ▶ Not be capable of propelling the cycle faster than 32 kilometers per hour on level ground without pedaling,
- ▶ Must be equipped with a mechanism that either allows the driver to turn the motor on and off, or prevents the motor from turning on or engaging before the MAC attains a speed of 3 kilometers per hour,
- ▶ Must disengage when the operator stops pedaling or releases the accelerator or applies a brake,
- ▶ Cannot be gasoline or other fuel powered, must be electric powered, and
- ▶ Must be capable of being propelled by muscular power using the pedals, but it is not necessary to always be pedaling (RSTBC E-Bike Policy, 2019).

Bicycles that meet the definition of a MAC are currently permitted on any regional trails or trails in regional parks that currently permit cycling.

The MBAC recognizes that both throttle controlled, and e-assist mountain bikes have become a point of contention on trails throughout the region and the sport in general. A variety of concerns have been expressed, but not necessarily proven through science, regarding this emerging activity. Electric bicycles may:

- ▶ Elevate safety concerns by:
 - ▷ Enabling less experienced riders to travel at faster speeds with potentially less skill to manage their bicycles at increased speeds which may pose greater safety risks to the rider and other trail users.
 - ▷ Removing some physical limitations and allowing more riders to travel further and more quickly which may lead to safety concerns due to malfunctions, accidents that happen further into remote area and riders being unprepared for more remote riding.
- ▶ Increase the levels of use a trail receives which can create the need for additional maintenance requirements,
- ▶ Increase the level of visitation and use in more remote areas which may add greater stress and strain on wildlife populations and limited visitor infrastructure (e.g. washrooms, rest areas), and
- ▶ Create inter-activity conflict with conventional mountain bike riders as some conventional riders may see e-bikes as motorized recreation instead of non-motorized, as a form of cheating, as lazy or may have assumptions that they create greater environmental and trail impacts.

Though many of the above concerns have yet to be studied academically, research undertaken by IMBA does conclude that impacts on the amount of soil displacement and erosion on a trail from conventional mountain bike and electric-assist (class 1) mountain bikes are not significantly different^x. However, the body of science into the range of environmental and social impacts is limited, given the novelty of this activity, and understanding of the impacts of electric bicycles, e-assist bicycles and how these impacts compare to conventional mountain bikes will continue to evolve over time.

The MBAC also recognizes that there are several positive benefits that may arise from electric mountain bikes. Electric mountain bikes may:

- ▶ Allow more people to enter activity who might not have otherwise,
- ▶ Allow disparate riders and families to ride together strengthening relationships and social bonds,
- ▶ Improve physical and mental health of a segment of the mountain bike population who would not have received these benefits otherwise, and
- ▶ Allow segments of the population to connect with and appreciate our parks that might not have otherwise.

The MBAC is aware of the electric bicycle policies that agencies such as Parks Canada, BC Parks and Recreation Sites and Trails have developed. These policies differentiate between the classifications of electric bicycles and explicitly indicate which classification of trails, park classes and zones each classification of electric bicycle is permitted to be operated in. In these jurisdictions, it is consistently agreed that electric bicycles that are capable of being propelled without pedaling are considered to be more similar to a motorized motorcycle or dual-sport motorcycle than they are a conventional mountain bike and are deemed incompatible on trails, or in environments, that prohibit motorized recreation (e.g. 4x4, Off-road vehicles).

Advice & Guidance

The committee reviewed the policies used in other jurisdictions and feels there is great merit in remaining consistent with these other provincial and federal jurisdictions as many visitors to regional parks also frequent national parks, provincial parks, and crown lands. However, the committee did not have sufficient time to develop a policy recommendation on electric bicycle use for the Capital Region.

To appropriately manage electric bikes in regional parks, the MBAC recommends that:

1. The CRD recognize that its current policy approach to electric bicycle use on trails in the Capital Region, through the adoption of the motor assisted cycle definition, is inadequate to address the concerns that have and will continue to arise over electric bicycle use in regional parks.
2. The CRD recognize that off-road vehicles such as motorcycles, all-terrain vehicles and side by sides are being electrified and that a clear policy is required to ensure clear and deliberate management of these recreational activities along with electric bicycle use.
3. The CRD develop a clear policy statement on the use of electric bikes on regional trails and on trails in regional parks and that this policy utilize existing classifications of electric bikes, clearly identify what trail types each classification of electric bicycle is permitted on as well as what park classifications and zones each classification of electric bicycle is permitted in. It is imperative that any policy developed by the CRD can be easily understood by the riding community, can be easily communicated through park and trail signage and trip planning information and can be readily enforced when and where needed.

Table 3. Example Alignment of Electric Bicycle Class with Trail Classification - RSTBC

E-Bike Class	Mixed Use Trail	Non-Motorized Trail that Permits Cycling	Non-Motorized Trail that Prohibits Cycling	Active Transportation Trails
Class 1	Yes	Yes	No	Maybe
Class 2	Yes	No	No	Maybe
Class 3	Yes	No	No	Maybe
a-MTB (met criteria)	Yes	Yes	No	Yes

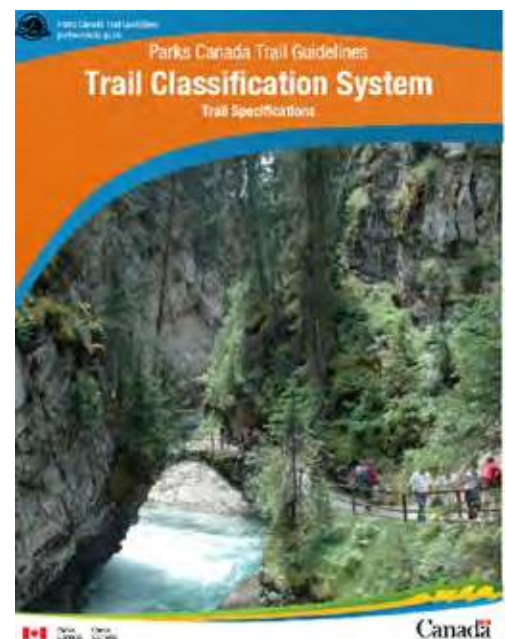
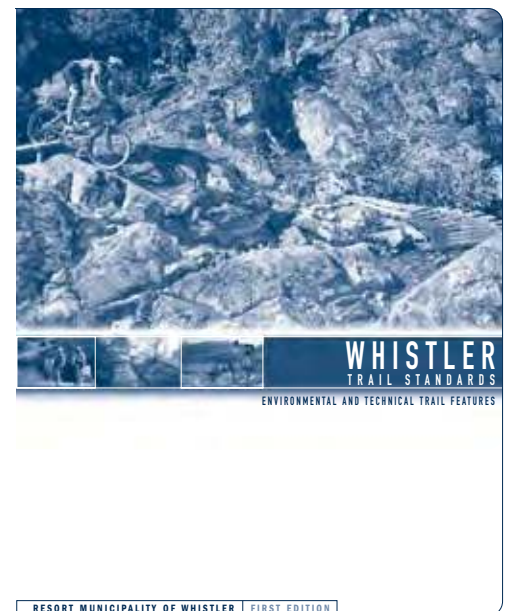
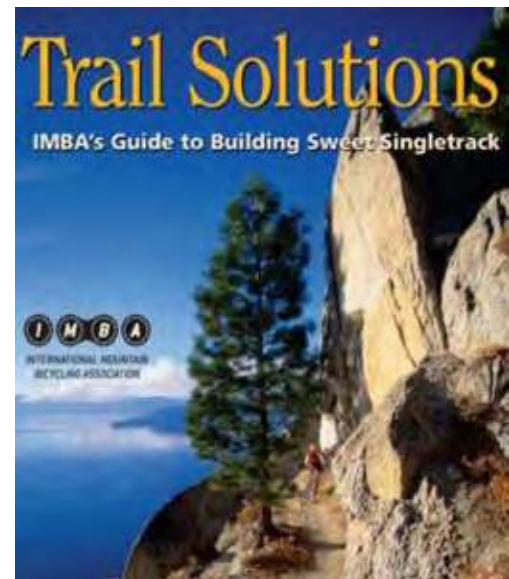


4.4.6 TRAIL PLANNING & DESIGN GUIDANCE

Context

Development of quality, sustainable and safe mountain bike trails do not happen by accident, it is the result of applying good planning, design, construction, and maintenance practices. Many planning and design guidance manuals and documents have been developed by mountain bike and trail organizations and other park and land management agencies. The MBAC understands that the CRD currently relies on the following planning and design guidance documents:

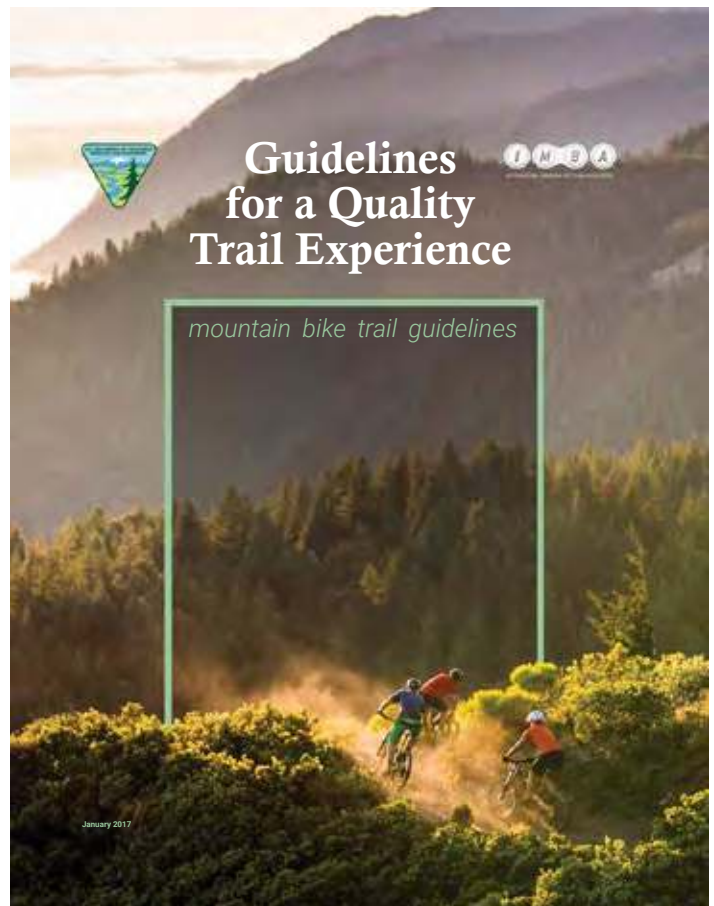
- ▶ International Mountain Bike Association (IMBA) Trail Solutions
- ▶ Whistler Trail Standards: Environmental & Technical Trail Features
- ▶ Parks Canada Trail Guidelines – Trail Classification System & Trail Specifications



Advice & Guidance

To ensure mountain bike trails are planned, designed, constructed, maintained and managed in accordance with best practices, the MBAC recommends that:

1. CRD continue to apply the classification, planning, design, construction, and maintenance manuals from IMBA, Whistler and Parks Canada. However, the CRD should recognize that some of these manuals are general in nature, not specific to the conditions in the Capital Region and are aging. Though the MBAC does not recommend that the CRD should develop its own trails planning, classification, design, construction and management manual at this time, the CRD should actively review new and refreshed guidance documents as they are released in other leading jurisdictions.
2. In addition to the above listed resources, the MBAC also recommends that the CRD adopt and apply the following newly released manuals as they provide more refined understanding of mountain bike user objectives and allow the CRD to understand what trail features can deliver which user objectives and how those features align with the desired recreation setting and typical land management classifications. These manuals also uniquely address new insights on eMTB:
 - Bureau of Land Management's Guidelines for a Quality Trail Experience
 - eMTB Land Manager Handbook





4.5 Implementation & Review of Guidelines

Context

While cognizant of the capacity and resourcing and significant demands on CRD staff, the MBAC recognizes the considerable anticipation and expectation that this process has generated in the mountain bike community. There is considerable hope and expectation that reasonable action will be taken in a reasonable time period to advance the implementation of the guidelines and improvement of mountain biking opportunities in regional parks. The MBAC also recognizes that there will be a period of learning and likely refinement once the guidelines are released and implemented and that further dialogue and input with the mountain bike community and other regional parks stakeholders will be needed to ensure the guidelines are effective.

Advice & Guidance

Recognizing this, the MBAC recommends that:

- ▶ CRD immediately identify multiple easy wins opportunities implementing the guidelines and enhance mountain biking opportunities where mountain biking is not explicitly prohibited by a management plan and the criteria presented earlier in this report can be met.
- ▶ CRD expedite the development of the internal and operational policies and structures needed to allow the effective and timely implementation of the guidelines (e.g. mountain bike trail development approval process, operation, and maintenance agreements).
- ▶ CRD expedite the review and update of park management plans for parks that hold the greatest mountain biking potential and suitability to support mountain biking and / or will allow the trail connection between other established or under development mountain bike trail networks.
- ▶ Recognizing that mountain biking is evolving rapidly and new parks continue to be acquired by the CRD, the CRD should review and, if necessary, update the guidelines after 2 years in collaboration with the mountain bike community and other park stakeholders and Indigenous peoples.
- ▶ CRD Regional Parks staff review and recommend an ongoing stakeholder process for feedback and advice on mountain bike management in regional parks, and procedures and policies relating to mountain bike trail development, maintenance, and management.

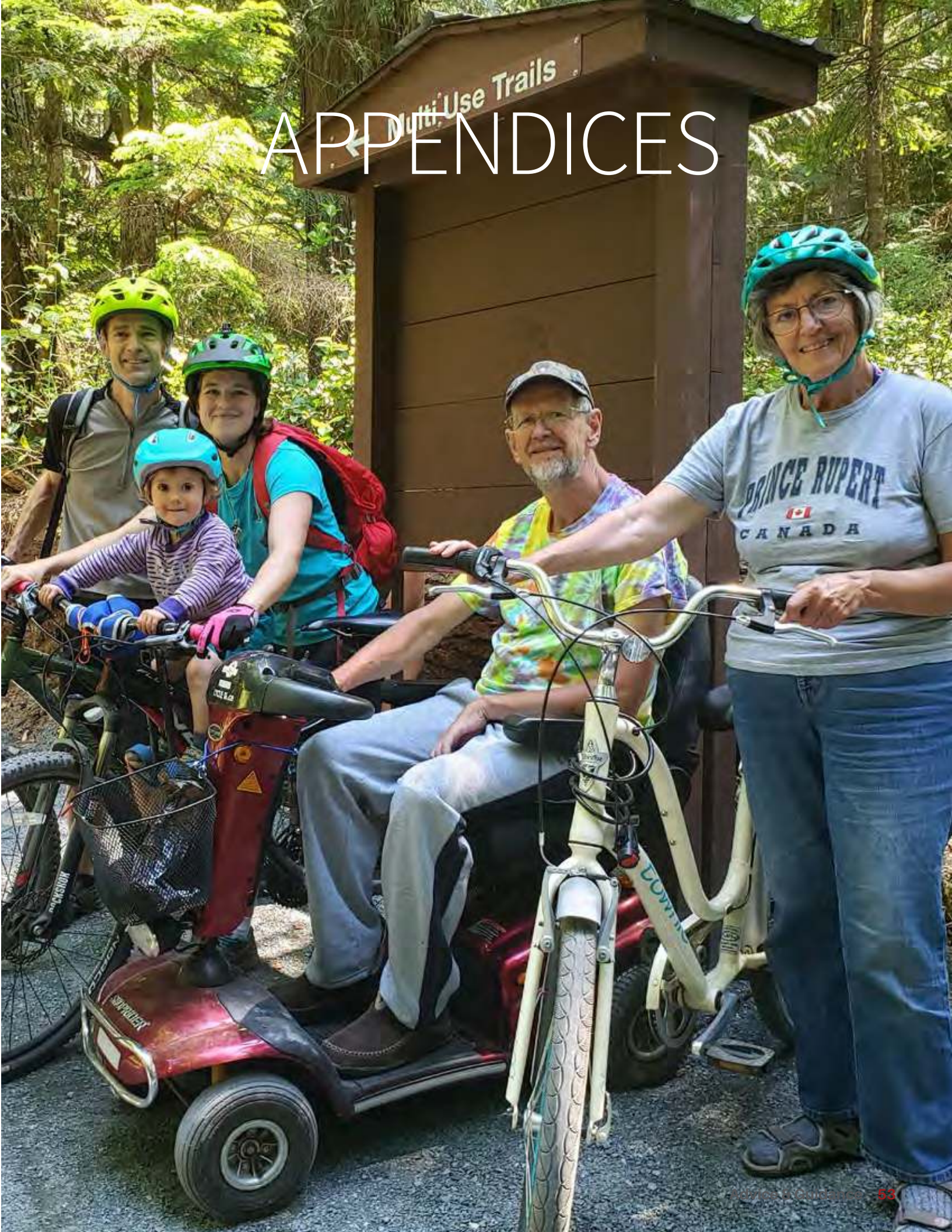


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Photo Cred: Sooke Bike Club

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APPENDICES



APPENDIX A POTENTIAL DISCUSSION TOPICS FOR MBAC



The following topics were tabled with the MBAC for review and prioritization.

Mountain Biking & Mountain Bike Experiences

- ▶ Recognizing that “mountain biking” is a diverse recreational activity, what are the different segments of mountain bikers and their expectations in terms of trail experiences, trail length and size of riding area, amenities, and infrastructure? And what type of mountain bike experiences do riders expect in regional parks?
- ▶ Currently, mountain biking opportunities are delivered through a system of different lands and providers (e.g. BC Parks, private lands, regional parks, municipal parks). The system should work together and be planned to ensure the diversity of desired mountain biking experiences can be met. Thinking about the mandate of CRD Regional Parks, **what role does CRD Regional Parks currently play in meeting residents’ mountain biking needs and what role should it play moving forward?**
- ▶ What are the most **significant future trends** in mountain biking that CRD Regional Parks need to consider as it develops the Mountain Biking Guidelines? How should the CRD plan for addressing these trends?
- ▶ What are the benefits of mountain biking in regional parks?
- ▶ How is mountain biking and its varying disciplines defined?

Appropriateness of Mountain Biking in Regional Parks & Service Delivery

- ▶ What are the most significant challenges associated with mountain biking in regional parks, and the CRD’s ability to achieve their environmental and cultural heritage (e.g. for archaeological sites, First Nations village sites) protection mandate?
- ▶ What are the **criteria that should be used to determine when and which existing trails (e.g. multi-use trails) are appropriate to permit mountain biking** and which will provide a desired mountain biking experience? And, what activities tend to be more compatible with mountain biking and what management actions are required to increase compatibility?
- ▶ Planning, design, construction, monitoring and management of mountain bike trails in regional parks can happen in a number of ways. **What is the preferred service delivery model for the planning, design, construction, management and monitoring of mountain bike trails and mountain bike use in**

regional parks (direct, indirect, enablement)? How can relationships between CRD Regional Parks and the riding community be strengthened and data and information sharing enhanced?

- ▶ Recognizing the range of mountain bike segments and their expectations, **what type of mountain bike experiences are most appropriate to provide / enable in regional parks?** And, thinking about park management planning at an individual park scale, **what are the criteria that should be used to determine/ evaluate where mountain bike areas should be developed and for which mountain bike experiences** (i.e. # hectares, elevation/topography/slope, trail distances, variety of route options, mix of styles and levels of difficulty)?
- ▶ Moving forward, of the total amount of approved mountain bike trails in regional parks, generally what proportion should be allocated to each mountain bike experience type?

Mountain Bike Trail Planning & Design

- ▶ How can the trail planning process ensure that mountain biking does not create undesirable environmental and cultural impacts and conflicts?
- ▶ Thinking about the design of mountain bike trails in regional parks, are there any **existing design guideline manuals or documents that should be adopted and implemented by the CRD to guide the design of mountain bike trails and related trail infrastructure** (e.g. Technical Trail Features) and signage?
- ▶ What are the characteristics of a high quality, safe and sustainable mountain bike trail and experience?
- ▶ There are many benefits to a mountain bike trail classification system. The system can create consistency in how mountain bike trails are described and understood between the mountain bike community, the CRD, trail designers and other visitors. The classification system allows the accurate and consistent communication of essential information about the trail to allow visitors to self-select the appropriate trail. Should, and if so, how should mountain bike trails and mountain bike experiences be classified in regional parks?
- ▶ What type of trail configurations (e.g. linear, loop, stacked loop, maze etc.) are most desirable for mountain bikers by discipline? And, what practices can be implemented to determine an appropriate density of mountain bike trails at a park level?

Mountain Biking & Mountain Bike Trail Management


- ▶ How can mountain biking be effectively integrated with other approved recreational uses of regional parks in order to minimize impact to the environment as well as social impacts?
- ▶ How can mountain biking and mountain bike trails be managed to avoid / minimize impacts to ecological, Indigenous, and cultural heritage values in regional parks?
- ▶ Rogue, or unauthorized trail building, is on the rise in regional parks. What promising practices can be implemented to avoid or limit unauthorized trail building?
- ▶ How can mountain biking and mountain bike trails be managed to avoid / minimize impacts on the experience of other visitors?
- ▶ How should mountain bike trails and mountain biking be monitored in regional parks?
- ▶ What research should be undertaken to understand mountain biking (e.g. visitation, origins, satisfaction, impacts) in regional parks?
- ▶ The popularity of e-MTB (electric mountain bikes) continues to grow. Are e-MTB's appropriate in regional parks, what class and how should they be managed?
- ▶ How can risks/impacts to personal and public safety from mountain biking be managed in regional parks?
- ▶ Should, and if so, how should commercial mountain biking businesses be managed and promoted in regional parks?
- ▶ Should, and if so, how should mountain bike based special events (e.g. races), group rides etc. be managed and promoted in regional parks?

Members of the MBAC were invited to identify other topics of importance for consideration. The following topics were identified by the MBAC:

- ▶ How will CRD provide the amount of mountain bike trail opportunities (design, build, maintain) needed by our region?
- ▶ I hope the committee to have plenty space for the discussion focused around the benefits that MTB brings to the region. I'm concerned that question 5 in particular seems to focus on challenges without consideration for

how to promote the many positives of welcoming MTB in regional parks. As I write this, I am realizing that the many benefits of the sport (physical & mental health, love of nature/environmental stewardship, community involvement to name a few) should be addressed as an additional fundamental topic. I'm concerned that there are some persistent misconceptions and biases against the mountain bike community, but optimistic that this committee can serve to find the common interests and passions (and I truly believe there are plenty!) between all the stakeholders involved.

- ▶ In consideration of CRD mandate to protect environment and current park classification systems should existing trails and use be reconsidered in where there are sensitive, rare or endangered ecosystems, plants or animals (e.g. Night hawk nesting sites Mt. Quimper).
- ▶ It was very difficult to prioritize the questions in the survey, as I find them all very important and necessary to a robust and multi-faceted management plan. It would be worth considering, when we approach the end of this committee's objective, the creation a standing committee that provides feedback and suggestions about the management plan on an ongoing basis.
- ▶ Other regional districts have implemented mountain biking plans in parks with varying rates of success; what qualities of these plans have created successes or failures? Which mountain bike societies/communities are active within CRD Parks, are they involved in this discussion, and if not at what stage will they be consulted with? Which CRD Parks currently see the most and least mountain bike use and does that correlate with ecological sensitivity (i.e. are sensitive species/ecosystems avoided)? What is/will be the CRD's strategy for preventing, restoring and otherwise mitigating unauthorized trail building?
- ▶ What models adopted in other similar park systems (Canada/US) have implemented a successful balance among concerns of mountain bikers, hikers, and conservationists?
- ▶ Who maintains and clears trail? CRD or volunteer organizations. How is this contract developed? How is training provided?



APPENDIX B

SURVEY # 1 – PRIORITIZATION OF MBAC DISCUSSION TOPICS

Report for CRD Mountain Bike Advisory Committee - Survey # 1

CRD Mountain Bike Advisory Committee - Survey # 1

Response Statistics

	Count	Percent
Complete	8	80
Partial	2	20
Disqualified	0	0
Totals	10	

1. Mountain Biking & Mountain Bike Experiences

Item	Overall Rank	Score	Total Respondents
Recognizing that “mountain biking” is a diverse recreational activity, what are the different segments of mountain bikers and their expectations in terms of trail experiences, trail length and size of riding area, amenities, and infrastructure? And, what type of mountain bike experiences do riders expect in regional parks?	1	28	7
Currently, mountain biking opportunities are delivered through a system of different lands and providers (e.g. BC Parks, private lands, regional parks, municipal parks). The system should work together and be planned to ensure the diversity of desired mountain biking experiences can be met. Thinking about the mandate of CRD Regional Parks, what role does CRD Regional Parks currently play in meeting residents’ mountain biking needs and what role should it play moving forward?	2	28	8
What are the most significant future trends in mountain biking that CRD Regional Parks need to consider as it develops the Mountain Biking Guidelines? How should the CRD plan for addressing these trends?	3	22	7
What are the benefits of mountain biking in regional parks?	4	15	6
How is mountain biking and its varying disciplines defined?	5	15	6

2. Appropriateness of Mountain Biking in Regional Parks & Service Delivery

Item	Overall Rank	Score	Total Respondents
What are the most significant challenges associated with mountain biking in regional parks, and the CRD's ability to achieve their environmental and cultural heritage (e.g. for archaeological sites, First Nations village sites) protection mandate?	1	28	7
What are the criteria that should be used to determine when and which existing trails (e.g. multi-use trails) are appropriate to permit mountain biking and which will provide a desired mountain biking experience? And, what activities tend to be more compatible with mountain biking and what management actions are required to increase compatibility?	2	27	8
Planning, design, construction, monitoring and management of mountain bike trails in regional parks can happen in a number of ways. What is the preferred service delivery model for the planning, design, construction, management and monitoring of mountain bike trails and mountain bike use in regional parks (direct, indirect, enablement)? How can relationships between CRD Regional Parks and the riding community be strengthened and data and information sharing enhanced?	3	25	7
Recognizing the range of mountain bike segments and their expectations, what type of mountain bike experiences are most appropriate to provide / enable in regional parks? And, thinking about park management planning at an individual park scale, what are the criteria that should be used to determine/evaluate where mountain bike areas should be developed and for which mountain bike experiences (ie. # hectares, elevation/topography/slope, trail distances, variety of route options, mix of styles and levels of difficulty)?	4	21	7
Moving forward, of the total amount of approved mountain bike trails in regional parks, generally what proportion should be allocated to each mountain bike experience type?	5	10	6

3. Mountain Bike Trail Planning & Design

Item	Overall Rank	Score	Total Respondents
How can the trail planning process ensure that mountain biking does not create undesirable environmental and cultural impacts and conflicts?	1	28	7
Thinking about the design of mountain bike trails in regional parks, are there any existing design guideline manuals or documents that should be adopted and implemented by the CRD to guide the design of mountain bike trails and related trail infrastructure (e.g. Technical Trail Features) and signage?	2	26	7
What are the characteristics of a high quality, safe and sustainable mountain bike trail and experience?	3	25	7
There are many benefits to a mountain bike trail classification system. The system can create consistency in how mountain bike trails are described and understood between the mountain bike community, the CRD, trail designers and other visitors. The classification system allows the accurate and consistent communication of essential information about the trail to allow visitors to self-select the appropriate trail. Should, and if so, how should mountain bike trails and mountain bike experiences be classified in regional parks?	4	17	7
What type of trail configurations (e.g. linear, loop, stacked loop, maze etc.) are most desirable for mountain bikers by discipline? And, what practices can be implemented to determine an appropriate density of mountain bike trails at a park level?	5	15	7

4. Mountain Biking & Mountain Bike Trail Management

Item	Overall Rank	Score	Total Respondents
How can mountain biking be effectively integrated with other approved recreational uses of regional parks in order to minimize impact to the environment as well as social impacts?	1	69	8
How can mountain biking and mountain bike trails be managed to avoid / minimize impacts to ecological, Indigenous, and cultural heritage values in regional parks?	2	65	8
Rogue, or unauthorized trail building, is on the rise in regional parks. What promising practices can be implemented to avoid or limit unauthorized trail building?	3	52	8
How can mountain biking and mountain bike trails be managed to avoid / minimize impacts on the experience of other visitors?	4	46	8
How should mountain bike trails and mountain biking be monitored in regional parks?	5	39	7
What research should be undertaken to understand mountain biking (e.g. visitation, origins, satisfaction, impacts) in regional parks?	6	38	6
The popularity of e-MTB (electric mountain bikes) continues to grow. Are e-MTB's appropriate in regional parks, what class and how should they be managed?	7	31	7
How can risks/impacts to personal and public safety from mountain biking be managed in regional parks?	8	28	7
Should, and if so, how should commercial mountain biking businesses be managed and promoted in regional parks?	9	24	6
Should, and if so, how should mountain bike based special events (e.g. races), group rides etc. be managed and promoted in regional parks?	10	23	6

5. We likely missed some other questions that may you feel are important for MBAC to consider and provide advice to the CRD on. If so, please identify and describe the question(s) in the space below.

Response
How will CRD provide the amount of mountain bike trail opportunities (design, build, maintain) needed by our region?
I hope the committee to have plenty space for the discussion focused around the benefits that MTB brings to the region. I'm concerned that question 5 in particular seems to focus on challenges without consideration for how to promote the many positives of welcoming MTB in regional parks. As I write this, I am realizing that the many benefits of the sport (physical & mental health, love of nature/environmental stewardship, community involvement to name a few) should be addressed as an additional fundamental topic. I'm concerned that there are some persistent misconceptions and biases against the mountain bike community, but optimistic that this committee can serve to find the common interests and passions (and I truly believe there are plenty!) between all the stakeholders involved.
In consideration of CRD mandate to protect environment and current park classification systems should existing trails and use be reconsidered in where there are sensitive, rare or endangered ecosystems, plants or animals (e.g. Night hawk nesting sites Mt. Quimper).
It was very difficult to prioritize the questions in the survey, as I find them all very important and necessary to a robust and multi-faceted management plan. It would be worth considering, when we approach the end of this committee's objective, the creation a standing committee that provides feedback and suggestions about the management plan on an ongoing basis.
Other regional districts have implemented mountain biking plans in parks with varying rates of success; what qualities of these plans have created successes or failures? Which mountain bike societies/communities are active within CRD Parks, are they involved in this discussion, and if not at what stage will they be consulted with? Which CRD Parks currently see the most and least mountain bike use and does that correlate with ecological sensitivity (i.e. are sensitive species/ecosystems avoided)? What is/will be the CRD's strategy for preventing, restoring and otherwise mitigating unauthorized trail building?
What models adopted in other similar park systems (Canada/US) have implemented a successful balance among concerns of mountain bikers, hikers, and conservationists?
Who maintains and clears trail? CRD or volunteer organizations. How is this contract developed? How is training provided?









APPENDIX C


TRAIL DIFFICULTY RATING



TRAIL DIFFICULTY RATINGS

TRAIL SIGN ICONS	 Easiest White Circle	 Easy Beginner Green Circle	 More Difficult Intermediate Blue Square	 Very Difficult Advanced Black Diamond	 Extremely Difficult Expert Double Black Diamond	 Extremely Dangerous Professional Double Orange Diamond
BASIC DESCRIPTION	Fairly flat, wide, possibly paved but can be a hardened surface. Suitable for users of all skill levels.	May have gentle climbs and avoidable or optional obstacles such as rocks, roots, and small drops. Trail is relatively wide.	Steeper slopes and some unavoidable obstacles such as roots, rocks, and medium drops. Trail is beginning to narrow.	Increasingly steeper slopes on a much narrower trail. Trail surface may be loose and have many difficult obstacles such as roots, rock gardens, larger drops, jumps, and sharp corners.	Very steep and technical, requiring highly advanced skills and balance to clear obstacles safely.	Very dangerous conditions requiring very highly advanced skills, balance, and bike control to traverse safely. Not recommend for most riders—even seasoned mountain bikers.
TRAIL WIDTH	72" or wider	36" or wider	24" or wider	12" or wider	6" or wider	3" or wider
TRAIL SURFACE	Hardened or paved	Firm and stable	Mostly stable with some variability	Widely variable	Widely variable and unpredictable	Extremely variable and unpredictable
TRAIL GRADE	Average: Less than 5% Max: 10%	Average: 5% or less Max: 15%	Average: 10% or less Max: 15% or greater	Average: 15% or less Max: 15% or greater	Average: 20% or more Max: 15% or greater	Average: 20% or more Max: 20% or greater
TECHNICAL TRAIL FEATURES (TTFs)	None	Avoidable obstacles may be present Some unavoidable obstacles 2' tall or less Unavoidable bridges 36" or wider	Avoidable obstacles may be present Unavoidable obstacles 8' tall or less Unavoidable bridges 24" or wider TTFs 2' high or less, width of deck is greater than 1/2 the height	Avoidable obstacles may be present Unavoidable obstacles 15' tall or less Unavoidable bridges 24" or wider TTFs 4' high or less, width of deck is less than 1/2 the height May include loose rock Short sections may exceed above criteria	Avoidable obstacles may be present Unavoidable obstacles 15' tall or greater Unavoidable bridges 24" or narrower TTFs 4' high or greater, width of deck is unpredictable May include loose rock Many sections may exceed above criteria	Avoidable obstacles may be present Unavoidable obstacles 20' tall or greater Unavoidable bridges 12' or narrower TTFs 8' high or greater, width of deck is highly unpredictable May include loose rock Most sections may exceed above criteria

Source: <https://ntxtrails.com/what-do-the-trail-difficulty-ratings-mean/>



APPENDIX D

REGIONAL PARK CLASSIFICATIONS & MANAGEMENT ZONES

D.1 Current Park Classifications

The CRD defines the purpose of each park classification as follows:

WILDERNESS AREA	CONSERVATION AREA	NATURAL AREA	RECREATION AREA
<p>A Regional Wilderness Area is characterized by:</p> <ul style="list-style-type: none"> - a large land base, generally more than 1,000 hectares; - the conservation of ecosystems, with minimal human interference; - opportunities for visitors to experience, firsthand, the park's ecosystems; - opportunities for backcountry recreation and camping; - the provision of few, if any, rudimentary services and facilities; and - the experience of remoteness, solitude and harmony with nature. <p>Maintaining wilderness areas in the region is an important part of the regional parks function. Wilderness is critical to sustain wildlife and plants that rely on sizable natural areas for their survival and to provide wilderness outdoor experiences and activities. They are places where residents can experience wilderness close to their home. East Sooke, Sea to Sea Green Blue Belt and Sooke Hills Wilderness regional parks are the sole examples of Regional Wilderness Areas in the capital region.</p>	<p>A Regional Conservation Area protects regionally significant natural environments that contain sensitive and threatened ecosystems (e.g., they will have significant Garry oak, old-growth forest, salt marsh, or estuary ecosystems). They contain rare or endangered plant and wildlife species and their supporting ecosystems. The size of a Regional Conservation Area should be sufficient to ensure that natural features can be protected and remain viable over the long-term.</p> <p>Outdoor activities will be permitted in a Regional Conservation Area, provided they have minimal impact on the natural environment. In most cases, the main activity will be hiking. These areas will generally have basic facilities, such as trails, parking areas, toilets and signage.</p> <p>Examples of a Regional Conservation Area are Witty's Lagoon, Mill Hill, Francis/King, Matthews Point and Island View Beach regional parks.</p>	<p>A Regional Natural Area protects the natural environment and provides opportunities for a range of appropriate outdoor experiences and activities. These natural areas are not as ecologically sensitive or diverse as those found in a Regional Conservation Area, although they may contain some sensitive and threatened ecosystems. These ecosystems will be identified in the park management plan, and conservation will be the priority in those areas. Regional Natural Areas also protect key greenspaces that are important to the natural character of the region.</p> <p>These areas will try to accommodate a range of appropriate outdoor experiences and activities. The exact uses will be outlined in the park management plan. Examples of a Regional Natural Area are Mount Parke, Coles Bay and North Hill regional parks.</p>	<p>A Regional Recreation Area provides opportunities for many outdoor experiences, activities and events, and will be managed to accommodate a relatively high number of visitors. Facilities will be developed to support this level of use. The area must lend itself to development for a variety of uses that meet recreational needs, and it must be able to withstand intensive public use.</p> <p>This classification is distinct from other park classifications in a number of ways:</p> <ul style="list-style-type: none"> - The emphasis is on outdoor experiences and activities, although protecting the natural environment will be addressed in all decision-making about visitor use and facilities. - The range of acceptable recreational activities in these areas will be the widest within the regional parks and trails system. - Recreation activities may include competitive sports. - Recreation facilities operated by non-profit groups may be permitted. - Opportunities and facilities may be provided for celebrations such as festivals, and group functions (e.g., picnics). <p>Elk/Beaver Lake is an example of a Regional Recreation Area. It is the only regional park in the capital region with this classification.</p>

The classification assigned to each park is as follows:

Albert Head Lagoon	6.960	Regional Conservation Area
Ayum Creek	6.403	Regional Conservation Area
Bear Hill	48.764	Regional Natural Area
Brooks Point	6.041	Regional Conservation Area
Coles Bay	3.598	Regional Natural Area
Devonian	13.526	Regional Conservation Area
East Point	0.883	Regional Natural Area
East Sooke	1456.806	Regional Wilderness Area
Elk/Beaver Lake	443.168	Regional Recreation Area
Francis/King	107.333	Regional Conservation Area
Gonzales Hill	1.796	Regional Natural Area
Horth Hill	36.359	Regional Natural Area
Island View Beach	51.064	Regional Conservation Area
Jordan River	147.036	Regional Natural Area
Kapoor	12.591	Regional Natural Area
Lone Tree Hill	31.401	Regional Conservation Area
Matheson Lake	157.148	Regional Natural Area
Matthews Point	24.730	Regional Natural Area
Mill Farm Reserve	315.266	Regional Natural Area
Mill Hill	71.654	Regional Conservation Area
Mount Parke	49.085	Regional Natural Area
Mount Wells	120.827	Regional Conservation Area
Mount Work	728.823	Regional Natural Area
Roche Cove	159.984	Regional Natural Area
Sea to Sea	3979.793	Regional Wilderness Area
Sooke Hills Wilderness (total)	4120.073	Regional Wilderness Area
Sooke Potholes	71.886	Regional Natural Area
Sooke River Road Reserve	6.968	Regional Natural Area
St. John Point	27.467	Regional Conservation Area
Thetis Lake	923.060	Regional Natural Area
Witty's Lagoon	56.233	Regional Conservation Area

D.2 Park Management Zones

The following management zones are applied through the management planning process and set more specific management direction for specific areas of the park:

Environmental protection zone

To protect ecologically significant areas within regional parks through long term science-based land stewardship

Cultural heritage protection zone

To protect culturally significant areas and features through a long term cultural resource management strategy

Regional wilderness zone

To keep large natural systems functioning and provide a regional wilderness experience for park visitors

Natural environment zone

To provide easily-accessible natural areas within the parks. To provide areas within the parks that can be used for more active recreational pursuits

Outdoor recreation zone

To provide areas within a regional park that can accommodate concentrated recreation use

Park services zone

To provide areas within a park needed to support park services

The following regional parks have been assigned a recreation zone:

- ▶ **Elk Beaver Lake** - has both general outdoor recreation and intensive outdoor recreation zones.
- ▶ **Island View Beach** - has outdoor recreation zone in the existing management plan.
- ▶ **Thetis Lake** - has a Natural Area Recreation zone in the existing management plan.
- ▶ **Francis King** - has a natural area recreation zone in the existing management plan.
- ▶ **East Point** - had a recreation zone included in management plan, but CRD no longer manages the portion of land that it was on (it is now part of Gulf Islands National Park Reserve)



