# CARTWRIGHT MOUNTAIN TRAIL PLAN









The Cartwright Mountain trail system is one of the most desired year-round trail systems in the District of Summerland (District). It supports many different trail-based activities such as walking, hiking, trail running, mountain biking, fat biking horseback riding, dog walking, off-road vehicle (ORV), off-road motorcycle (ORM), and snowshoeing and offers stunning vistas of Giants Head Mountain, Okanagan Lake, and the rolling hills and open forests and grasslands of the Okanagan Valley.

Hosting thousands of visits each year, the trail system has been developed organically and informally over the past few decades through the incredible efforts of a small number of skilled and dedicated volunteers. Visitors to the trail system are quite satisfied with the quality of the recreation experience it provides. Though satisfied, opportunities to undertake basic improvements to trail system and its governance and management have emerged.

Recognizing the growing popularity of the trail system, the evolving interests and new uses (e-bikes) that are occurring on the trail system, and the emerging management issues and concerns (e.g. land development, ecological values, user conflicts), action 1.4 of the District's 2019 Trails Master Plan directed the District to prepare a trail plan for Cartwright Mountain.

### **PURPOSE**

The purpose of this trail plan is to outline the recommended steps that can be taken, if and when resourcing is available, to establish a more coordinated and formalized approach to the development and management of the Cartwright Mountain trail system.

### The plan:

- Provides a detailed inventory and classification of the existing trail system and visitor amenities.
- Provides an overview of existing land use and environmental values.
- Identifies the priority management issues and concerns associated with the trail system and recreational use as identified by the community and research.
- Defines the desired conditions envisioned for the area and sets out the activities and amenities that are appropriate for the trail system.
- Proposes the trails that should be considered for formal designation and those that should be considered for decommissioning.



### TRAIL SYSTEM AT A GLANCE

55 km long

73% Non-Motorized 27% Mixed Use

**15%** optimized for Mountain Biking

26% Green Circle 68% Blue Square 6% Black Diamond

100% unsanctioned

# GOVERNANCE & OPERATIONAL MODEL

- Informal volunteer
- Identifies capital development actions including a conceptual signage plan.
- Outlines actions that could be taken to advance the authorization, governance, operation and management of the trail system.

Content in this plan will also help to inform the District's future negotiations and discussions regarding land development in the area as well as District updates to the Official Community Plan and land use bylaws.

#### **ENGAGEMENT**

The plan was informed through a meaningful public engagement process. Engagement tactics included:

- Online public surveys
- Sounding boards
- Stakeholder Interviews (virtual & in-person)
- Written submissions
- Online interactive crowdsource web map
- Input from District of Summerland Council and Parks & Recreation Advisory Committee

# ENGAGEMENT BY THE NUMBERS



197

Online Public Surveys (114 completes and 83 partials)



22

sounding board comments



14

Interviews (17 individuals for both Conkle and Cartwright Mountains)



5

written submissions



192

webmap contributions (points, line, comments, likes / dislikes from 45 unique users

### **Snapshot of Stage 1 Engagement Findings**

The following represents a brief snapshot of what was heard:

- The trail system is highly valued and supports a variety of activities year-round.
- Participants were very satisfied with their recreational experience on the trail system, but opportunities to improve emerged.

### **Top Recommended Amenity Improvements**

- Signage (wayfinding, educational, regulatory, interpretive)
- On-trail amenities (benches, repair stations)
- Parking and trailhead enhancements (parking capacity, wildlife-proof garbage cans, picnic tables, vault toilet, bike parking)
- Participants want to ensure amenities are basic and complement the natural setting

#### **Top Recommended Trail Improvements**

- Clearly identify the network of non-motorized and mixed-use trails
- Reroute trails off private property where landowners do not support trail access
- Ensure that the connectivity of the most popular trails will be integrated into and retained through future land developments (e.g. Vistas, Eco-Village)
- Consider adding additional technical trail features
- Elevate the trail maintenance

# Opportunities to Improve Governance, Trail & Visitor Management

- Collaborate with the Province and the owners of large private land parcels to explore options to formalize the trails on Crown and maintain trail connectivity on private lands
- Manage risk and liability to private landowners that authorize trails to cross their properties
- Address gaps in ecological and archaeological inventories
- Establish a volunteer stewardship group for trail maintenance
- Elevate environmental awareness and responsible recreation
- Address trail conflicts with motorized users, dog walkers, and equestrian/mountain bikers

### **Snapshot of Stage 2 Engagement Findings**

[Populated after Stage 2 input has been compiled]

The District reached out to the Penticton Indian Band and Okanagan Nation Alliance at the start of the project to provide awareness of the project and provide opportunity for input. To date, they have not provided a response which may indicate that they do not have any directions or recommendations for the Plan.

### **DESIRED CONDITIONS**

To articulate what the trail system will look like in the future, five broad desired condition statements have been developed, along with clear descriptions of what each means. The strategies and actions included in the plan are deliberately focused on achieving and maintaining these desired conditions.

- Quality & Memorable Visitor Experiences
- A Sustainable Trail System
- A Community Supported Trail System
- A Collaboratively Stewarded & Effectively Resourced Trail System



#### THE PLAN AT A GLANCE

To achieve the desired conditions sixteen strategies have been identified as follows:

### **Trail Development Plan**

- 1. New Trails
- 2. Trail Reroutes & Enhancements
- 3. Trail Decommissioning
- 4. Parking, Staging Areas & Community Trailheads
- 5. Amenity Nodes
- 6. Signage
- 7. Winter Grooming

# Authorization, Governance, Operations & Management

- 8. Trail Authorizations
- 9. Governance Model & Trail Stewardship Group
- 10. Visitor Use Management
- 11. Inspections & Routine Maintenance
- 12. Risk Management & Volunteer Management
- 13. Activation & Programming
- 14. Trails Tourism
- 15. Land Use Planning, Official Community Plan & Zoning



Each strategy contains one or more actions that are proposed to be implemented over the plan's fifteen-year horizon.

# KEY ELEMENTS OF THE TRAIL DEVELOPMENT PLAN

Key elements include:

- The trail system should remain a network of designated mixed use & non-motorized trails that deliberately target beginner and intermediate users.
- Continuing to support the current mix of activities nonmotorized and motorized activities on trails designated for those uses.
- Introduction of new trails or trail segments to:
  - » Connect the summit of Cartwright Mountain to the northern tip of ToH
  - » Formally connect Hermiston Drive to Lower K2 / Chez Nic Connector
  - » Provide connection from the planning area west to a potential future equestrian optimized trail.
- Development of a new staircase and connection from the Flume Trail to Taylor Place.
- Upgrades to the trail tread on the mixed-use trail that leads to the summit of Cartwright Mountain.
- Designation and management of Family Jules, Clubber Lang, Joyride DH, Yahoo & Repeat, Roller Coaster / Roxy Roller as mountain bike optimized downhill only trails to improve visitor safety and manage potential conflicts. Introduction further Tech Trail Features on these mountain bike optimized trails.
- Continued winter grooming on Joy Ride, Family Jules, Deer Ridge and Yahoo & Repeat trails.
- Trail reroutes and decommissioning to avoid private lands, avoid future land developments, improve efficiency and reduce habitat fragmentation.
- Development of formalized parking and staging areas with basic visitor amenities at the Eco Village / Solar Centre, West of McLarty Place, and proposed Vistas neighbourhood.
- Formalization of a network of community trailheads with basic amenities.
- Continued provision and formalization of existing amenity nodes (e.g. bench, picnic table, signage) and introduction of three new amenity nodes at key viewpoints.
- A new signage typology and a signage plan.

### **IMPLEMENTATION**

The following tables, which are presented by implementation timeframe, provide an abbreviated summary of actions identified in the plan. All proposed actions are subject to landowner / manager approvals, required assessments, and future capital budget allocations and resource availability.

### Initial Actions | 1 - 2 Years

Strategy	Section & Action No.	Action
Trail Development Plan		
Trail Reroutes & Enhancements	7.3(2)	Consider working proactively with the developer of parcels PID: 011-530-596 and PID: 016-595-378 throughout the land development process to ensure that the trail system and amenities outlined in this plan are integrated into the respective developments.
Authorization, Governance, O	perations &	Management
Trail Authorizations	8.1(1)	Based on recommendations from the Environmental Scan, consider undertaking a biophysical inventory and environmental impact assessment to determine if existing trails should be rerouted to avoid wildlife habitat features.
	8.1(1)	Work with the Penticton Indian Band's preferred Archaeologist to complete Archaeological Overview Assessment of all proposed trails, trail re-routes, parking / staging area developments / improvements and infrastructure development. Undertake Pre-Field Reconnaissance Reports and/or Archaeological Impact Assessments as required.
	8.1(2)	Consider working with private landowners to secure a lease, license or other similar agreement authorizing the District to temporarily provide, maintain and operate the trails that cross private lands.
	8.1(3)	Investigate and consider pursuing authorization of the trail system on Crown lands through either a Forest Range Practices Act section 56/57 approval or a License of Occupation under the Land Act and sanctioning the full trail network.
Governance Model & Trail Stewardship Group	8.2(1)	Investigate and consider establishing a multi-interest trail stewardship group to provide both governance and operations and maintenance of trail systems in the District (including Cartwright Mountain, Conkle Mountain, Giants Head and potentially others).
	8.2(4)	Research and explore funding opportunities to implement the Plan's strategies and actions (grant applications, donations, sponsorships, etc.)
Land Use Planning, Official Community Plan & Zoning	8.8 (1)	The District should work closely with developers to ensure that trail system and network of staging areas and community trailheads identified in this plan (section 7.0) are integrated into future development plans. Land should be acquired by the District through the subdivision process to provide for the necessary staging areas, community trails and trail connections and the District should collaborate with the respective developer to ensure that current trail connections that will be lost to development are re-routed generally as illustrated in this plan.

### Short Term | 3 - 6 Years

	Section	
Strategy	&	Action
<b>3</b> /	Action No.	
Trail Development Plan		
New Trails	7.2(1)	Consider engaging appropriately experienced local volunteers to design and build the following trails / trail segments:
		N3 - Blue rated non-motorized single track multi-use trail connecting the Hermiston Road community trailhead to the Lower K2 / Chez Nic Connector trail intersection.
		N4 - Green rated non-motorized single track trail connecting Prairie Valley Rd. to Ottley Ave.
		N5 - Staircase to connect Flume Trail to Taylor Place (subject to feasibility).
Trail Reroutes & Enhancements	7.3(1)	R1 - Reroute the flume trail downslope of the existing alignment to avoid trespass on parcels PID: 015-237-435 and PID: 015-237-427. Co-locate trail with future sewer infrastructure.
		R2 - Reroute the existing Test of Humanity Trail alignment to avoid the Sunset Place private land parcels and connect into the Flume Trail.
		R3 - Reroute the Flume Trail to enter the proposed staging area on Denike St. Provide an additional reroute to improve the grade profile of the trail to the Denike St. intersection.
		R4 - Realign the existing trail to avoid the Solar Centre and provide a more sustainable trail grade and connection to a future Prairie Valley viewpoint overlooking Prairie Valley Road.
		R5 - From the new Eco Village staging area, relocate the Flume Trail to the north side of the flume line to avoid the steep eroding slope into the Solar Centre. Realign the unnamed north south segment of trail that connects the Test of Humanity Trail and Flume Line to integrate switchbacks and reduce the trail grade.
		R6 - Reroute the current Flume Trail alignment to the upslope / west of the 13 private land parcels along Taylor Place. Establish switchbacks to provide a more reasonable climb and sustainable grades from the current Flume Trail alignment to the elevation / height of land necessary to avoid the private land parcels and to provide a more natural southeastern loop for the Test of Humanity Trail. Create a new connection from the height of land to the Test of Humanity Trail.
		R7 - Realign the north end of the Flume Trail to establish a more sustainable descent to Cartwright Avenue community trailhead and loop connection to the Test of Humanity Trail.
		R8 - Reroute the equestrian bypass to connect into the Test of Humanity Trail main route and avoid unnecessary linear disturbance.
		R9 - Realign the mixed-use trail to start from the new proposed staging area west of McLarty Place.
	7.3(3)	Consider implementing the following trail tread enhancements to improve the quality and sustainability of the trails:
C%		E1- Develop a 2.5 m wide raised boardwalk along the Test of Humanity Youth loop north of the Eco Village to protect the wetland.
		E2 - Remove large cobble, restore proper draining and resolve erosion rills on the unnamed mixed-use trail leading to the summit of Cartwright Mountain.
O'	7.3(4)	Consider managing Family Jules, Clubber Lang, Joyride DH and Yahoo & Repeat trails as mountain bike optimized downhill only trails. All other trails in the system should continue to be managed as multi-use bi-directional trails.
	7.3(5)	Undertake routine trail maintenance activities to address identified trail sustainability problems (tread cupping, erosion, standing water, bench cuts, turn design).
	7.3(6)	Consider integrating more technical trail features into the trails to elevate the experience for visitors and to help satisfy their objectives (see section 7.3(6) for further details).
	7.3(7)	Consider working with grazing license holders to identify where improvements to fencing are needed and gates, walk / ride throughs, and cattle guards should be installed to ensure trail connectivity, minimize conflict between livestock and visitors and mitigate impacts of grazing on the trails.

Strategy		Section & Action No.	Action					
Parking & Staging Areas		7.5(1)	Continue the development of the parking lot within the Eco Village cul du sac that is north of the Solar Centre. Consider undertaking a design plan for the new staging area in the new District park space to the north east of the Solar Centre					
		7.5(2)	Consider working with the Deer Ridge developer and / or Province to assemble land for a new staging area in the Deer Ridge neighbourhood west of McLarty Place. Once land is assembled, consider undertaking a design plan for the staging area.					
		7.5(3)	Consider working with the Vistas neighbourhood developer to assemble land for a new staging area. Once land is assembled, consider undertaking a design plan for the staging area.					
		7.5(4)	Consider developing and maintaining a network of community trailheads that provide formalized access into the trail system from adjacent neighbourhoods for visitors who walk or cycle to the trail system.					
		7.5(5)	Consider working with the private landowner of parcel PID: 018-687-270 to explore the potential of establishing a future community trailhead and trail connections from Cartwright Avenue to the Flume Trail.					
Signage		7.1(1)	Consider adopting the sign typology and engaging a sign design professional to prepare the detailed design and content production of the signs proposed in the conceptual signage plan. Ensure the visual design of the signs is inspired by and compliments the natural setting.					
		7.7(2)	Upon completion of the sign design package, consider implementing the signage plan as presented.					
Winter Grooming		7.8(1)	Subject to confirmation of impacts to ungulate winter range, continue to provide a looped winter groomed trail experience.					
Authorization, G	overnance, Ope	rations & N	lanagement					
Governance Model & Trail Stewardship Group		8.2(2)	Once the trail stewardship group is established and the trail systems on District and Crown lands are authorized, consider establishing a contract / agreement with the trail stewardship group to operate and maintain the trail system.					
		8.2(3)	Consider providing recurring annual operating funding and capacity (e.g. equipment, materials) to support implementation of the trail stewardship group's annual operations and maintenance plans and, on a cost shared basis, capital funding to support capital priorities.					
Visitor Use Management	Bylaws & Regulation	8.3.2(1)	Consider reviewing and updating the Parks Regulation Bylaw No. 2022-012 to ensure that it addresses contemporary trail management issues.					
<b></b>	Temporary Trail System Closures	8.3.3(1)	Consider implementing temporary trail system closures as needed (e.g. conditions result in damage to trail tread, wildlife pose risk to public, minimize wildlife displacement / disturbance during sensitive times).					
	Weeds & Invasive Plants	8.3.4(1)	Consider undertaking an inventory of weeds and invasive plant species along the trails and visitor infrastructure in the planning area and identify treatment prescriptions.					
		8.3.4(3)	Consider requiring a Construction Environmental Management Plan be prepared for any trail or amenity developments / upgrades that require the use of machinery.					
Inspections & Routine Maintenance		8.4(1)	Consider formalizing "Inspection and Maintenance Protocols" to guide inspection frequency, prioritization of maintenance deficiencies, documentation / record keeping, reporting, and accident tracking.					
Land Use Planning, Official Community Plan & Zoning		8.8(2)	If / when future provincial land and resource management planning or forest landscape planning initiatives occur, advocate for the Crown land parcels to recognized for their recreation values and establish recreation as a priority land use.					

### Medium Term | 7 - 10 Years

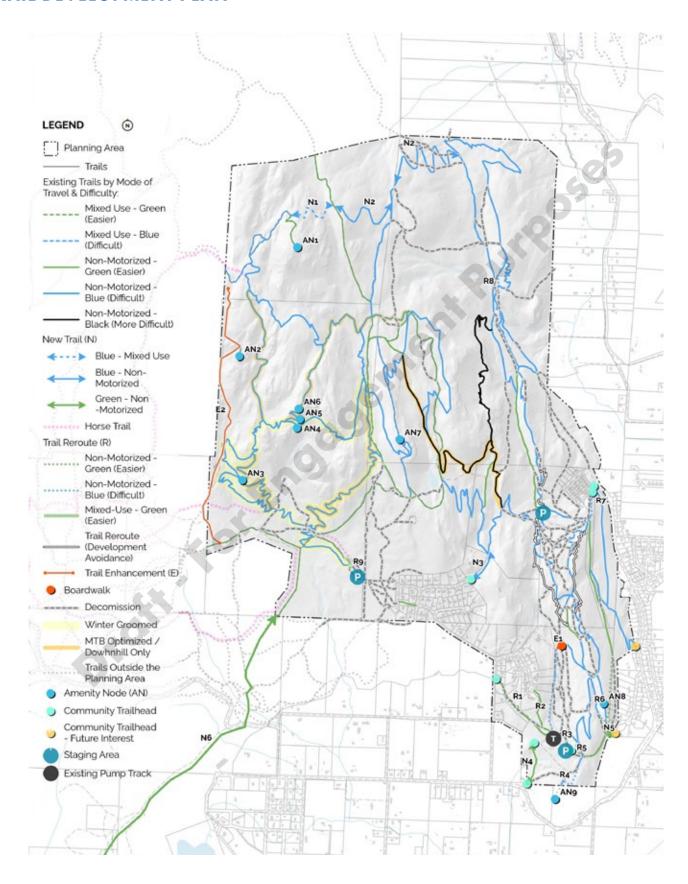
Strategy	Action No.	Action
Trail Development Plan		
New Trails	7.2(1)	Consider engaging appropriately experienced local volunteers to design and build the following trails / trail segments:
		N1 - Blue rated double track mixed-use trail connecting Cartwright Summitt to existing green mixed-use trail.
		N2 - Blue rated non-motorized single track multi-use trail connecting the existing green mixed-use trail to the northern loop of the Test of Humanity Trail.
Trail Decommissioning	7.4(1)	Consider implementing trail decommissioning including 5.7 km of active decommissioning, 4.6 km of passive decommissioning and 8.4 km of trail abandonment.
Amenity Nodes	7.6(1)	Consider formalizing and enhancing the existing amenity nodes and develop three new amenity nodes:
		AN1 - Cartwright Mountain Summit
		Benches
		Picnic Table
		Interpretive signage     Wayfinding signage
		AN2 - Mixed Use Trail to Cartwright Mountain Summit
		Benches
		Interpretive signage
		Wayfinding signage
		AN3 - Joyride & Lower Family Jules Trail Intersection  • Bench
		AN 4 – Deer Ridge Trail Near Joyride Trail Intersection
		• Bench
		AN 5 – Joyride Trail Switchback / Climb
		Bench
		AN 6 – Eagles View Viewpoint
		Benches
		Picnic Table
		Interpretive signage     Wayfinding signage
		Bike Repair Station
Otolly		AN 7 – Dragons Back Viewpoint on Hairway to Steven Trail
		Benches
		Picnic Table
		Interpretive signage
		Wayfinding signage
		AN 8 – Test of Humanity Trail South Viewpoint
		Benches
		Interpretive signage
		AN 9 – Prairie Valley Viewpoint (future interest)
		Benches     Interpretive signage
	7.4.101	
	7.6 (2)	Formalize and maintain the existing (or a suitable replacement) youth pump track with the Eco Village development.

Strategy		Action No.	Action
Authorization, Governance,	Operations & I	Manageme	ent
Visitor Use Management Visitor Information & Education		8.3.1(1)	Consider improving proactive visitor education and information regarding a) adventure smart & ride smart, b) Leave No Trace & Trail Etiquette, c) Rules of Use.
	Weeds & Invasive Plants	8.3.4(2)	Consider collaborating with the Okanagan and Similkameen Invasive Species Society and volunteers to appropriately treat and manage weeds and invasive plant infestations.
	Special Events & Commercial Use	8.3.5(1)	Consider developing / refining the District's internal procedures or developing a Special Events and Commercial Use policy to guide issuance of Park Use Permits for commercial, competitive and special event use of the trails on District lands.
Inspections & Routine Maintenance		8.4(2)	Consider developing an annual maintenance / operating plan to identify the routine and non-routine maintenance activities that are prioritized to be resolved and operational funding requirements / requests.
Risk Management & Volunteer Management		8.5(1)	Implement good risk management practices regarding the trail system and trail operations (e.g. design, hazard identification & control, inspections & maintenance, visitor information, volunteer health & safety program, accident reporting & analysis).
		8.5(2)	Consider adopting / developing a volunteer agreement, volunteer job description(s), and volunteer health and safety program.
Activation & Programming		8.6(1)	Consider encouraging community partners to provide programming on the trail system such as "learn to" programs, equity & inclusion programs, adaptive recreation programs, Indigenous youth programs.
		8.6(2)	Consider working with the Penticton Indian Band to determine if, and if so, how and where First Nation's culture, stories and places of significance can be integrated into the visitor experience and how the trail system can support Canada's Truth and Reconciliation.
Land Use Planning, Official Community Plan & Zoning		8.8(3)	Upon authorization of the trail system on Crown lands, or parkland dedication to the District provided through development opportunities, consider updating the zoning bylaw to zone land parcels in the area to permit trails, recreation, tourism and associated amenities, such as the P Parkland zoning designation.

### Long Term | 11 - 15 Years

Strategy	Action No.	Action
Trail Development Plan	·	
New Trails	7.2(2)	Consider undertaking feasibility study to develop an off-road non-motorized trail connection between the Rodeo Grounds staging area and the Cartwright Mountain trail system (N6).
Authorization, Governo	ance, Operati	ons & Management
Activation & Programming	8.6(3)	Consider working with the Summerland Museum, Okanagan Historical Society, Penticton Indian Band and others to prepare an interpretive plan for the trail system.
Trails Tourism	8.7(1)	Consider elevating the general awareness of the trail system and approved parking locations and integrate the trail system into summer and winter visitor itineraries.
	8.7(2)	Consider developing a compelling trail tourism destination marketing and communications strategy to encourage both locals and tourists to choose Summerland and Summerland's local businesses for one of their trails tourism adventures.
	8.7(3)	The District and the Province should be receptive to issuing approvals to local businesses that wish to offer guided, instructional or other trails focused tourism experiences on the trail system so long as the desired resource conditions identified in this plan are being achieved.

### TRAIL DEVELOPMENT PLAN



### **CAPITAL COSTS ESTIMATES**

Full details of cost estimates are outlined in section 10.2.

Description	Subtotal
SHORT-TERM SUBTOTAL	\$1,375,378
Soft Costs - Design, Surveys, Investigations, Permitting, Studies	\$500,000
Contingency (30%)	\$412,613
SHORT-TERM TOTAL COSTS	\$2,287,991
MEDIUM-TERM SUBTOTAL	\$413,375
Soft Costs - Design, Surveys, Investigations, Permitting, Studies	\$95,000
Contingency (30%)	\$124,013
MEDIUM-TERM TOTAL COSTS	\$632,388
LONG-TERM SUBTOTAL	\$159,375
Soft Costs - Design, Surveys, Investigations, Permitting, Studies	\$35,000
Contingency (30%)	\$47,813
LONG-TERM TOTAL COSTS	\$242,188
DEER RIDGE & VISTAS FUTURE NEIGHBOURHOODS STAGING AREAS	\$859,000
Soft Costs - Design, Surveys, Investigations, Permitting, Studies	\$0
Contingency (30%)	\$257,700
DEER RIDGE & VISTAS FUTURE NEIGHBOURHOODS STAGING AREAS TOTAL COSTS	\$1,116,700
SUBTOTAL (ALL ITEMS)	\$2,518,378
Soft Costs - Design, Surveys, Investigations, Permitting, Studies	\$630,000
Contingency (30%)	\$ <i>7</i> 5 <i>5</i> ,513
TOTAL COSTS	\$3,903,891

<sup>\*</sup>Costing associated with trail construction and re-routing assumes the work will be completed by contractors in accordance with IMBA and provincial standards / best practices. If volunteers are used to undertake the works, the costs may be reduced.

### **Monitoring**

To monitor progress and the status of each desired condition, a suite of indicators and associated triggers and thresholds have been developed and included in the plan.

<sup>\*</sup>While cost estimates associated with the Vistas and Deer Ridge staging areas have been included, those cost may be able to be avoided or reduced through the land development and negotiation process.

# TABLE OF CONTENTS

1. INTRODUCTION	1
1.1 PURPOSE	2
1.2 PLANNING AREA	2
1.3 PLANNING PROCESS	4
2. CARTWRIGHT MOUNTAIN TRAIL SYSTEM & VISITATION TODAY	5
2.1 TRAIL ACTIVITIES	6
2.2 TRAIL SUPPLY	6
2.3 VISITATION CHARACTERISTICS & DISTRIBUTION	12
2.4 TRAIL TREAD CONDITIONS	16
<ul><li>2.4 TRAIL TREAD CONDITIONS</li><li>2.5 EXISTING TRAIL GRADES</li><li>2.6 STAGING AREAS &amp; ACCESS TO THE TRAILS</li></ul>	18
2.6 STAGING AREAS & ACCESS TO THE TRAILS	20
2.7 SIGNAGE  2.8 VISITOR AMENITIES  2.9 VISITOR INFORMATION & TRIP PLANNING	23
2.8 VISITOR AMENITIES	25
2.9 VISITOR INFORMATION & TRIP PLANNING	26
2.10 TRAIL SYSTEM GOVERNANCE, OPERANONS & MAINTENANCE	26
3. SITE CONTEXT	27
3.1 LAND OWNERSHIP & LAND WHAGEMENT	28
3.2 WILDLIFE & ECOLOGICA V UES	36
3.3 TERRAIN & EXISTING TRAIL GRADES	36
4. ENGAGEMENT	38
5. STRENGTHS, 1531ES & OPPORTUNITIES	42
6. DESIRED RESOURCE CONDITIONS & APPROPRIATE ACTIVITIES &	45
AMENITIES  AMENITIES	45
	40
ADDESIRED CONDITIONS	

7. TRAIL DEVELOPMENT PLAN		50
7.1 OVERVIEW		51
7.2 NEW TRAILS		53
7.3 TRAIL RE-ROUTES & ENHANCE	EMENTS	53
7.4 TRAIL DECOMMISSIONING		55
7.5 PARKING, STAGING AREAS &	COMMUNITY TRAILHEADS	57
7.6 AMENITY NODES		61
7.7 SIGNAGE		62
7.8 WINTER GROOMING		62
8. AUTHORIZATION, GOVERNANC	E, OPERATIONS & MANAGEMENT	64
8.1 TRAIL AUTHORIZATIONS	~~	65
8.2 GOVERNANCE MODEL & TRA	IL STEWARDSHIP GROUP	66
8.3 VISITOR USE MANAGEMENT		67
8.4 INSPECTIONS & ROUTINE MA	INTENANCE	71
8.5 RISK MANAGEMENT & VOLUN	NTEER MANAGEMENT	72
8.6 ACTIVATION & PROGRAMMIN	1G	73
8.7 TRAILS TOURISM		74
8.8 LAND USE PLANNING, OFFICE	A COMMUNITY PLAN & ZONING	76
9. MONITORING		77
10. IMPLEMENTATION PLANS	TITAL COST ESTIMATES	79
10.1 IMPLEMENTATION PLAN	19. 2016年	80
10.2 CAPITAL COST ESTIMATES		85
APPENDICES		90
APPENDIX A TRAIL PLANNING & D	DESIGN GUIDANCE TOOLS	91
APPENDIX B: SIGN TYPOLOGY, TY	PICAL LOCATIONS & CONTENT	99
AV ENDIX C: CROWN LAND TRAIL	AUTHORIZATION OPTIONS 1	04
REPRESENTATION & ROLES & F		06
APPENDIX E: MONITORING INDIC	ATORS, TRIGGERS & THRESHOLDS	110
REFERENCES		113
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# **FIGURES**

Figure 1	Planning Area	3
Figure 2	Visitor Use Management Framework	4
Figure 3	Reported Activity Participation in the Cold Months	6
Figure 4	Reported Activity Participation in the Warm Months	6
Figure 5	Trail System by Sanction, Mode of Travel & Optimization	8
Figure 6	Trail Difficulty Demands Compared with Current Supply	9
Figure 7	Trails by Difficulty Rating	10
Figure 8	Winter Grooming	a.
Figure 9	Frequency of Visits - Warmer & Colder Months	12
	Length of Recreational Visit	12
Figure 10		13
Figure 11	Transportation Modes Most Used by Visitors  Group Composition  BC Bike Race (Photo: Dave Silver)	
Figure 12	Group Composition	13
Figure 13	BC Bike Race (Photo: Dave Silver)	14
Figure 14	Existing Visitation According to Strava	15
Figure 15	Evolution of a Trail Tread Leading to Cupping, Erosion & Colling	16
Figure 16	Existing Trail Grades	19
Figure 17	Mode of Transportation to Trailhead	21
Figure 18	Typical Parking Locations	21
Figure 19	Satisfaction with Parking Locations, Size A Sateway Experience	22
Figure 20	Land Ownership	29
Figure 21	Eco-Village, Deer Ridge & Vistor Verghbourhood Developments	31
Figure 22	Vistas Neighbourhood Future Tang Use Plan (2000) & Current Trail Inventory	32
Figure 23	Active Dispositions by Ce	35
Figure 24	Slopes & Trail Construction Suitability	37
Figure 26	Decommissioning Plan	56
Figure 27	Eco Village Varking & Staging Area	57
Figure 28	Deer Ridge Staging Area - Potential Options	58
Figure 29	Visits Neighbourhood Staging Area	60
Figure 30	Storage Plan	63
Figure 25	ráil Development Plan	52
Figure 31	Multi-Use Trail Courtesy Yield	67
Figure 32	Wayfinders Landmark Sculpture Identifying Points of Importance to	
	the Secwépemc Peoples	73
Figure 33	Trailheads Post: Secwépemc Landmarks Project	73
Figure 34	Relationship Between Trail Tourism Readiness & Benefits (Justin Ellis)	75
Figure 35	Trails Ecosystem	<i>7</i> 5
Figure 36	Relationship Between Indicators, Triggers & Standard / Threshold	78
Figure 37	Trail Classification System - Trans Canada Trail	91
Figure 38	Characteristics & Considerations of Multi-Use, Activity Optimized & Single Use Trails	92
Figure 39	Multi-Use & Mountain Bike Optimized Trail Intersection Design Guidance	95

# **TABLES**

Table 1: Distribution of Trails by Landowner & Mode of Travel	2
Table 2: Compatible, Permitted & Non-Compatible Recreation Activities & Amenities	4

Table 3: Index of Proposed New Trails PUI POSÉE

Table 4: Index of Trail Re-routes

Table 5: Index of Trail Tread Enhancements

Table 6: Index of Amenity Nodes

# **ACRONYMS**

a-MIB	Adap	ofive	Mount	ain	<u>ال</u>	Ke	
EDDA	-		LD				

**FRPA** Forest and Range Practices Act TrailKettle Valley Rail Trail **KVR** 

LOO Licence of Occupation

Land & Resource Management Plan **LRMP** 

Mountain Bike **MTB** 

OCP Official Community Plan

ORV Off Road Vehicle

PIB Penticton Indian Band

**RDOS** Regional District Okanagan Similkameen

Resource Management Zone RMZ

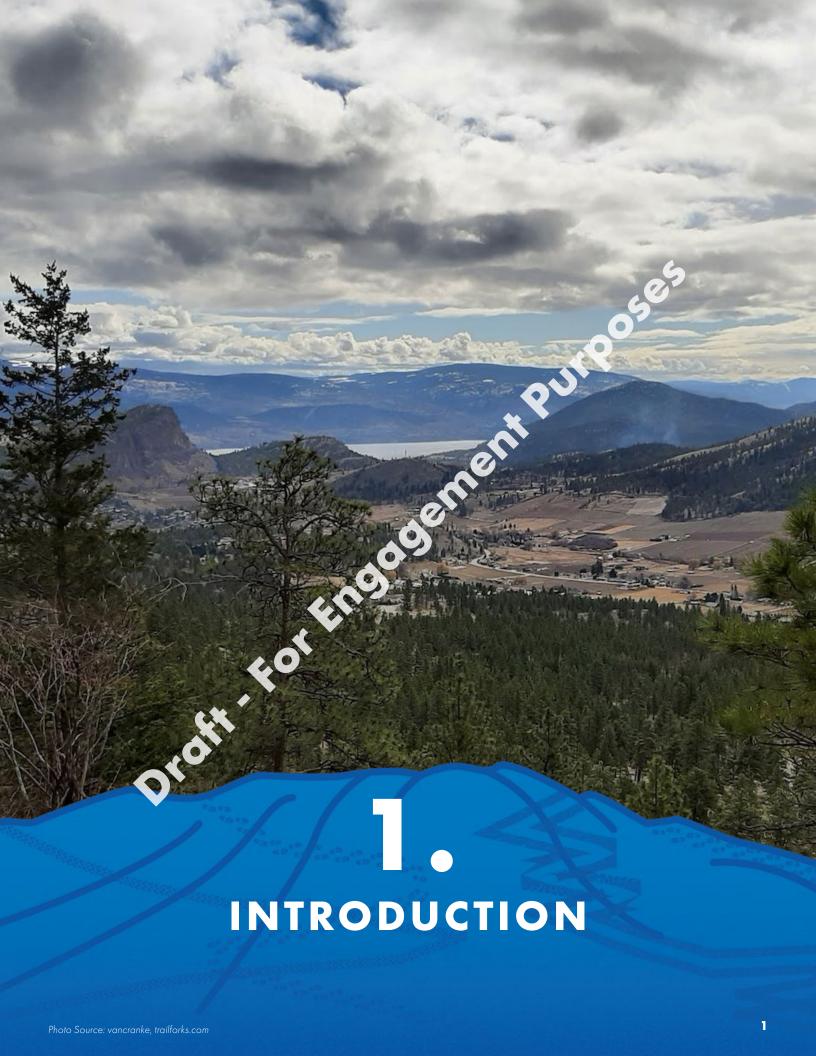
SARA Species at Risk Act

TCT Trans Canada Trail

Technical Trail Feature TTF

TMO Trail Management Objective

**VUMF** Visitor Use Management Framework



The Cartwright Mountain trail system is one of the most desired year-round trail systems in the District of Summerland (District). It supports many different trail-based activities such as walking, hiking, trail running, mountain biking, fat biking, horseback riding, dog walking, off-road vehicle (ORV), off-road motorcycle (ORM), and snowshoeing. It also offers stunning vistas of Giants Head Mountain, Okanagan Lake, the rolling hills and open forests and grasslands of the Okanagan Valley. The trail system is becoming an increasingly known tourism attraction that brings visitors to the community and has served as the stage for major trail-based special events and races.

Hosting thousands of visits each year, the trail system has been developed organically and informally over the past few decades through the incredible efforts of a small number of skilled and dedicated volunteers. Visitors to the trail system are quite satisfied with the quality of the recreation experience it provides. Though satisfied, opportunities to undertake basic improvements to trail system and its governance and management have emerged.

The District's 2019 Trails Master Plan suggested that conflicts between users (e.g. bikes, equestrian, motorized vehicles, dogs), lacking visitor infrastructure, signage and wayfinding, and unauthorized trail building and trespass on private lands are growing management issues. In addition, many of larger private land parcels and the District's Eco Village site, on which much of the trail system is located, are planned for development in the near term. The Cartwright Mountain area is also ecologically important. The mountain provides habitat for many different species, including species at risk, and trails and trail use have the potential to negatively impact these wildlife and ecological values if not well planned and actively managed. Recognizing the growing popularity of the trail system, the evolving interests and new uses (e-bikes) that are occurring on the trail system, and the emerging management issues and concerns (e.g. land development, ecological values, conflicts), action 1.4 of the District's 2019 Trails Master Plan directed the District to work collaboratively with trail users, First Nations, residents, landowners and interested organizations to prepare a trail plan for Cartwright Mountain. Recognizing the importance of the trail system to the community, and that private landowners retain decision-making authority for approving trails and public access to their lands, this plan provides the District with a community supported vision for the trail system that can be used by the District to inform future land development discussions with private landowners.

### 1.1 PURPOSE

The purpose of this trail plan is to outline the recommended steps that can be taken, if and when resourcing is available, to establish a more coordinated and formalized approach to the development and management of the Cartwright Mountain trail system.

Focused on the next fifteen years, the plan:

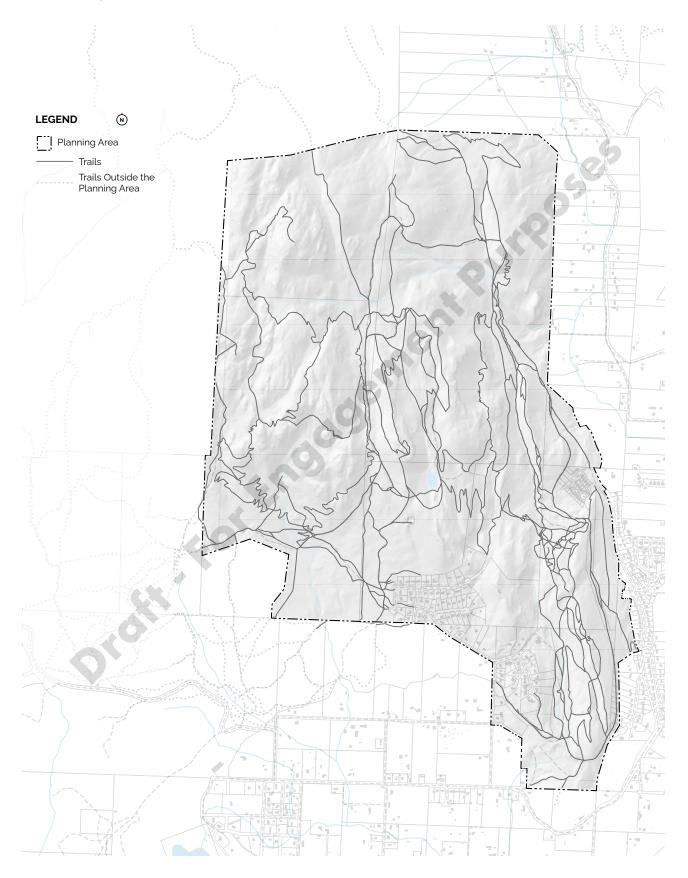
- Provides a detailed inventory and classification of the existing trail system and visitor amenities.
- Provides an overview of existing land ownership, land use and environmental values.
- Identifies the priority management issues and concerns associated with the trail system and recreational use as identified by the community and research.
- Defines the desired conditions envisioned for the area and sets out the activities and amenities that are appropriate for the trail system.
- Proposes the trails that should be considered for formal designation and those that should be considered for decommissioning.
- Identifies capital development actions including a conceptual signage plan.
- Outlines actions that could be taken to advance the authorization, governance, operation and management of the trail system.

Content in this plan will also help to inform the District's future negotiations and discussions regarding land development in the area as well as District updates to the Official Community Plan and land use bylaws.

### 1.2 PLANNING AREA

The 473.1 ha Cartwright Mountain planning area is broadly bound by Morrow Ave to the southwest, Crown land parcel in the west, the District of Summerland corporate boundary in the northwest, large private land parcel in the north, the Flume trail and Cartwright Ave to the east and the District's Eco Village in the southeast (Figure 1).

Figure 1 Planning Area



#### 1.3 PLANNING PROCESS

Preparation of the plan was undertaken in accordance with the <u>Visitor Use Management Framework</u> (VUMF) planning process (Figure 2). Tasks in each of the four planning phases included:

### PHASE 1: Building the Foundation

- Reviewing relevant information and data and articulating the planning area's purpose and relevant management direction.
- Review of background plans, reports, policies, and research.
- Assembly and mapping of available spatial data (e.g. environmental values, cultural values, geo-admin boundaries, land ownership, trail inventory, TrailForks, Alltrails, Gaia, Strava).
- Completion of a multi-day field program (June 17-20, 2024) to validate the desk-top trail inventory and rapidly assess the supply and condition of trails, infrastructure and amenities.

### PHASE 2: Defining Visitor Use Management Direction

- Engagement planning and launch of stage 1 engagement.
- Engagement analysis & What We Heard report preparation.
- Identification of key management issues and opportunities and preparation of desired condition statements. Identification of indicators, triggers and thresholds that will be used to monitor desired conditions over time.

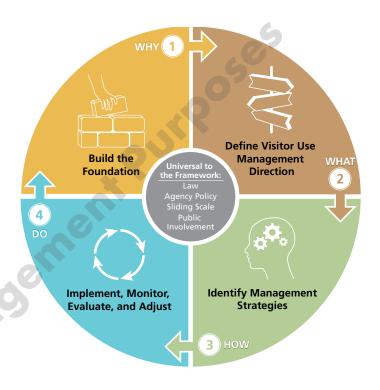
# PHASE 3: Identifying Management Strategies, Draft Plan & Final Plan

- Development of management strategies, actions and trail / infrastructure priorities.
- Preparation of the draft trail plan.
- Presentation of the draft trail plan to Council.
- Engagement planning & launch of stage 2 engagement to receive feedback on the draft plan. Engagement analysis and What We Heard reporting.

### PHASE 4: Finalize & Implement

- Editing of the draft plan & preparation of the final plan.
- Presentation to District Council.

Figure 2 Visitor Use Management Framework





#### 2.1 TRAIL ACTIVITIES

Thousands of residents and tourists come to the trail system each year to be physically active / exercise, enjoy nature, improve their mental health and wellness, to have fun and relax and for adventure and personal challenge. Engagement results indicate that the trail system hosts a diverse mix of trail-based activities in all seasons (Figure 3 and Figure 4). The most popular reported activities include:

Figure 3 Reported Activity Participation in the Cold Months

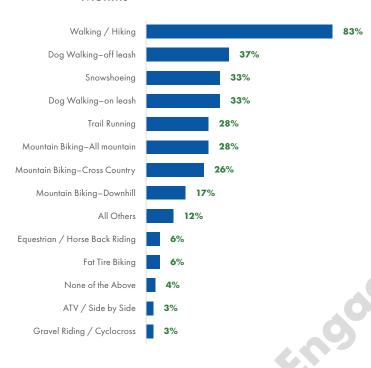
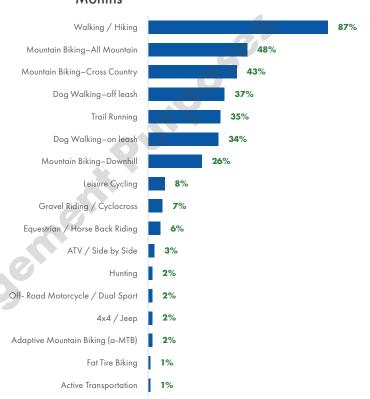


Figure 4 Reported Activity Participation in the Warm Months





## **ALL-MOUNTAIN MOUNTAIN BIKING**

Gravity focused flow and tech trails with technical features, less focused on physical challenge more focused on adventure, lower preference for climbing, heavier bikes with more travel.

## **CROSS COUNTRY MOUNTAIN BIKING**

Traditional trails, undulating with lots of climbing, not gravity focused, seeking endurance / fitness, seeking variable terrain with many climbs, lighter bikes with less travel.

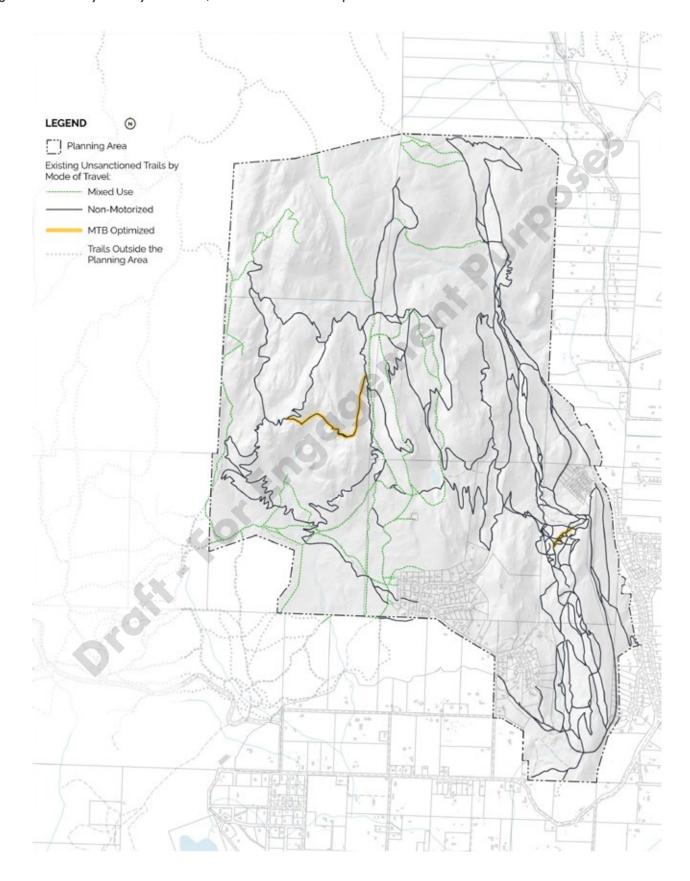


### 2.2 TRAIL SUPPLY

### 2.2.1 Trails by Status & Mode of Travel

The Cartwright Mountain trail system includes 55.2 km of trails (Figure 5). The entire trail system is unsanctioned (non-status) and has been built without formal authorization from the respective landowners/managers. Approximately 27% (15.0 km) of the trail system is classified as mixed-use trails (used by both motorized and non-motorized activities) while the remaining 73% (40.2 km) are classified as non-motorized trails, though no regulatory mechanism is currently in place to backstop this community preference. Of the non-motorized trails, 6.0 km (15%) are considered to be mountain bike optimized trails while the remaining 34.1 km (85%) of non-motorized trails are multi-use trails that have not been optimized for any particular activity.

Figure 5 Trail System by Sanction, Mode of Travel & Optimization



### 2.2.2 Trails by Difficulty

The difficulty level of inventoried trails was determined through general application of Recreation Sites and Trails BC's (RSTBC) proposed Mountain Bike Trail Difficulty Rating Matrix.<sup>1</sup>

Of the 55.2 km of trails:

- 26% is rated as easy (green circle)
- 68% are rated as more difficult (blue square)
- 6% is rated as advanced (black diamond)
- 0% is rated as expert (double black diamond)

According to input from the engagement process, visitors are seeking trail opportunities at all levels of difficulty (Figure 6). Regardless of activity, demands are greatest for blue (more difficult) rated trails followed by easier (green circle) rated, and then most difficult (black diamond) rated trails.

Figure 6 illustrates that the current supply of trails by difficulty does not fully align with reported demands. For example, 46% of respondents are seeking black diamond rated trails while just 6% of the current supply is rated as black diamond. Aligning the level of difficulty of trails with visitor demands helps to ensure:

- The trail system appeals to the broadest range of visitors.
- That visitors have opportunity to progress their individual skills and abilities.
- The incentive to build unauthorized trails is limited.

While supply and demand match may not be perfect, it is important to recognize that the Cartwright Mountain trail system is one of numerous trails systems in the Okanagan Valley. Other nearby trail systems (e.g. Three Blind Mice) offer a more significant supply of advanced black diamond rated trails. Learnings from the engagement indicate that the community intends for the Cartwright Mountain trail system to deliberately target visitors who are at a beginner or intermediate level of experience in their activity while providing some opportunity for progression to more technically challenging trails.

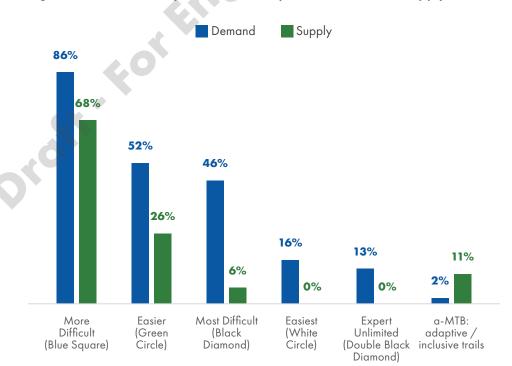
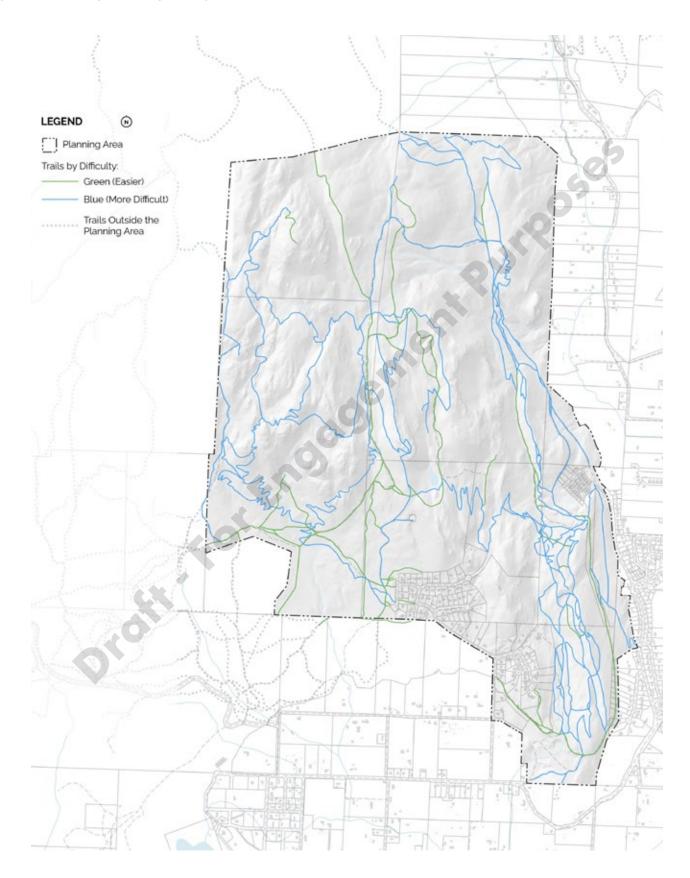


Figure 6 Trail Difficulty Demands Compared with Current Supply

Figure 7 Trails by Difficulty Rating





### 2.2.3 Winter Groomed Trails

To improve winter conditions for fat biking, snowshoeing and hiking, snow grooming is informally undertaken on approximately 5.6 km (10%) of the trail system. Grooming occurs on Joyride, Deer Ridge and Yahoo and Repeat trails. Grooming is also undertaken on the Family Jules trail if capacity is available. A snowblower is used to groom these trails and grooming is performed informally by a small number of volunteers.

Figure 8 Winter Grooming



### 2.3 VISITATION CHARACTERISTICS & DISTRIBUTION

While a quantitative visitation study is not available for the trail system, data from the engagement survey and Strava's heat maps were analysed and provide some helpful insights into existing demands and the distribution of visitation.

### 2.3.1 Online Survey Insights

Figure 9 Frequency of Visits - Warmer & Colder Months

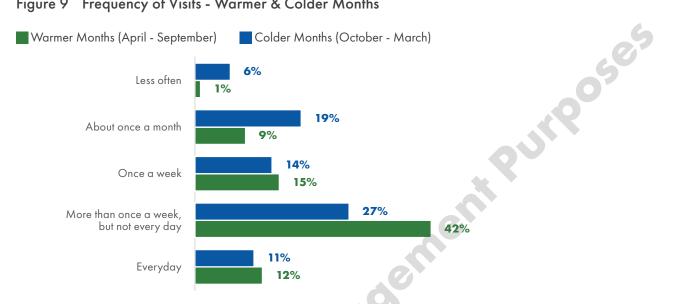


Figure 10 Length of Recreational Visit

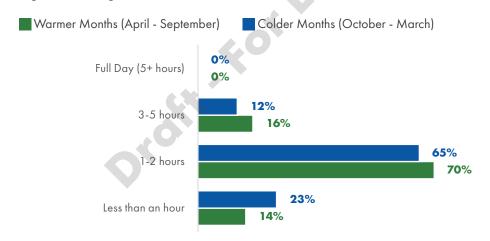




Figure 11 Transportation Modes Most Used by Visitors

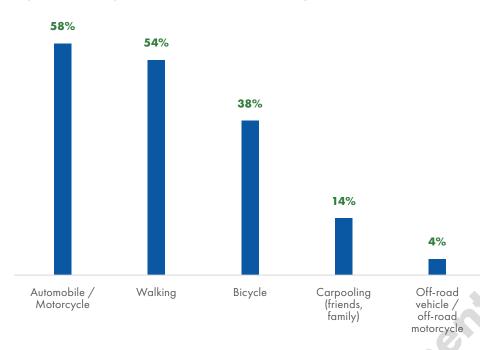
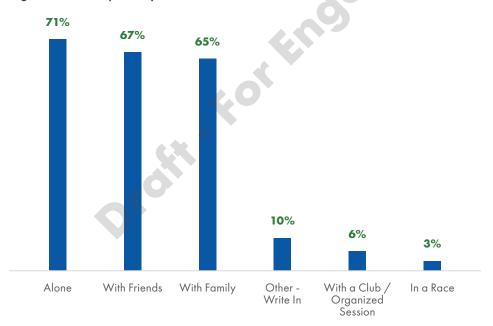


Figure 12 Group Composition







### 2.3.2 Strava Heat Map Insights

Strava's heat map provides insights into the relative volume of visitation on each trail. While Strava data is known to be biased towards more competitive users associated with trail running and mountain biking, analysis of the Strava heat map (Figure 14) suggests some trails may receive significantly more visitation than others. The most visited trails in the system appear to be:

- Test of Humanity
- Joyride
- Flume Trail
- Cartwright Summitt
- Hairway to Steven
- Deer Ridge
- Roxy Roller

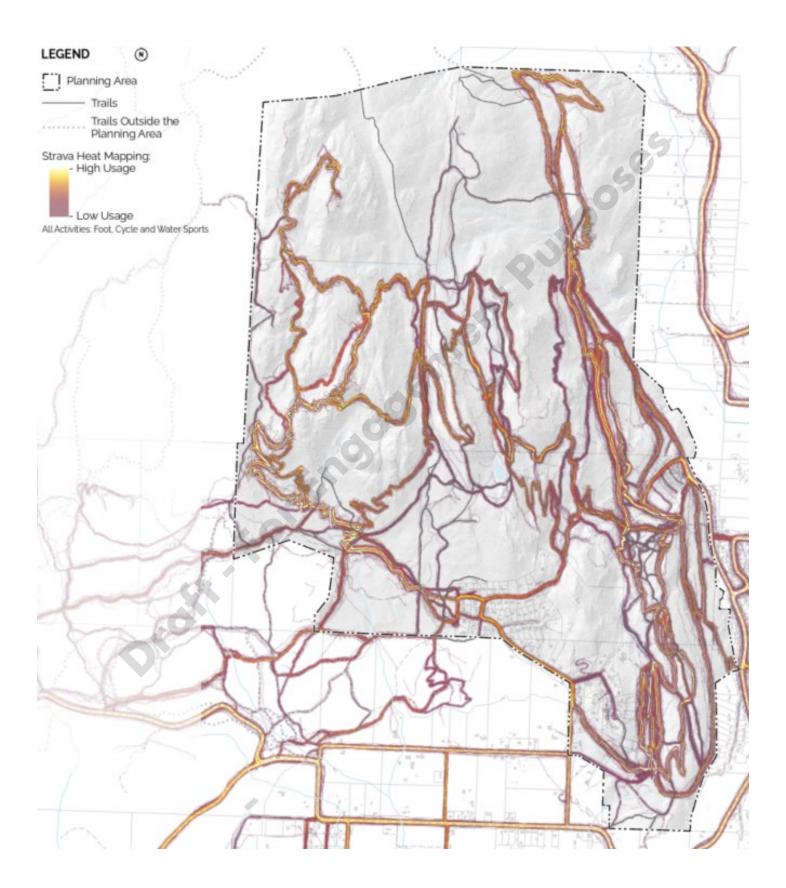
### 2.3.3 Competitions & Special Events

While most use of the trail system is spontaneous, the trail system has hosted a number of major warm season races and events in the past including the Test of Humanity Race and BC Bike Race. While local schools utilize the trails for Cross-Country running, no major events are known to occur annually on the trails any longer and no events or competitions were identified as being held in the colder months.

Figure 13 BC Bike Race (Photo: Dave Silver)



Figure 14 Existing Visitation According to Strava

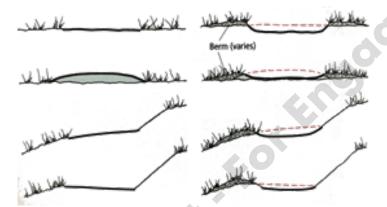


### 2.4 TRAIL TREAD CONDITIONS

A rapid assessment of the trail system was undertaken on June 17-20, 2024. Field assessment findings and engagement input confirmed that the trails in the system are generally in good condition. While some routine maintenance issues were observed, no major trail sustainability problems that place a trail or a trail segment at risk of failure were observed. Routine trail sustainability issues that were observed include:

- Tread Cupping, Berming & Erosion
- Standing Water / Puddling
- Degraded Bench Cut
- Trail Braiding
- Switch Back Turn Designs & Radius
- Undefined Trail Tread & Vegetation Encroachment (e.g. Rolling Stone)

Figure 15 Evolution of a Trail Tread Leading to Cupping, Erosion & Puddling



Technical trail features (TTFs) are natural or constructed obstacles that are purposefully integrated or built into a trail to enhance the experience and satisfy user objectives (e.g. challenge, risk, fun) particularly for mountain bikers. While very few TTFs have been built or designed into the trail network, the Herron Rd area, which is a dense maze of unsanctioned mountain bike optimized trails, contains several constructed gap jumps, step downs and ramps. These features have not been constructed to best practice (e.g. Whistler Trail Standards) are not signed or rated (e.g. RSTBC Mountain Bike Trail Difficulty Classification), and their current design may be elevating risk to visitors.



Tread Cupping, Berms & Erosion





Examples of Standing Water



Failing Bench Cut





Switchback Turn Designs & Radius



Undefined Tread & Vegetation Encroachment





Technical Trail Features





#### 2.5 EXISTING TRAIL GRADES

As a general practice, the most sustainable trails are those with an average grade of 10% or less. However, the grade on some segments of trail may deliberately exceed 10% (e.g. 15-30%) where needed to a) meet user objectives, b) provide the intended trail difficulty or c) to navigate site constraints. These sections should be short, be properly designed and contain water management features. As shown in Figure 16:

- 22% of the existing trail length has a grade between 0 10.9%
- 13% of the existing trail length has a grade between 11 -15.9%
- 12% of the existing trail length has a grade between 16 -20.9%
- 19% of the existing trail length has a grade between 21 30%
- 35% of the existing trail length has a grade of 30.1% +

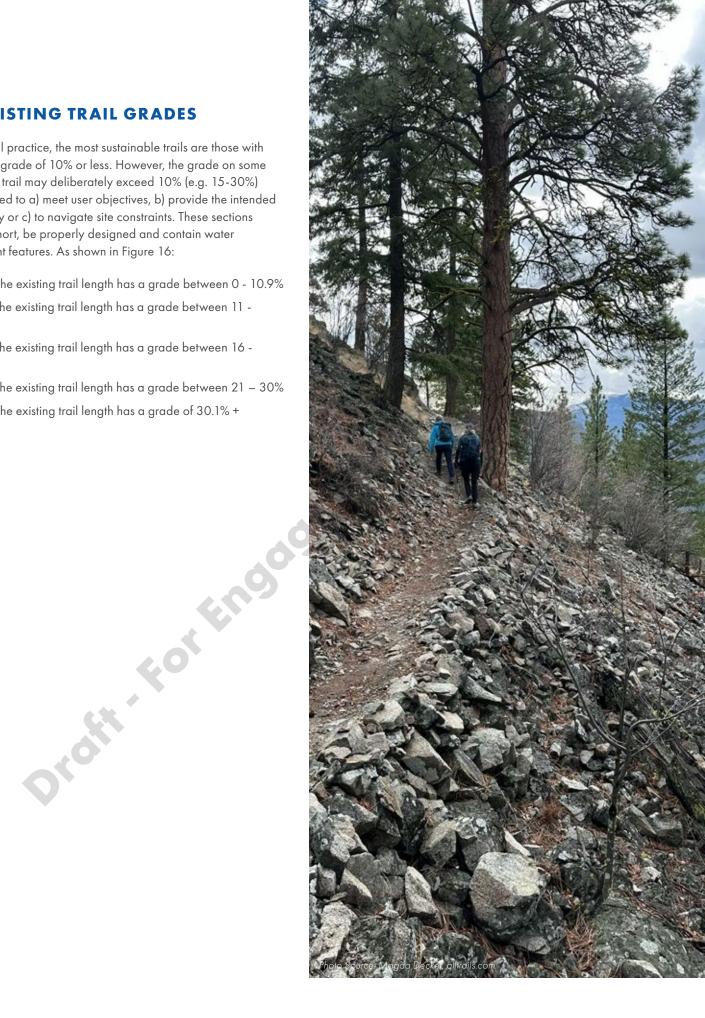
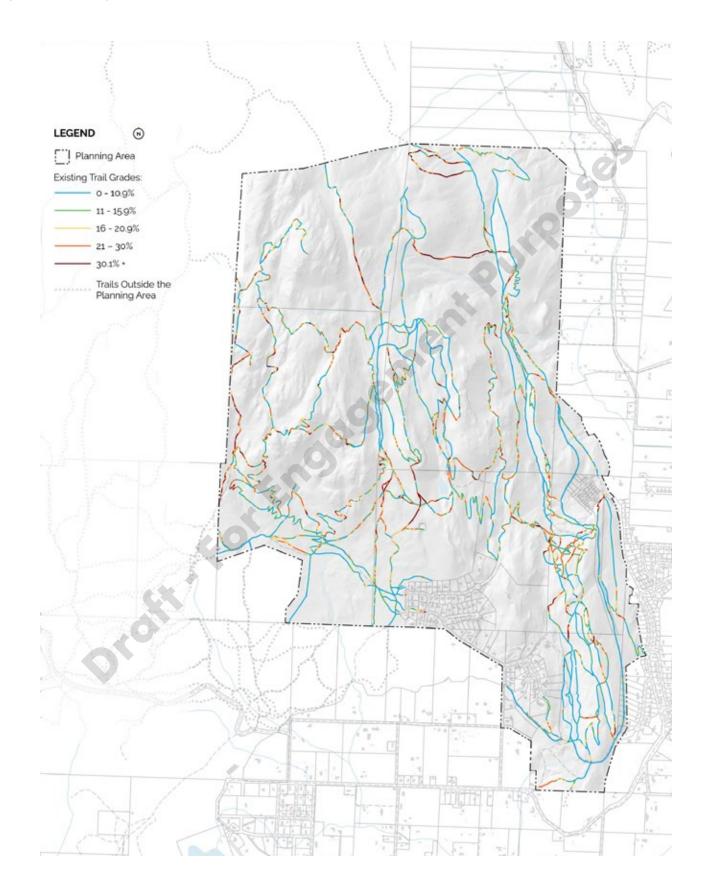


Figure 16 Existing Trail Grades



#### 2.6 STAGING AREAS & ACCESS TO THE TRAILS

The trail system is currently accessed through three informal staging areas 1) Morrow Road, 2) McLarty Place Cul du Sac, and 3) Herron Road.

	Morrow Road	McLarty Place	Herron Road
Status	Informal	Informal	Informal
Parking Capacity	3-5 vehicles	3-5 vehicles	Approx. 5 vehicles
Amenities	Interpretive Sign     Regulatory Signage	None	None
Considerations	Parking demand considerable resulting in vehicles lining both sides of Morrow Road and significantly narrowing the travel way.	Parking demand can be considerable resulting in vehicles parking on both sides of McLarty Place in addition to the cul du sac.	N/A

Morrow Road



McLarty Place



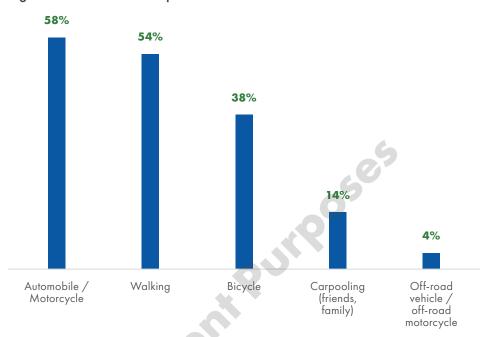
Herron Road



The Trapper's informal staging area, located outside of the planning area on Princeton Summerland Road, is the most common staging area for off-road vehicles and equestrian users.

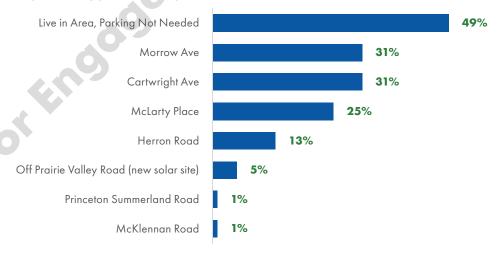
Fifty-eight percent (58%) of survey respondents indicated that they arrive at the trail system by automobile while 14% indicate they carpool (Figure 17). Fifty-four percent (44%) walk to the trailhead while 38% cycle. Parking capacity is a key consideration at trailheads.

Figure 17 Mode of Transportation to Trailhead



Based on the survey results, parking demands at the Morrow Road, Cartwright Avenue and McLarty Place informal staging areas are almost equal (Figure 18). Parking demands at these locations likely exceed the current parking capacity available which has led to concerns about traffic, parking congestion, trespass and disruption to the neighbourhood.

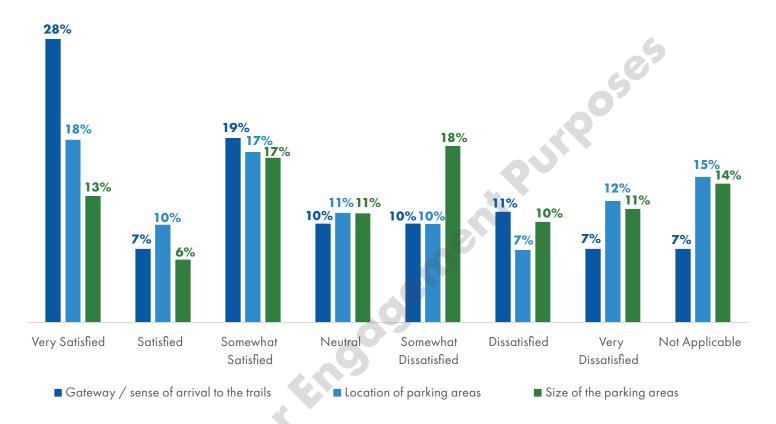
Figure 18 Typical Parking Locations



Engagement participants indicated (Figure 19) that there is opportunity to improve:

- Parking capacity at staging areas.
- Gateway experience and sense of arrival at the staging areas.

Figure 19 Satisfaction with Parking Locations, Size & Gateway Experience





#### 2.7 SIGNAGE

Much of the on-trail wayfinding signage has been informally developed and installed by trail volunteers and adds unique organic character to the trail system. Most signage is concentrated on the non-motorized trail network. The mixed-use trail network does not contain any signage. The approach, type, and design of signage varies significantly between the upper Cartwright Mountain area trails and the lower Cartwright Mountain area trails. Installed signage includes basic wayfinding signs that use trail names or arrows, regulatory signage indicating the trail is non-motorized or prohibiting horse use, and some advisory signage (e.g. cliff warning, direction of travel). Wayfinding with a map is included in two locations in the upper Cartwright Mountain area trails but not at any of the trailheads or staging areas. Though the names are not formally approved by landowners / managers, most of the non-motorized trails have been assigned names by the trail builders while most of the mixed-use trails are unnamed. Analysis of the existing signage system found that:

- Design & Condition Having been developed by volunteers, many signs are unique and add an interesting and appealing character to the trail system. Many installed signs do not apply District, Provincial, or other signage content or design practices. Many signs are reaching the end of their lifecycle and will require replacement in the near term.
- Missing Signs Wayfinding, advisory, education, and regulatory signage could be introduced / expanded and provided more consistently to better inform visitors.
- Permitted & Prohibited Activities Trailhead signs could be installed and use standardized symbology to communicate the activities that are permitted or prohibited on each trail.
- Level of Difficulty Rating Symbology Trailhead signs could include standardized symbology and language (e.g. green circle, blue square, black diamond) to communicate the level of difficulty trails to visitors.

- Missing Information Trailhead kiosks with integrated, accessible and useful information do not exist in the planning area. As such, visitor information at staging areas is limited. Information specific to the Cartwright Mountain trail system could be provided and visitor education messaging could be greatly expanded to address topics such as:
  - » First Nation's land acknowledgement
  - » Map of trail system communicating trail class, difficulty, style and visitor amenities
  - » Permitted and prohibited activities
  - » Regulations
  - » Responsible recreation / Leave No Trace messages
  - » Multi use trail etiquette
  - » Safety / Adventure Smart messages (e.g. Pre-Ride, Re-Ride, Free Ride, MTB Code of Conduct)
  - » Reporting instructions for maintenance issues & emergencies
  - » QR code to Trailforks
  - » Exclusion of liability & assumption of risks notice
- Advisory Signage Caution and warning signage could be added in areas such as downhill only trails and steep cliffs along with general notices about wildlife (e.g. bears, snakes).
- Private Property Sign Siting Where installed, boundary signage does not align with property boundaries or where land transitions from District / Crown to private land. Inconsistent use gives users impression that they are not on private lands elsewhere throughout the trail system.
- Interpretive Signage Interpretive signage could be provided in other appropriate locations on the trail system to present other interpretive themes.
- Trail Naming Trail naming could be implement based on longer contiguous trails rather than individual trail segment.
   This would reduce wayfinding confusion for visitors.

Typical Wayfinding –Upper Cartwright Area Trails



Wayfinding Map – Upper Cartwright Area Trails



Regulatory Sign – Mountain Biking & Hiking Only



Private Property Boundary Sign



Advisory – Downhill Only



Typical Wayfinding –Upper Cartwright Area Trails



Typical Regulatory Sign – No Horses



Private Property Boundary Sign



Advisory - Cliff



#### 2.8 VISITOR AMENITIES

Visitor amenities enhance the comfort and convenience of visitors to the trail system. They can also mitigate some undesirable visitor impacts (e.g. wildlife habituation, improper human waste disposal, littering). Amenities are limited to benches installed near long and / or steep climb trails (e.g. Joy Ride) and at some viewpoints. None of the informal staging areas contain toilets, waste receptacles or other day use amenities. Additionally, none of the available amenities are universally accessible. Informal user created firepits have been constructed at some of the viewpoints throughout the trail system.

Picnic Tables



Benches



**Firepits** 





## 2.9 VISITOR INFORMATION & TRIP PLANNING

Timely, accurate and effective trip planning and visitor information help visitors arrive at the trailhead prepared, informed about the trails and their conditions, and aware of the rules and responsible recreation practices. Accurate information also helps visitors select trails that are suitable for their abilities or desired experiences.

The availability of trip planning and information resources for the trail system was evaluated through a web search. The most common website returns were TrailForks, AllTrails and the District's parks and trails website. Analysis of the information provided through these and other websites found that:

- Websites identify and promote unauthorized / non-status trails and identify trails on adjacent private lands which are not approved for public use by the landowner.
- Websites do not consistently describe the rules of use for visitors and do not communicate a clear / consistent classification of the trails.
- Most websites provide little to no information on other values on the mountain (e.g. ecological, First Nations) or identify adjacent private lands. Visitor education about responsible recreation is largely absent.
- No websites provide visitor itineraries for the trail system with crosspromotion of other visitor services (e.g. accommodation, food and beverage) or attractions in the region.
- The trail system is not identified in any trail-focused tourism marketing by local or regional Destination Management Organizations.

## 2.10 TRAIL SYSTEM GOVERNANCE, OPERATIONS & MAINTENANCE

Responsibility for the maintenance and operations of the trails varies throughout the planning area. Trails on District owned land are the responsibility of the District. As these trails are unsanctioned, the District does not directly or actively inspect or maintain these trails. Trails on private lands are ultimately the responsibility of the private landowner while trails on Crown lands are the responsibility of the Province.



## ONLINE SEARCH TERMS USED

Cartwright Mountain +

- Trails
- Horseback Trails
- Hiking Trails
- Mountain Biking Trails
- Running Trails



# TRAIL MAINTENANCE ON CROWN LAND

Non-commercial recreational use and incidental clearing of brush or downed trees on Crown lands typically does not require approval from the Province before completing. Trail development or maintenance that includes ground disturbance, cutting / clearing of live vegetation and construction of structures (e.g. water bars, stairs, bridges, signs, etc.) requires a section 57 approval before it can be undertaken.



#### 3.1 LAND OWNERSHIP & LAND MANAGEMENT

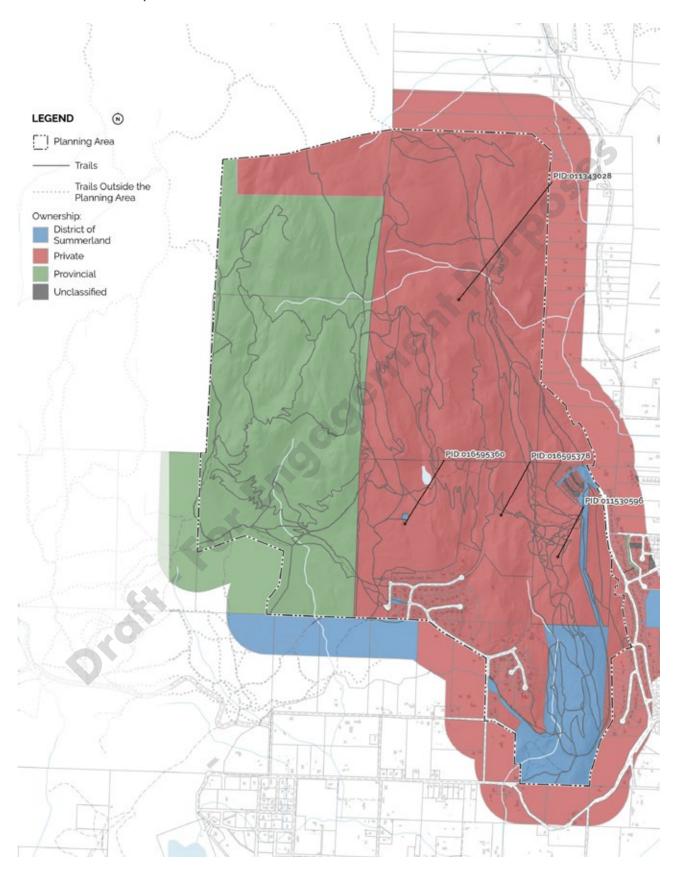
As shown in Figure 20 (on the following page), 7% of the planning area is owned by the District of Summerland. Thirty-three percent (33%) is provincial Crown land, and 60% is private land. As illustrated in Table 1, 60.1% of the current trail system exists on private land, 27.9% is on Crown land and 12% is on District land. Parcels PID: 011-530-596, PID: 016-595-378 and PID: 011-343-028 contain 47% of the trail system while parcel PID: 016-595-360 contains 9%.

Table 1: Distribution of Trails by Landowner & Mode of Travel

Trail Mode of Travel	Private Land	Crown Land	District Land
Non-Motorized Trail	25.1 km (45.5%)	8.5 km (15.4%)	6.6 km (12.0%)
Mixed-Use Trail	8.1 km (14.7%)	6.9 km (12%)	0.02 km (0.04%)
Total Trail Length (Mixed-Use & Non-Motorized)	33.2 km (60.1%)	15.4 km (27.9%)	6.6 km (12%)

While the intent of the plan is to provide a community supported vision for the trail system, each respective landowner / manager ultimately holds final decision-making regarding trail development, maintenance and management on their lands.

Figure 20 Land Ownership



#### 3.1.1 Eco-Village Site

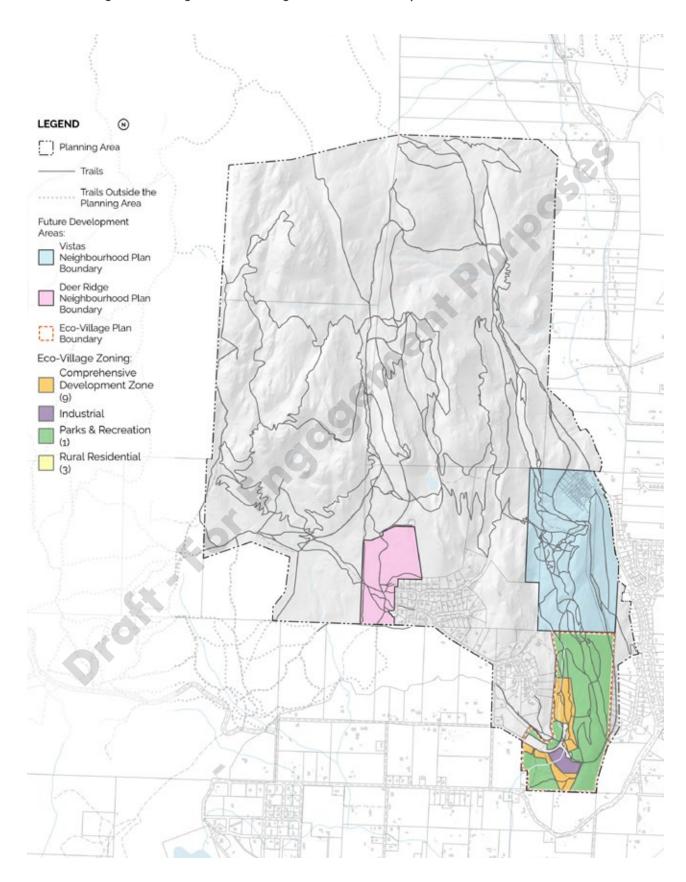
The District is developing an 11.6 acre Eco-Village on District owned land north of the District's Solar Energy Centre. The Eco-Village is intended to be a leading-edge and highly sustainable residential development complementing the District's Solar Energy Centre. The development is anticipated to include approximately 150 residential units through cluster single family / duplex housing, hillside town housing and pocket apartment buildings. The development is envisioned to be surrounded by parkland and is to provide direct access to the Cartwright trail system. Council approved the re-zoning of the Eco-Village site (Figure 21) in August 2024. The Eco-Village development site includes approximately 5.5 km of existing trails, many of which are anticipated to be impacted by the development. The development is expected to generate considerable additional demand for and usage of the trails future District parkland as well as adjacent private land.

#### 3.1.2 Deer Ridge Development

The District is aware that the owner of parcel PID: 016-595-360 is in the early stages of designing a residential subdivision to the north and west of McLarty Place. The proposed development is in keeping with the existing zoning for the land (Figure 21). Known as the Deer Ridge Subdivision, this residential development is likely to overlap short segments of multiple trails (e.g. Joy Ride, mixed-use) leading west from McLarty Place to the Crown land. However, the loss of these short segments will be inconsequential to the overall functionality and visitor experience provided by the trail system. The development will also remove the current informal parking that takes place in the cul du sac and create the need to establish a new formalized major staging area, with sufficient parking and visitor amenities, to access the trails on Crown lands. The development is expected to generate increased demand for access to and use of the unauthorized non-motorized and mixeduse trails on the adjacent Crown lands.



Figure 21 Eco-Village, Deer Ridge & Vistas Neighbourhood Developments



#### 3.1.3 Vistas Neighbourhood Development

Known as the Summerland Vistas Neighbourhood, Parcel PID: 011-530-596 is anticipated to be developed in accordance with the Summerland Vistas Neighbourhood Plan which was developed in 2000. This plan was re-adopted in the District's 2015 Official Community Plan. The plan anticipates developing approximately 12.6 ha of land identified in the future land use plan as low density (15 units / ha) residential and medium density (25 units / ha) residential. While currently included in the District's zoning bylaw, the current neighbourhood plan indicates that development is not planned on areas exceeding 30% slope (14.7 ha) or in areas identified as park (2.1 ha). Given the variable topography, development is expected to occur in clusters in order to ensure that it is sensitively sited and contains appropriate form that respects off-site views and ensures the development is integrated into the landscape. This form of development is also expected to result in more land being left as open space. The development is estimated to provide a projected population of 505 people which will significantly increase demand for and usage of the unauthorized trail network. As shown in Figure 22, the identified low density and moderate density residential areas overlap multiple segments of trail which are critical to the long-distance connectivity of the Test of Humanity trail as well as segments of the Chez Nic Connector, T2 and Janky Skidder.

Figure 22 Vistas Neighbourhood Future Land Use Plan (2000) & Current Trail Inventory





#### KEY TAKEAWAYS FOR THE PLAN

- The Eco-Village and Vistas Neighbourhood developments will impact the connectivity of the trail system. Trail decommissioning and rerouting will be required.
- Deer Ridge subdivision is likely to have minimal impact on the trail system but will create the need for a formalized major staging area to access Joyride and the mixed-use trails.
- Pending the development footprint in the Vistas neighbourhood, it will likely be necessary to
  reroute segments of the Test of Humanity and T2 trails higher up slope (areas of 30% grade or
  more) to avoid the most developable lands and road plans.
- Each of the developments will significantly increase demand for and usage of the currently unauthorized trail system.

#### 3.1.4 Crown Land Management

Crown lands in the planning area are managed by the Province. Management direction for these lands is largely directed by the Okanagan Shuswap Land and Resource Management Plan (2001) (LRMP). The LRMP utilizes Resource Management Zones (RMZs) to provide specific management objectives and strategies to define how Crown resources are to be managed. The RMZs in the planning area and the key implications for trails are as follows:

Community Crown Interface RMZ – This RMZ directs greater operation planning and coordination between the Province and local governments to minimize potential negative resource development impacts on adjacent communities and key features (e.g. recreational, visual, sensitive or biological) "where those features have been identified for protection by local government bylaws" (e.g. OCP). Note, Crown land within the planning area is currently zoned as Forestry Grazing in the District's zoning bylaw which does not identify trails or recreation as a principal or accessory land use. The RMZ directs the Crown land managers to provide opportunities to site municipal / regional infrastructure (e.g. parks and recreation facilities) on Crown land where needed to serve community and economic development needs and where such infrastructure can appropriately exist with other resource and environmental values.

#### Type 4 Natural Disturbance (NT4) Resource

Management Zone – This RMZ is to be managed to limit further impacts to and maintain natural grasslands and ecosystem processes, minimize loss of naturally occurring grasslands, and provide for connectivity between grassland ecosystems. Managing disturbances and specifically reducing disturbance and degradation from access (e.g. trails) is an objective for the RMZ. The zone directs that mechanized (e.g. bicycles) and motorized use on grasslands should be discouraged, off-trail use in grasslands should be avoided, winter motorized recreation should only occur in deep enough snow, and non-status roads and trails should be deactivated and rehabilitated. The above does not apply to grassland ecosystems that are within lands identified as "summer motorized intensive use areas" as long as the activities in those areas are consistent with the "Summer Motorized Recreational Use – Land Stewardship Principles" outlined in the plan.

**Mule Deer Winter Range RMZ** – The goal of this zone is to enhance habitat suitability to allow for current populations of mule deer to increase. More specifically, impacts of access on mule deer in the winter are to be minimized and recreational activities are not to be promoted in mule deer winter ranges. These areas should not be selected for organized events, and unorganized users should be sensitive to the needs of the species and the sensitivity of the site to disturbance. This does not apply to winter range identified as a Recreation RMZ.

Recreation Resource Management Zone - This zone includes areas where incremental management (that is in addition to the general prescriptions) is prescribed. It focuses on areas where the recreation values relate to trails, specifically "regionally significant trail corridors" and "intensive recreation" areas (areas within which networks of unmapped trails exist). Objectives for the zone include making the public and recreation groups aware of the zone developing site specific recreation strategies, encouraging organized groups to take on a stewardship role in the management of recreation, and to ensure recreation is considered when planning for other industrial activities and impacts to recreation values are managed.

#### **Intensive Recreation Area Resource Management**

**Zone** – This zone includes locations with high concentrations of recreational values. The overall goal is to manage for intensive recreational use, opportunities and experiences. The planning area includes an intensive recreation area specifically for "Summer Motorized / Shared Use". The goal for this specific area is to acknowledge and manage summer motorized and non-motorized recreation in areas that have significant summer recreation attributes and historical recreation use including providing opportunities for organized and maintained motorized trails.

#### **Regionally Significant Trail Corridors Resource**

**Management Zone -** This RMZ identifies the Kettle Valley Rail Trail and Hudson's Bay Company Brigade Trail corridors (where identifiable) as regionally significant trail corridors. Management of these trail corridors is to ensure their connectivity / continuity, retain recreation features and scenic values, enable compatible recreation uses and ensure maintenance of the trail route and associated infrastructure.

**Visual Resource Management Zone –** This RMZ is to maintain naturally appearing landscapes, and to encourage new practices and techniques that maintain visual quality. The Conkle Mountain trail planning area contains a Visual Management Zone 1 area which is to be managed to achieve visual quality objectives including retention, partial retention and modification.



#### KEY TAKEAWAYS FOR THE PLAN

- Recreation and trails are permitted and desired use of Crown lands in the planning area.
- The LRMP supports intensive motorized and non-motorized recreation in the planning area subject to best practices.
- Avoiding or minimizing disturbance to grasslands from trail development is required.
- Off trail travel in grasslands should be discouraged.
- Decommissioning of unsanctioned trails should be pursued.
- Trail siting and development should be sited to avoid impacts to visual quality and visual impact assessments should be considered during trail planning.



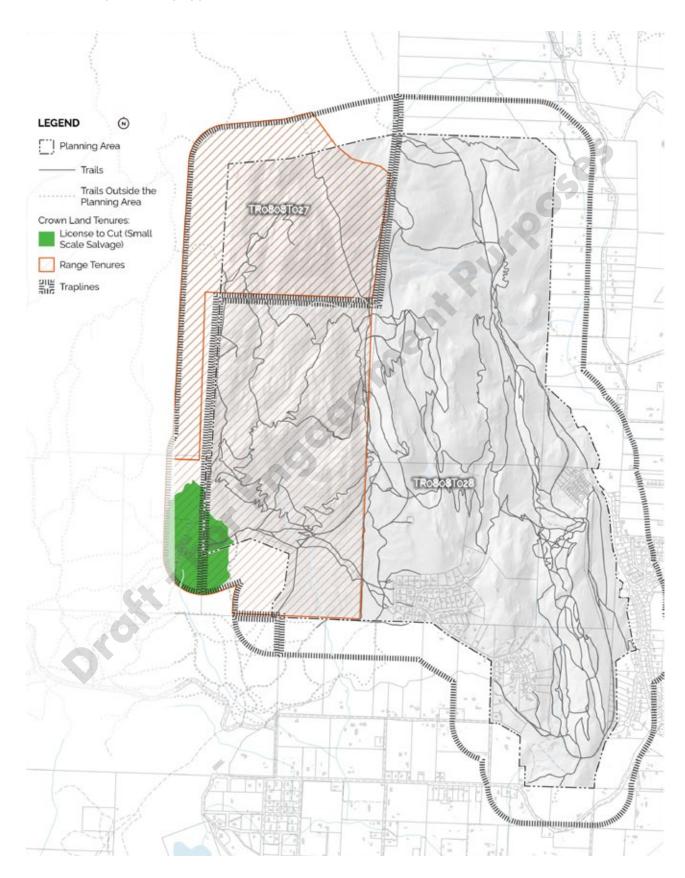
#### 3.1.5 Crown Land Tenure

Data available through iMapBC was analysed to identify active dispositions on Crown lands in the planning area (Figure 23). The following dispositions were identified:

- Range Tenures RAN077114B, RAN077115B, RAN077116B
- Traplines TR0808T028, TR0808T027
- License to Cut (small scale salvage)
- Miscellaneous Land Use Reserve / Notation

None of the existing dispositions prevent public recreational access to the disposed land or require the public to obtain permission to access the land that is disposed. Authorized development of trails and related amenities or infrastructure can be considered, and these disposition holders do not have a veto to prevent their approval. However, disposition holders would receive a referral for any applications that are made to sanction the trail system (e.g. FRPA section 57 / 56 or License of Occupation) and approval may include conditions required to mitigate conflicts with or impacts to the disposition holder.

Figure 23 Active Dispositions by Type



#### 3.2 WILDLIFE & ECOLOGICAL VALUES

The Cartwright Mountain planning area is located within two biogeoclimatic ecosystem classification (BEC) subzones; the southeast portion of the planning area is within the Okanagan Very Dry Ponderosa Pine (PPxh1) subzone, while the northeast portion above 800 metres is within the Okanagan Very Dry Hot Interior Douglas-fir (IDFxh1). The planning area consists of a variety of predominantly intact ecosystems including grasslands, old forest, mature forest, and sparsely vegetated habitats including rock outcrops, talus slopes, and cliff faces. Aquatic habitat within or immediately adjacent to the planning area includes tributaries of Eneas Creek and Prairie Creek. Several small ponds, marshes, and ephemeral receiving microsites are also present within the planning area. Occurrences of Tiger Salamander are known in at least one of these ponds; the aquatic features may also be used by other rare species such as Great Basin Spadefoot Toad.

Cartwright Mountain includes several rare ecosystems and species. Critical habitat for Federally listed species under the Species at Risk Act (SARA) is present within the planning area for Western Rattlesnake, Great Basin Gophersnake, Western Tiger Salamander, & Lewis's Woodpecker. Proposed critical habitat within the planning area includes 'core' and 'safe movement' habitat for American Badger. Other confirmed species records within/proximal to the Cartwright planning area for SARA and Red listed species include Flammulated Owl (Blue listed), White-headed Woodpecker (Red listed), Western Screech-Owl, macfarlanei subspecies (Red listed), and Great Basin Spadefoot toad (Blue listed).

BlueLines Environmental produced a stand-alone 'Environmental Scan' document to support trail planning on Cartwright Mountain. For greater detail with respect to environmental values within the planning area, please refer to the Environmental Scan report on the District's website.

## 3.3 TERRAIN & EXISTING TRAIL GRADES

#### 3.3.1 Existing Topography

Figure 24 presents the slopes in the planning area according to the following four categories of general suitability for constructing trails:

- 8-20% most suitable
- 0-8% & 20-40% moderate suitability
- 40-55% low suitability
- 55% + least suitable

As illustrated in Figure 24 most of the current trail system has been constructed in areas of general suitability though some short segments of trail pass through areas of low suitability.

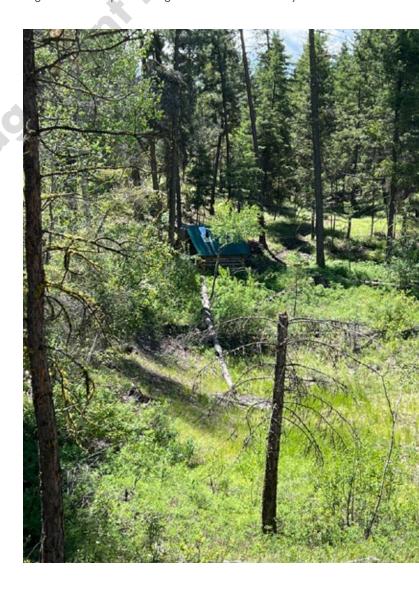
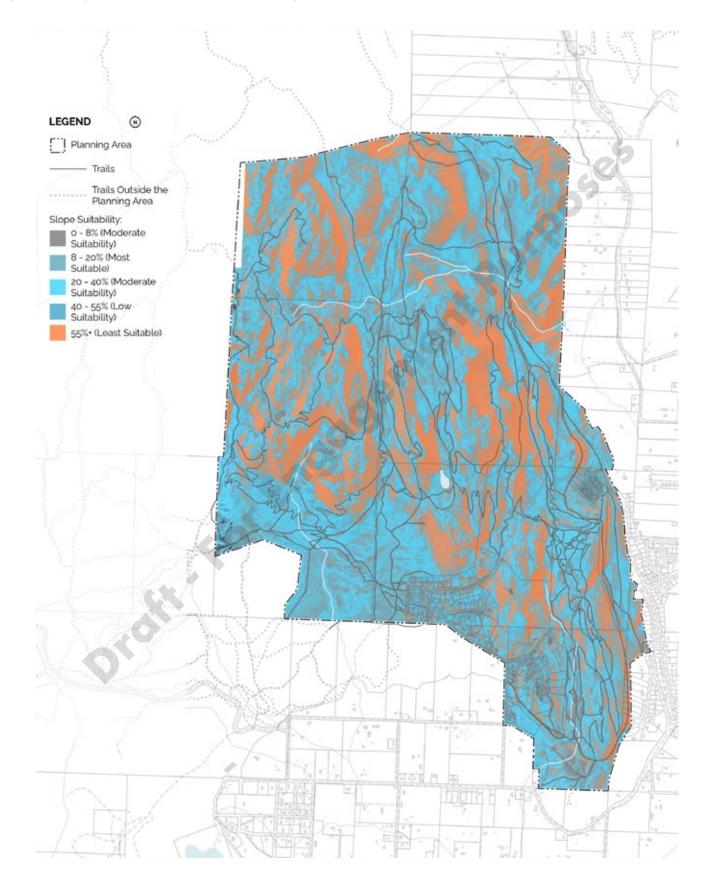


Figure 24 Slopes & Trail Construction Suitability





A two staged public engagement process was held to inform the plan. The process targeted recreational users, trail volunteers, general public, adjacent landowners, District staff, Regional District staff and Government of BC staff.

#### Stage 1 Engagement

The stage 1 engagement process was implemented in September 2024. Engagement tactics included:



Online public survey



Sounding boards



Stakeholder Interviews (virtual & in-person)



Written submissions



Online interactive crowdsource web map



#### **Snapshot of Key Learnings**

The following represents a brief snapshot of what was heard:

- The trail system is highly valued and supports a variety of activities year round
- Participants were very satisfied with their recreational experience on the trail system

#### Top Recommended Amenity Improvements:

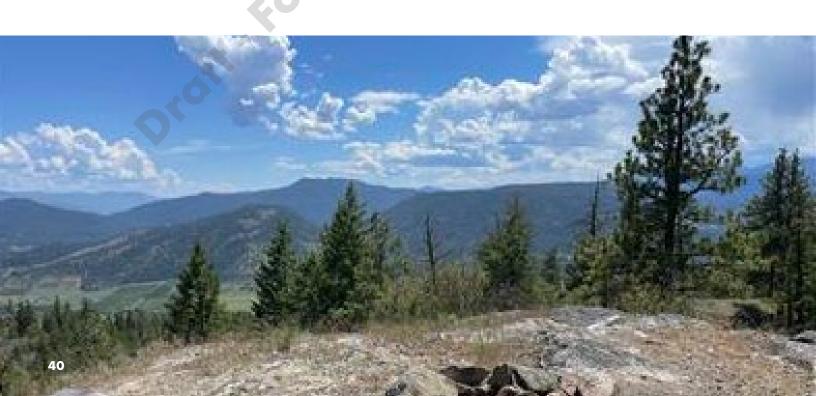
- Signage (wayfinding, educational, regulatory, interpretive)
- o On-trail amenities (benches, repair stations)
- Parking and trailhead enhancements (parking capacity, wildlife-proof garbage cans, picnic tables, vault toilet, bike parking)
- o Participants want to ensure amenities are basic and complement the natural setting

#### Top Recommended Trail Improvements

- Clearly identify the network of non-motorized and mixed-use trails
- Reroute trails off private property where landowners do not support trail access
- Ensure that the connectivity of the most popular trails will be integrated into and retained through future land developments (e.g. Vistas, Eco-Village)
- o Consider adding additional technical trail features
- o Elevate the trail maintenance

### Opportunities to Improve Governance, Trail & Visitor Management

- Collaborate with the Province and the owners or large private land parcels to explore options to formalize the trails on Crown and maintain trail connectivity on private lands
- Manage risk and liability to private landowners that authorize trails to cross their properties
- o Address gaps in ecological and archaeological inventories
- o Establish a volunteer stewardship group for trail maintenance
- o Elevate environmental awareness and responsible recreation
- o Address trail conflicts with motorized users, dog walkers, and equestrian/mountain bikers



#### Stage 2 Engagement

The second stage of engagement was implemented in **DATE** and was designed to receive feedback on the draft plan. Engagement tactics included:



Presentation to District Council



Input from Parks & Recreation Advisory Committee



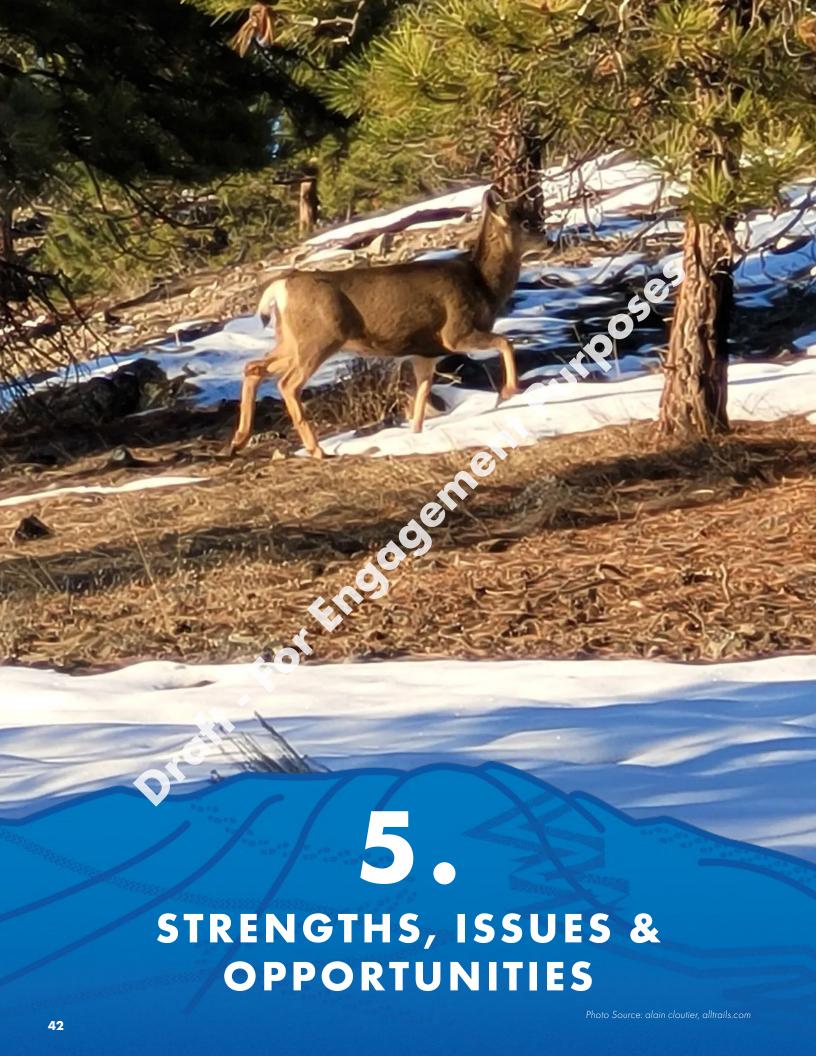
Public Online Survey

#### [Populated once stage 2 engagement input is compiled].

The District reached out to the Penticton Indian Band and Okanagan Nation Alliance at the start of the project to provide awareness of the project and provide opportunity for input. To date, they have not provided a response which may indicate that they do not have any directions or recommendations for the Plan.

For further details on stage 1 engagement, please see the Cartwright Mountain Trail Plan What We Heard Report compendium available on the District's website. For further details on the stage 2 engagement, see Appendix XX.





#### **STRENGTHS**

- Abundance of non-motorized and mixed-use trails with minimal need for new trail building.
- Trail system is well known. The user base cares deeply about the trails and area.
- Trails are, for most part, sustainably built and in good condition.
- Trails connect to and provide multiple scenic viewpoints.

- Trails are available and enjoyed year-round and periodically groomed for winter use.
- Trails system is located close to the community and easy to get to.
- The mountain provides relatively intact and high value ecosystems and habitat.
- While few in number, volunteers are passionate and skilled.

#### **ISSUES & OPPORTUNITIES**

#### **Trails & Visitor Amenities**

- The diversity of trail styles and the distribution of trail difficulty
  does not align with demands and could be expanded slightly
  to support progression (e.g. black diamond rated tech trail,
  technical skills training area).
- Parking locations are limited, and capacity is insufficient to meet current and anticipated future demands which may lead further elevate congestion and parking conflicts in adjacent neighbourhoods overtime.
- There is opportunity to formalize community trailheads to reassure visitors that access is permitted and to provide essential visitor information.
- The sense of arrival and gateway experience at staging areas could be elevated.
- Signage and visitor information could be improved with attention paid to ensuring the visual design of signage compliments the natural landscape. There are further opportunities to educate visitors and deepen their understanding and appreciation through interpretive signage.
- Basic visitor comfort and convenience amenities (e.g. vault toilet, benches, waste receptacles, bike repair, bike wash station) could be expanded in staging areas and in some limited on-trail locations.

#### **Management & Operations**

- Most of the trail system was informally built and is unsanctioned (non-status) by landowners / managers.
   Opportunity to sanction trail system to limit trespass on private lands, protect long-term access to the trails, allow uses to be managed (e.g. motorized), expand funding opportunities for improvements (e.g. provincial grants), and enable agreements to be established for maintenance and operations.
- Residential development in the Eco-Village site, Deer Ridge subdivision and Vistas neighbourhood will impact the supply of trails, connectivity of the trail system, current parking / access and significantly increase usage of the unauthorized trail system. Opportunity to identify the trails that should be retained through development and infrastructure needed to support future use of the trail system and ensure these needs are included in future land development plans.
- Trails are currently unclassified. Trail classification could be used to formally communicate permitted and prohibited uses of the trails as well as trail difficulty and to formally regulate undesirable uses (e.g. motorized, Class 2 & 3 e-bikes, horses).
- Visitor management is limited and could be improved to address emerging user conflicts, dog use, damage to the trails from horses, use of the trails when they are susceptible to damage, and trespass on private land.
- Visitor information and trip planning resources could be improved to help better inform and prepare visitors.
- Trail inspections are limited. Regular trail inspections, documentation and prioritization of deficiencies could be undertaken and applied to inform / direct routine trail maintenance and capital replacement.

#### **ISSUES AND OPPORTUNITIES CONTINUED**

#### **Environmental & Archaeological Values**

- Detailed field-based inventories of wildlife and ecological values have not been completed. There is insufficient environmental and archaeological information to inform trail planning, infrastructure development and management.
- Past trail development proceeded without appropriate environmental assessment (e.g. District's <u>Terms of Reference</u> <u>for Professional Reports and Technical Studies</u>) or provincial regulatory approvals..
- Trail development and trail use could be causing habitat disturbance (e.g. winter, natal), wildlife displacement and harassment (e.g. mountain goats, ungulates) and human wildlife conflicts (e.g. bears, snakes).
- Potential for increased persecution of snakes as the potential for encounters increase with increasing use.
- Potential for increased mortality of tiger salamanders and collapse of their burrows from trail development and off trail recreational use (e.g. shortcutting).
- Birds and raptors, including their nests, protected cavity nests, eggs, and chicks, may be being impacted through vegetation removal, hazard tree removal, soil disturbance, or noise.
- Sensitive grasslands have been fragmented and could be further impacted by trail braiding / short-cutting and off-trail use.
- Impacts to aquatic habitat and species at risk (e.g. amphibians) from dogs bathing in ponds/wetlands.
- Introduction and spread of invasive vegetation (e.g. 'hitchhiking' on clothing, dogs, horses, horse feed, mountain bike tires and trail building equipment).
- Archaeological Overview Assessments, Pre-Field
  Reconnaissance reports and Archaeological Impact
  Assessments have not been completed prior to trail
  construction and there is potential for impacts to protected
  known and unknown archaeological values.

#### **Governance & Capacity**

- A multi-interest governance structure and organization could be established to ensure a collaborative approach to the development, maintenance and management of the trail system.
- The capacity of District and volunteers to manage the trail system and the financial resources dedicated to maintenance and operations of the trail system could be increased and formalized.
- The recreation importance and value of Conkle Mountain could be more fully acknowledged in the District's Official Community Plan and/or zoning bylaw.





DESIRED RESOURCE CONDITIONS & APPROPRIATE ACTIVITIES & AMENITIES

#### 6.1 DESIRED CONDITIONS

Desired conditions are future focused statements of aspiration that describe the trail related conditions that will be achieved and maintained on the trail system.

#### Quality & Memorable Visitor Experiences

#### What Does This Mean?

- The Cartwright Mountain trail system continues to attract visitors from the District, the region and beyond to enjoy the trails, connect with nature and live healthy, active lives.
- The Cartwright Mountain trail system remains fully connected through all future residential development lands and to sanctioned trails on adjacent lands. While the majority of non-motorized trails are multi-use, some trails in the network are optimized for mountain biking and, where necessary for public safety and to minimize conflict, are one direction. The non-motorized trail network connects visitors to existing viewpoints that provide visitors with impressive views of Giants Head, Okanagan Lake and the Okanagan Valley.
- The trail system includes an all season stacked loop network of double track mixed-use trails that provide opportunities for visitors to enjoy off-road vehicles (1.83 m in width or less) and off-road motorcycles. The mixed-use network connects motorized users to the impressive viewpoints on the 'Dragon's Back' and Cartwright Mountain summit and to trails outside the planning area.
- Regardless of activity, the trail system is deliberately designed
  to target beginner and intermediate trail users while providing
  some opportunity for skill development and progression to a
  more advanced difficulty. In keeping, most of the trails in the
  system are rated at a blue level of difficulty with two black
  diamond trails and one green rated trail. Other nearby trail
  systems meet visitors demands for more technically challenging
  trail experiences.

- Joyride, Deer Ridge and Yahoo and Repeat are groomed in the winter providing a looped trail experience for fat bikers, snowshoers and hikers.
- Basic visitor amenities are available at the staging areas and at select visitor amenity nodes on the trail system and are designed to compliment the natural character of the mountain. Visitors experience a formalized and welcoming sense of arrival at the staging areas and the quality of visitor amenities continually meets or exceeds visitor expectations.
- Visitors arrive at the trailheads informed and prepared (equipment and skills) to travel the trail system safely and responsibly. Visitors enjoy the trails safely and the number of emergency responses does not increase.
- Visitors have engaging opportunities to learn about and appreciate local Indigenous peoples, truth and reconciliation, the early settlers of Summerland (e.g. Conkle, Latimer, Millionaires Row), red and blue listed wildlife and habitats, culturally important plants (e.g. bitterroot) and the geology / geomorphology (e.g. volcanos) of Cartwright Mountain.

#### A Sustainable Trail System

#### What Does This Mean?

- The trail system is sanctioned by the respective landowners / managers when management and maintenance resources have been established. Further unsanctioned trail development does not occur. All new trail development and / or enhancement of trails occurs through a formalized planning and approval process in keeping with this plan.
- The connectivity of the trail system and quality of the trail
  experience is maintained and effectively integrated into future
  residential developments. Re routing of trails occur where
  necessary to accommodate future development plans but do
  not compromise the connectivity of the trail system or quality of
  the trail experience.
- Trail development adheres to environmental legislation (e.g. BC Riparian Areas Protection Regulation (RAPR), BC Water Sustainability Act/Regulation, Wildlife Act, federal Fisheries Act and federal Migratory Birds Convention Act/Regulation (MBCR)), policy and best practices.
- Disturbance or displacement of ungulates from their winter range is minimized and winter recreational use is predictable for wildlife.
- On-trail snake mortality and persecution are avoided while travel corridors between den sites and foraging areas remain intact.
- Wildlife habitat features (hibernacula's, dens, wildlife trees, etc.) are avoided and, if found, are buffered and protected through trail re-routing.
- Further fragmentation of grasslands does not occur.
   Decommissioning of unused trails improves habitat.
- Introduction of new invasive species from recreation is avoided and existing infestations of invasive species are controlled and do not spread along the trails.
- Recreation related human-wildlife conflicts with bears, cougars, ungulates and snakes are minimized and the frequency of occurrences do not increase over time despite increasing visitation.
- Trails are routed, re-routed, upgraded and maintained to avoid impacts to known or unknown archaeological sites or other Penticton Indian Band values.
- Trails are actively maintained, and routine trail tread sustainability issues are quickly and appropriately treated to ensure the trail tread remains aligned with the Trail Management Objective.
- Visitors are compliant with the rules of use, remain on trail, and apply responsible recreation practices while interactions between trail users are positive, respectful and user conflicts are minimal.

#### A Community Supported Trail System

#### What Does This Mean?

- District residents and adjacent landowners are supportive of the trails and investments in maintaining the trail system.
- Visitation to and use of the trails does not create unacceptable impacts on adjacent private property owners and visitors do not trespass on private lands adjacent to the trail system.
- Local elected officials understand, are supportive of, and are committed to realizing the social, economic, and environmental benefits that the trail system generates

## A Collaboratively Stewarded & Effectively Resourced Trail System

#### What Does This Mean?

- A Summerland Trails Stewardship Group, representing all interests in the trail system, is formalized and is championing the planning, development, maintenance and operations of the sanctioned (status) trail system (Note, this group could / would also steward trails on Cartwright Mountain, Giants Head Mountain and potentially others).
- Increasing numbers of District residents and trail users actively
  participate in the development, maintenance and management
  of the trail system as engaged and passionate volunteers.
- Businesses within and beyond the District that benefit from the trails system regularly provide financial and capacity support for the development, maintenance, and management of the trail system.
- The Summerland Trail Stewardship Group is sustainably resourced and has the capacity and capability (e.g. training, equipment) to develop, maintain and manage the trail system.

#### **6.2 APPROPRIATE TRAIL ACTIVITIES & VISITOR AMENITIES**

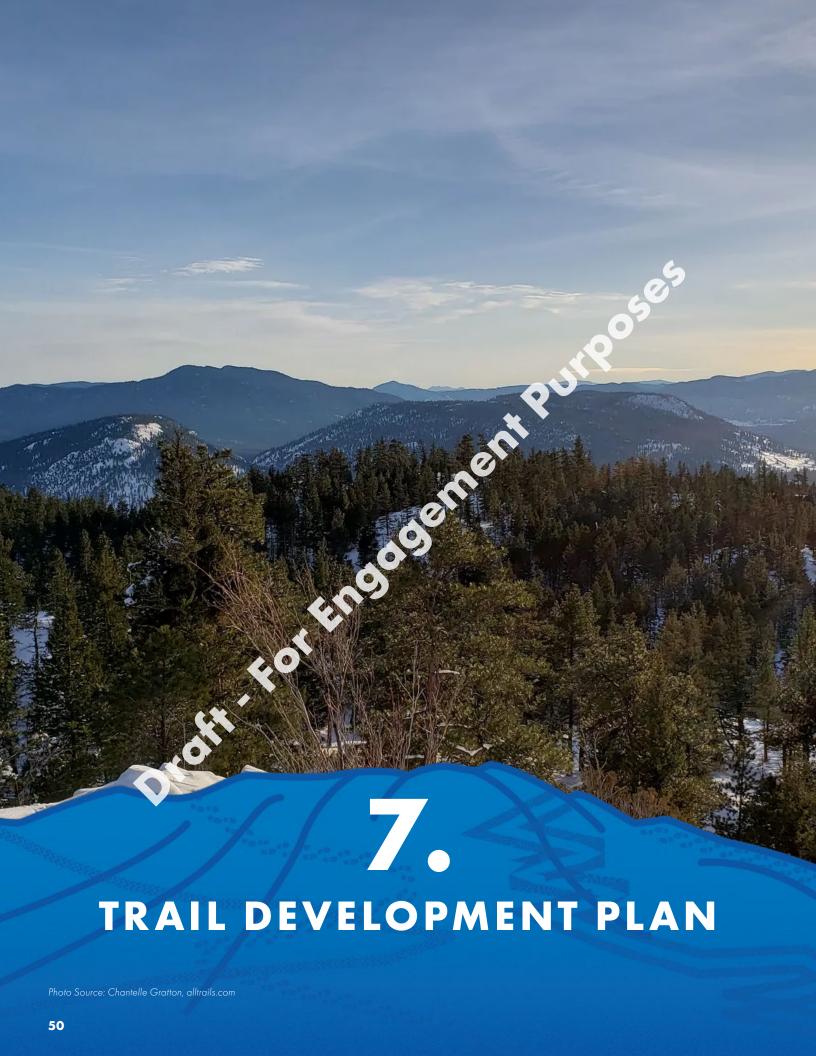
Subject to regulations and trail / area closures, Table 2 identifies the recreational activities and visitor amenities that are compatible with the desired conditions set in this plan and thus appropriate to occur on the trail system under either typical or specialized management practices. The table also identifies the activities and amenities that are considered to incompatible with the desired conditions for the trail system.

Table 2: Compatible, Permitted & Non-Compatible Recreation Activities & Amenities

Activity	Compatibility
Non-Motorized Activities	
Walking, Hiking, Trail Running	c
Mountain Biking – Analogue Bike	c
Mountain Biking – Class 1 Electric Assist	c
Adaptive Mountain Biking (analogue & electric assist)	P (on a-MTB classified or double track trails only)
Shuttle Based Mountain Biking	N AND
Fat Biking	c
Gravel Biking / Bikepacking	С
Road Biking	N O
Equestrian (horse or other pack animal) Trail Riding	C (except downhill only trails)
Equestrian Drawn Vehicle / Wagon	N.
Dog Walking Off-Leash	P (on two way or climb trails only, subject to timing restrictions)
Dog Walking On-Leash	P (on two way or climb trails only)
Snowshoeing	С
Cross Country Skiing	С
Skijoring	С
Dog sledding	N
Motorized Activities	
ATV / Side by Sides – less than 1.5 m width	P (on mixed use designated trails, maintenance)
ATV / Side by Sides – 1.5-1.83 m width	P (on mixed use designated trails, maintenance)
Class 2 & 3 Electric Assist Bicycles	P (on mixed use designated trails, maintenance)
Off-Road / Dual Sport Motorcycle	P (on mixed use designated trails)
Motor Vehicle (on highway or off-road) or ATV / Side by Side greater than 1.83 m width	P (on mixed use double track designated trails)
One Wheels / Electric Scooters etc.	N
Snowmobile – less than 1.5 m width	P (on mixed use designated trails, maintenance)
Snowmobile – greater than 1.5 m width	N

Activity	Compatibility
Other Activities	
Dispersed camping	N
Designated / Front Country / Serviced Camping	N
Target Shooting	N
Recreational Drone Flying	P (with permit from District / Crown)
Special Events, Instruction & Commercial Operators	P (with permit from District / Crown)
Amenities & Services	Compatibility
Paved Pump Track	N
Natural / Constructed Technical Trail Features	P (mountain bike optimized trails only)
Mountain Bike Technical Skills Area	P (within / adjacent to Eco Village)
Signage (wayfinding, regulatory, interpretive)	С
Pit / Vault Toilets (inc. universally accessible)	P (within staging area)
Flush Toilets	N
Shower Building	Ň
Potable Water Fountain / Water Bottle Refill	P (within staging area)
Picnic Tables / Benches	P (within staging area or amenity node)
Shade Structure / Pavilion	P (within staging area or amenity node)
Wildlife Proof Waste Receptacles	P (within staging area)
Fire Pits	N
Bicycle Parking	P (within staging area or amenity node)
Bike Wash Station	P (within staging area)
Equestrian Infrastructure (hitching rails, corrals, etc.)	P (within McLarty Rd. staging area)

Compatible Use (C)	Activities and amenities that is compatible with the management intent of the recreation area under typical designs and management practices.
Permitted Use (P)	Activities and amenities that may be compatible with the management intent of the recreation area or portions of the recreation area with specialized planning, designs and / or management practices.
Non-Compatible Use (N)	Activities and amenities that is not compatible with the management intent of the recreation area.



#### 7.1 OVERVIEW

The proposed trail development plan (Figure 25) and capital actions recognize and directly reflect that the community is generally satisfied with the current trail system and are seeking minimal trail additions and basic amenity improvements. Key elements of the trail development plan includes:

- In accordance with the <u>National Guidelines for Classifying</u>
  <u>Multi Use Trails in Canada</u> (Appendix A), the trail system
  will maintain a network of designated mixed-use and nonmotorized trails that targets beginner and intermediate trail
  users while providing some opportunity for progression.
- Supporting the current mix of motorized and non-motorized trail activities and formalization of much of the existing trail network. Eventual and formal prohibition of all motorized recreational use (e.g. off-road vehicles, off-road motorcycle, class 2 and 3 e-bikes) on designated non-motorized trails except where necessary for maintenance, operations or emergency response purposes.
- Development of six new trails / trail segments to connect Cartwright Mountain summit to the northern terminus of the Test of Humanity Trail and to physically connect adjacent neighbourhoods to the trail system.
- Designation and management of Family Jules, Clubber Lang, Joyride DH, Yahoo & Repeat, and Roller Coaster / Roxy Roller as mountain bike optimized & downhill only trails to improve safety and provide the intended trail experience. Introduction of further Tech Trail Features on these trails.
- Maintenance of the current youth pump track within the Eco Village.
- Completion of trail reroutes and decommissioning to avoid private lands where desired by landowners, avoid private land that is subject to future development, improve visitor experience, reduce habitat fragmentation and the potential introduction and spread invasive species while ensuring limited operational capacity is focused on the most important trails.
- Providing new formalized parking and staging areas within the Eco Village, Deer Ridge neighbourhood west of McLarty Place and the proposed Vistas neighbourhood.
- Formalization of existing and introduction of three new visitor amenity nodes with basic amenities.
- A new signage typology and a signage plan.
- Continued provision of a winter groomed loop trail opportunity (subject to confirmation of negative impacts on ungulate winter range).



## ACTIVITY OPTIMIZED TRAILS

A trail that permits multiple activities but is designed and managed to optimize the experience for one specific activity. These trails contain purposeful features, routings or elements that enhance the trail experience for one of the approved activity types.



#### **ELECTRIC BICYCLES**

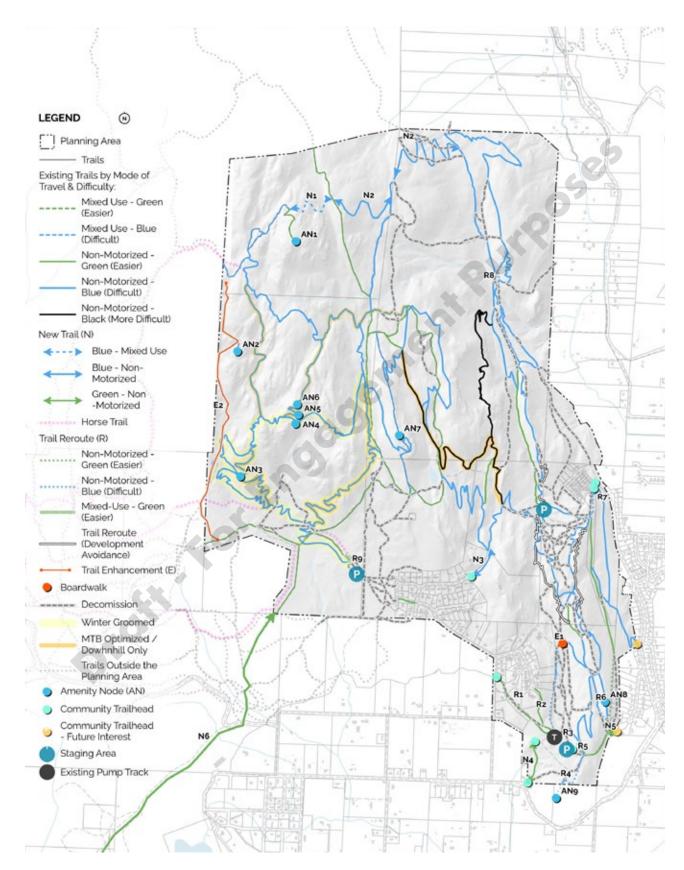
Recreation Sites and Trails BC's <u>Electric Bicycles Policy</u> and classification of electric bicycles has been adopted for implementation in this plan. In keeping, Class 1 E-bikes are considered a non-motorized activity. Class 2 and 3 e-bikes are considered motor vehicles and will be prohibited on the trail system.



New trail or trail reroute alignments shown in this report are a 'concept-level' desk-top representation of intended routes and are not field verified. 'Detail-design" will need to occur to confirm siting of each new trail or trail reroute.

The following sections provide further details about each capital action that is proposed in the trail development plan. All capital actions are subject to landowner / manager approvals, required assessments and future capital budget allocations and resource availability.

Figure 25 Trail Development Plan



#### 7.2 NEW TRAILS

- 1. Subject to completion of an environmental impact assessments, archaeological overview assessments and construction approval from the respective landowner, the District or future Trail Stewardship Group should consider engaging appropriately experienced local volunteers to design and build the trails / trail segments shown in Figure 25 and described in Table 3.
- 2. While out of the scope of this project, the District may want to consider undertaking a feasibility study to develop an off-road non-motorized trail connection between the Rodeo Grounds staging area and the Cartwright Mountain trail system as illustrated in Figure 25 and described in Table 3. Consideration could be given to locating the connection along the historic Brigade Trail route and the potential future road corridor connecting Doherty Ave / Denike Street to the proposed Deer Ridge development.

Table 3: Index of Proposed New Trails

New Trail / Connection	Description	Difficulty	Tread Width (m)	Length (m)
N1	Blue rated double track mixed-use trail connecting Cartwright Summitt to existing green mixed-use trail.	Blue	2.0 – 2.5	325 m
N2	Blue rated non-motorized single track multi-use trail connecting the existing green mixed-use trail to the northern loop of the Test of Humanity Trail.	Blue	0.3 - 0.5 m (single track)	1400 m
N3	Blue rated non-motorized single track multi-use trail connecting the Hermiston Road community trailhead to the Lower K2 / Chez Nic Connector trail intersection.	Blue	0.3 - 0.5 m (single track)	175 m
N4	Green rated non-motorized single track trail connecting Prairie Valley Rd. to Ottley Ave.	Green	0.3 - 0.5 m (single track)	225 m
N5	Staircase to connect Flume Trail to Taylor Place (subject to feasibility).	N/A	N/A	50 m
N6	Road separated, non-motorized, multi-use trail providing functional connectivity between the Conkle and Cartwright trail systems.	Green (easier)	1.0 - 1.5 m (double track)	2125 m

#### 7.3 TRAIL RE-ROUTES & ENHANCEMENTS

1. As illustrated in Figure 25 (page 52) and described in Table 4, and subject to the completion of an environmental impact assessment, archaeological overview assessment and construction approval from the respective landowner, the District or Trail Stewardship Group should consider implementing the identified trail reroutes and improvement to improve the flow and efficiency of the network, avoid private land and known future land developments, and improve the sustainability of the trails (e.g. grades).

Table 4: Index of Trail Re-routes

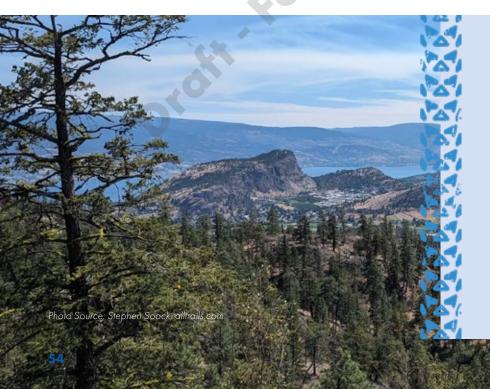
Reroute Identifier	Description	Length (m)
R1	Reroute the flume trail downslope of the existing alignment to avoid trespass on parcels PID: 015-237-435 and PID: 015-237-427. Co-locate trail with future sewer infrastructure.	200 m
R2	Reroute the existing Test of Humanity Trail alignment to avoid the Sunset Place private land parcels and connect into the Flume Trail.	300 m
R3	Reroute the Flume Trail to enter the proposed staging area on Denike St. Provide an additional reroute to improve the grade profile of the trail to the Denike St. intersection.	50 m
R4	Realign the existing trail to avoid the Solar Centre and provide a more sustainable trail grade and connection to a future Prairie Valley viewpoint overlooking Prairie Valley Road.	200 m
R5	From the new Eco Village staging area, relocate the Flume Trail to the north side of the flume line to avoid the steep eroding slope into the Solar Centre. Realign the unnamed north south segment of trail that connects the Test of Humanity Trail and Flume Line to integrate switchbacks and reduce the trail grade.	100 m

Reroute Identifier	Description	Length (m)
R6	Reroute the current Flume Trail alignment to the upslope / west of the 13 private land parcels along Taylor Place. Establish switchbacks to provide a more reasonable climb and sustainable grades from the current Flume Trail alignment to the elevation / height of land necessary to avoid the private land parcels and to provide a more natural southeastern loop for the Test of Humanity Trail. Create a new connection from the height of land to the Test of Humanity Trail.	500 m
R7	Realign the north end of the Flume Trail to establish a more sustainable descent to Cartwright Avenue community trailhead and loop connection to the Test of Humanity Trail.	300 m
R8	Reroute the equestrian bypass to connect into the Test of Humanity Trail main route and avoid unnecessary linear disturbance.	50 m
R9	Realign the mixed-use trail to start from the new proposed staging area west of McLarty Place.	50 m

- 2. The District should consider working proactively with the developer of parcels PID: 011-530-596 and PID: 016-595-378 throughout the land development process to ensure that the trail system and amenities outlined in this plan are integrated into the respective developments. Pending the future development plans, the eastern and western segments of the Test of Humanity Trail may need to be re-routed upslope away from the land that has been identified for low and moderate density development in the District approved Vistas Neighbourhood Plan (see Figure 25 for conceptual re-route options). Trail planning and design professionals should be retained by the developer to ensure the north / south connectivity, functionality and quality of the Test of Humanity Trail will be maintained through the proposed development(s).
- 3. As illustrated in Figure 25 (page 52) and described in Table 5, and subject to the completion of an environmental impact assessment, archaeological overview assessment and construction approval from the respective landowner, the District or Trail Stewardship Group should consider implementing the identified trail tread enhancements to improve the quality and sustainability of the trails.

### Table 5: Index of Trail Tread Enhancements

New Trail / Connection	Description	Length (m)
El	Develop a 2.5 m wide raised boardwalk along the Test of Humanity Youth loop north of the Eco Village to protect the wetland.	50 m
E2	Remove large cobble, restore proper draining and resolve erosion rills on the unnamed mixed-use trail leading to the summit of Cartwright Mountain.	1500 m



# **ONE WAY TRAILS**

Certain types of trails are best suited to one way travel for both enjoyment and safety. Gravity dependant mountain bike optimized trails, especially ones with jumps and berms where riders can not slow down, stop or change direction easily, are most suited to being one-way.

Mountain Bike Trail Development: Guidelines for Successfully Managing the Process

- 4. To manage visitor safety and potential user conflicts, consideration should be given to managing the following trails as mountain bike optimized downhill only trails (Figure 24). All other trails in the system should continue to be managed as multi-use bi-directional trails.
  - o Family Jules
  - o Clubber Lang
  - o Joyride DH
  - o Yahoo & Repeat
- The District or trail stewardship group should undertake routine trail maintenance activities to address the trail sustainability problems identified in section 2.4 including:
  - o Tread Cupping, Berms & Erosion
  - o Standing Water
  - o Degraded Bench Cuts
  - o Turn Designs & Radius

Appendix A provides general guidance on how to address these routine trail sustainability issues.

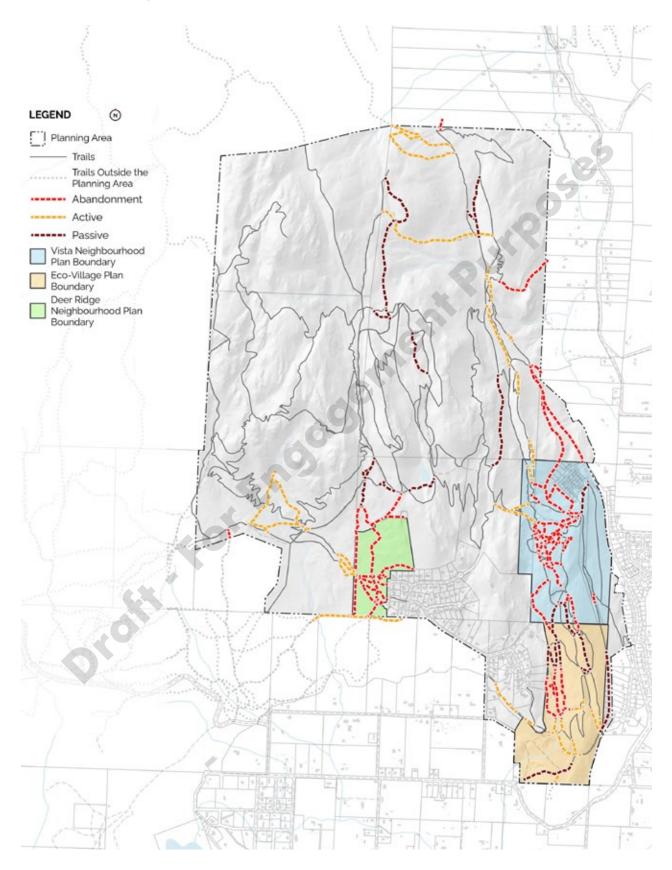
- 6. As upgrades and re-developments of existing mountain-bike optimized trails occur, the District or Trail Stewardship Group should consider integrating more of the following technical trail features into the trails to elevate the experience for visitors and to help satisfy their objectives:
  - o Natural Rolls
  - o Natural Drops
  - o Wooden Drops
  - o Wooden Rolls
  - o Rock Gardens
  - o Small side hit jumps / pops
- 7. The District and/ or future trail stewardship group should work with grazing license holders to identify where improvements to fencing are needed and gates, walk / ride throughs, and cattle guards should be installed to ensure trail connectivity, minimize conflict between livestock and visitors and mitigate impacts of grazing on the trails.

### 7.4 TRAIL DECOMMISSIONING

1. The trails and linear disturbances shown in Figure 26 are recommended for decommissioning and should not be included in the future sanctioned trail system. The District or Trail Stewardship Group should consider engaging qualified environmental professionals, volunteers and community partners as necessary to implement the decommissioning plan shown in Figure 26. Implementation of the decommissioning plan would include 5.7 km of active decommissioning, 4.6 km of passive decommissioning and 8.4 km of trail abandonment (see Appendix A for further decommissioning guidance). The District and / or future trail stewardship group should not invest further resources and capacity in the trails that are planned for decommissioning.



Figure 26 Decommissioning Plan



### 7.5 PARKING, STAGING AREAS & COMMUNITY TRAILHEADS

- The District should continue the development of the parking lot within the Eco Village cul du sac that is north of the Solar Centre. The District should consider undertaking a design plan for the new staging area in the new District park space to the north east of the Solar Centre (Figure 27). To the extent feasible, the staging area should be designed to include:
  - o Memorable gateway sign and experience
  - o Delineated parking for approximately 20 vehicles including designated accessible parking stalls
  - o Universally accessible gender-neutral vault toilet
  - o Approximately 1 3 universally accessible picnic tables / benches
  - Shade structure (serves as a hosting space during trail instruction / lessons / events)

- o Wildlife proof waste receptacles
- o Potable water refill station
- o Bicycle parking
- o Bike wash station
- o Bike tool repair station & air pump
- o Invasive species boot brush (at trailhead)
- o Trailhead kiosk
- o Interpretive, wayfinding & regulatory signage
- o Electrical power (for event hosting)
- o Security lighting

Figure 27 Eco Village Parking & Staging Area



- 2. The District or Trail Stewardship Group should consider working with the Deer Ridge developer and / or Province to assemble land for a new staging area in the Deer Ridge neighbourhood west of McLarty Place (Figure 28). Once land is assembled, the District or Trail Stewardship Group should consider undertaking a design plan for the staging area. To the extent feasible, the staging area should contain:
  - o Memorable gateway sign and experience
  - o Delineated parking for approximately 30 vehicles including designated accessible parking stalls and circulation and parking for 5 trucks with equestrian or off-road vehicle trailers
  - Limiters to prevent off-road vehicle access to nonmotorized trails
  - o Universally accessible gender-neutral vault toilet
  - o Approximately 1 3 universally accessible picnic tables / benches

- Shade structure (serves as a hosting space during trail instruction / lessons / events)
- o Wildlife proof waste receptacles
- o Potable water refill station
- o Bicycle parking
- o Bike wash station
- o Bike tool repair station & air pump
- o Invasive species boot brush (at trailhead)
- o Trailhead kiosk
- o Interpretive, wayfinding & regulatory signage
- o Electrical power (for event hosting)
- o Security lighting

Figure 28 Deer Ridge Staging Area - Potential Options



- 3. The District or Trail Stewardship Group should consider working with the Vistas neighbourhood developer to assemble land for a new staging area (Figure 29). Once land is assembled, the District or Trail Stewardship Group should consider undertaking a design plan for the staging area. To the extent feasible, the staging area should contain:
  - o Memorable gateway sign and experience
  - o Delineated parking for approximately 20-30 vehicles including designated accessible parking stalls
  - o Universally accessible gender-neutral vault toilet
  - o Approximately 1 3 universally accessible picnic tables / benches
  - Shade structure (serves as a hosting space during trail instruction / lessons / events)
  - o Wildlife proof waste receptacles
  - o Potable water refill station
  - o Bicycle parking
  - o Bike wash station
  - o Bike tool repair station & air pump
  - o Invasive species boot brush (at trailhead)
  - o Trailhead kiosk
  - o Interpretive, wayfinding & regulatory signage
  - o Electrical power (for event hosting)
  - o Security lighting
- 4. The District should consider developing and maintaining a network of community trailheads that provide formalized access into the trail system from adjacent neighbourhoods for visitors who walk or cycle to the trail system (Figure 25). Each community trailhead should provide the following:
  - Trailhead, wayfinding & regulatory sign (trail name, map, permitted / prohibited activity symbols)
  - Limiter to prevent off-road vehicle access to nonmotorized trails (e.g. ensure wide enough to accommodate accessibility needs such a wheel chairs / adaptive mountain bikes)
- 5. The District should consider working with the private landowner of parcel PID: 018-687-270 to explore the potential of establishing a future community trailhead and trail connections from Cartwright Avenue to the Flume Trail.



Figure 29 Vistas Neighbourhood Staging Area



### 7.6 AMENITY NODES

- 1. The District or Trail Stewardship Group should retain, formalize and enhance existing amenity nodes and consider developing three new amenity nodes as shown in Figure 25 and Table 6. Many visitors appreciate the organic non-uniform approach to amenity designs which should be retained to the extent feasible while ensuring amenities conform to accepted design and safety standards.
- 2. Formalize and maintain the existing (or a suitable replacement) youth pump track with the Eco Village development.

### Table 6: Index of Amenity Nodes

Amenity Node Location	Status	Amenities to be Provided
AN 1 - Cartwright Mountain Summit	Existing	<ul><li>Benches</li><li>Picnic Table</li><li>Interpretive signage</li><li>Wayfinding signage</li></ul>
AN 2 – Mixed Use Trail to Cartwright Mountain Summit	Existing	Benches     Interpretive signage     Wayfinding signage
AN 3 – Joyride & Lower Family Jules Trail Intersection	Existing	Bench
AN 4 – Deer Ridge Trail Near Joyride Trail Intersection	Existing	Bench
AN 5 – Joyride Trail Switchback / Climb	Existing	Bench
AN 6 – Eagles View Viewpoint	Existing	Benches     Picnic Table     Interpretive signage     Wayfinding signage     Bike Repair Station
AN 7 – Dragons Back Viewpoint on Hairway to Steven Trail	New	<ul><li>Benches</li><li>Picnic Table</li><li>Interpretive signage</li><li>Wayfinding signage</li></ul>
AN 8 – Test of Humanity Trail South Viewpoint	New	Benches     Interpretive signage
AN 9 – Prairie Valley Viewpoint (future interest)	New	Benches     Interpretive signage
Oto		

### 7.7 SIGNAGE

- 1. The District or trail stewardship group should consider adopting the sign typology presented in Appendix B and consider engaging a sign design professional to prepare the detailed design and content production of the signs proposed in the conceptual signage plan (Figure 30). In keeping with community expectations, the visual design of the signs (e.g. materials, colour palettes, motifs) should be inspired by and compliment the natural setting and characteristics of the mountain.
- 2. Upon completion of the sign design package, the District or trail stewardship group should consider implementing the signage plan as presented in Figure 30. If resources and capacity are not available to implement the full signage plan at one time, implementation could proceed in the following order of priority:

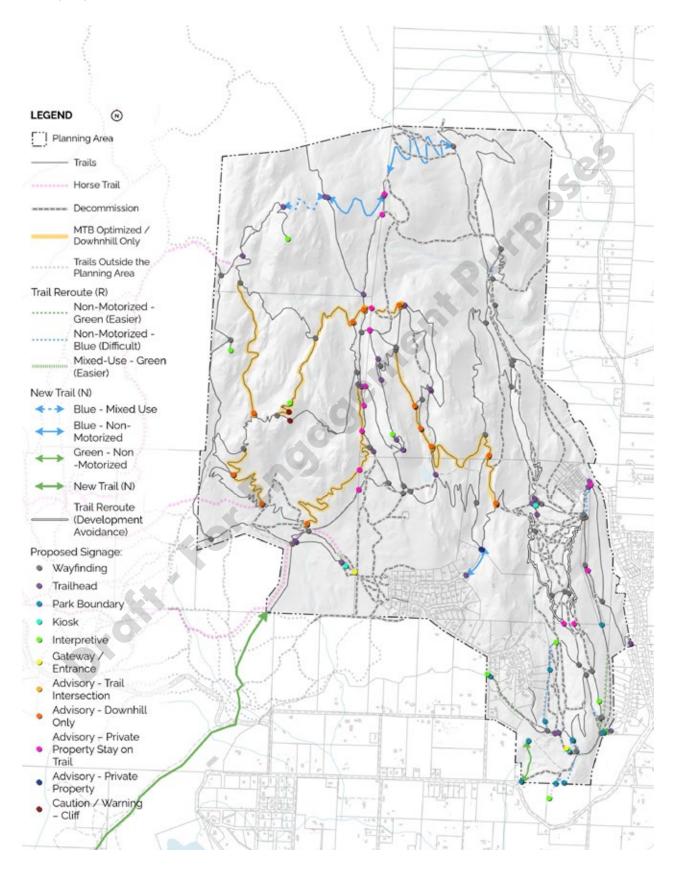
Phase 1	Phase 2	Phase 3
<ul><li>Kiosk</li><li>Trailhead</li><li>Wayfinding</li><li>Park Boundary</li></ul>	<ul> <li>Advisory – Trail Intersection / Merge</li> <li>Advisory – Downhill Only Trail</li> <li>Advisory – Technical Trail Feature</li> <li>Advisory – Private Property</li> <li>Caution / Warning (e.g. wildlife, cliffs)</li> </ul>	<ul> <li>Interpretive</li> <li>Gateway / Entrance Feature</li> <li>Pump Track Signage (Entry, Feature, Jump Line)</li> </ul>

Community members have created and installed several unique trail name signs which add character and value to the trail system. To the extent possible, these signs should be maintained as long as they do not provide incorrect or confusing information.

### 7.8 WINTER GROOMING

- , win 1. Subject to confirmation of impacts to ungulate winter range, a looped winter groomed trail should continue to be provided along the following trails (Figure 25):
  - o Joyride
  - o Family Jules
  - o Deer Ridge
  - o Yahoo & Repeat

Figure 30 Signage Plan





# AUTHORIZATION, GOVERNANCE, OPERATIONS & MANAGEMENT

This section outlines the authorization, governance, operations, and management actions that should be implemented. **All identified** actions are subject to landowner / manager approval and allocation of appropriate resources.

### 8.1 TRAIL AUTHORIZATIONS

Long-term sustainable trail systems are predicated on securing authorizations from the appropriate landowner / manager and First Nations to build, maintain and operate the trails and their associated features and amenities. Before implementation of the trail development plan presented in section 7.0 proceeds, approvals should be obtained from the District for work on District lands, the respective private landowners, and from the Province for work on Crown land.

### Actions

- 1. Prior to pursuing trail authorization from the District or the Province, the District should consider:
  - o Undertaking a biophysical inventory and Environmental Impact Assessment of the existing trail system to determine if, and if so, which trails should be considered for re-routing to avoid sensitive wildlife habitat features and areas while still maintaining the current distribution and connectivity of the proposed trail system. The assessment should be implemented in accordance with the District's Terms of Reference- Professional Reports & Technical Studies.
  - o Work with the Penticton Indian Band's preferred Archaeologist to complete Archaeological Overview Assessments of all proposed trails, trail re-routes, parking / staging area developments / improvements and infrastructure development. Undertake Pre-Field Reconnaissance Reports and/or Archaeological Impact Assessments as required.
- the District should consider working with private landowners in the meantime to secure a lease, license or other similar agreement authorizing the District to temporarily provide, maintain and operate the trails that cross private lands (see section 7.0) for public recreational use and trail-based events. Priority should be given to securing formal access to the following private land parcels:

2. As the timeframe for future land development is not known,

o PID: 016-595-360

o PID: 016-595-378

o PID: 011-530-596

o PID: 011-343-028

The District should work with legal professionals to determine which agreement mechanism is most appropriate and most likely to be accepted by private landowners and to develop the draft agreements.

3. The District should further investigate and consider pursuing authorization of the trail system on Crown lands through either a Forest Range Practices Act section 56/57 approval or a License of Occupation under the Land Act. The District should determine which mechanism is most feasible and desirable to pursue Provincial approval of this plan and authorization of the development, maintenance, and management of the trail system on Crown lands (see Appendix C for further information). If the trail system is authorized on Crown lands, the District should consider formally authorizing the trail system on District owned lands.



# HELPFUL RESOURCE

Outdoor Recreation Council of British
Columbia's Best Practices for Developing
Public Trails on Private Lands

### 8.2 GOVERNANCE MODEL & TRAIL STEWARDSHIP GROUP

While the trail system, and the Cartwright Mountain area in general, is important to and treasured by many diverse interests (First Nation, wildlife, recreation), decisions about new trail development, trail redevelopment, maintenance and operations have been made by a relatively small number of incredibly dedicated and skilled trail users. Nearly 50% of engagement participants identified the lack of a clear governance model and management responsibility for the trails as a problem that needs to be addressed (an additional 20% were neutral / did not know). The impassioned efforts of volunteers have produced a remarkable asset for the community. While a great deal of gratitude is owed to these volunteers, a formalized governance model should be developed to ensure that a) the interests of landowners / managers (District, Province), First Nations, wildlife and environmental organizations, and the diversity of trail users are being fully considered and reflected in decision making and b) that applicable legislation (provincial and federal) and District bylaws are being followed is recommended to support the longterm sustainability of the trails network.



Examples of Multi-Interest Trail Stewardship Groups with Advisory & Operational Roles

Tabor Mountain Outdoor Recreation
Society

Mackenzie Outdoor Route & Trail
Association

Golden & Area A Trail Alliance

Kootenay Trails Society

Shuswap Trails Alliance

- 1. Investigate and consider establishing a multi-interest trail stewardship group to provide both governance and operations and maintenance of trail systems in the District (including Cartwright Mountain, Conkle Mountain, Giants Head and potentially others). See Appendix D for further details regarding the proposed mandate, organization representation and roles and responsibilities of the potential trail stewardship group.
- Once the trail stewardship group is established and the trail systems on District, private and Crown lands are authorized, the District should consider establishing a contract / agreement with the trail stewardship group to operate and maintain the trail system.
- 3. If funding is available, the District should consider providing recurring annual operating funding and capacity (e.g. equipment, materials) to support implementation of the trail stewardship group's annual operations and maintenance plans. The District should also consider providing, on a cost shared basis, regular capital funding to support implementation of the trail stewardship group's capital priorities for projects that have been approved by the landowner / manager. Operational and capital funding options could be sourced through grants, donations, and sponsorship.
- Research and explore funding opportunities to implement the Plan's strategies and actions (grant applications, donations, sponsorships, etc.)

### 8.3 VISITOR USE MANAGEMENT

### 8.3.1 Visitor Education & Information

While not yet considered significant management problems, several management concerns consistently emerged through the engagement process including off-road vehicle use, off-trail travel, trail tread damage / widening, off-trail travel, off-leash dogs, dog waste, horse manure, litter, wildlife displacement / harassment, introduction / transport of invasive species, and visitor conflicts associated with dogs, mountain bikes and horses. These management concerns and conflicts are often the result of undesirable visitor behaviours which often occur because visitors are uninformed and / or unskilled about responsible behaviours, have bad habits or, in some cases, are careless. These types of management concerns are well suited to be addressed through proactive visitor education which is currently limited .

#### **Actions**

 The District or trail stewardship group should consider improving proactive visitor education and information regarding the following three topics:

### Adventure Smart & Ride Smart

- Helping visitors understand the different trail types in the system – multi-use vs mountain bike optimized, directional trails
- o Helping visitors understand the technical difficulty ratings
- o Being prepared for outdoor travel and hazards (e.g. taking the essentials, training, trip plan)
- o Ride Smart ("Pre-ride, re-ride, then freeride")
- o Visitor responsibility and code of conduct
- o Exclusion of liability and assumption of risk





Figure 31 Multi-Use Trail Courtesy Yield

### Leave No Trace Skills & Ethics & Trail Etiquette

- o Helping visitors understand and apply the 7 principles of Leave No Trace to minimize recreation impacts
- o Multi-use trail yield & etiquette guidelines (Figure 29)
- o Invasive species introduction & transport
- o Private land boundaries and trespass
- o Wildfire safety & FireSmart

#### Rules of Use

- o Permitted and prohibited activities.
- o Ensuring visitors are aware of rules of use.

Education and visitor information should be designed to target visitors:

- o During trip planning before they arrive at the trails.
- o At the trailheads.
- o At key decision-making points on the trails.

Multiple channels should be utilized to deliver education and visitor information messages including, but not necessarily limited to:

- o Social media
- o District and trail stewardship group website
- o Influencers
- .ıd € o Trailhead / on-trail interactions and events
- o Trailhead and on-trail signage

### 8.3.2 Bylaws & Regulation

Bylaws are a necessary management tool that backstops visitor education efforts and helps to ensure the sound management of the trail system and provision of a quality and safe visitor experience. It is essential that bylaws / regulations clearly establish the rules of use for the trail system and enable timely and efficient compliance actions. Trails on Crown land, if sanctioned through a section 56 approval, are regulated by the *Forest and* Range Practices Act and the Forest Recreation Regulation. The trails on District owned land, or leased/licensed land, are regulated by the District of Summerland's Parks Regulations Bylaw No. 2022-012.

- 1. The District should consider reviewing and updating the Parks Regulation Bylaw No. 2022-012 to ensure that it addresses and enables convenient compliance responses to contemporary trail management issues. The bylaw could be updated to ensure that it:
  - o Allows the District to designate trails in parks and require public to remain on designated trails where identified in signage.
  - o Allows the District to prescribe specific uses for a trail as well as directions of travel (e.g. down only) and requires the public to adhere to those specifications.
  - o Allows the District to temporarily close a trail, feature, zone, or the entire trail system to all activities or specific activities for reasons identified in this plan and make it an offence not to follow the closures.
  - o Require users to follow the signs and notices posted by the District within the park and make it an offence not to follow the signs and notices.
  - o Clearly requires District authorization for the construction of a trail, feature or amenity and makes it an offence to construct a trail, feature or amenity without authorization.
  - o Establishes the <u>provincial e-bike classification system</u> and permits the use of Class 1 e-bikes where bicycles are permitted and class 2-3 e-bikes on trails in parks where off-road vehicle use is permitted.
  - o Permit off-road vehicle use (including Class 2 and 3 e-bikes) on trails and in areas (e.g. staging areas) designated for such purpose and make it an offense to operate them on trails or in areas that are not designated for such use.
  - o Update definitions of terms.

### 8.3.3 Temporary Trail System Closures

Situations may arise where it is necessary to temporarily close an individual trail, multiple trails or the entire trail system to protect the investment in and sustainability of the trails, wildlife, First Nation's use, land use tenures or other values.

### **Actions**

- If and when resources are available, consideration should be given to temporarily closing a trail(s) when:
  - Visitor access may result in unreasonable damage to the trail tread and increased maintenance demands (e.g. spring freeze thaw cycles, overly wet periods where trail treads remain saturated).
  - The presence and / or behaviours of bears, cougars, snakes and other wildlife pose an unacceptable and abnormal risk to public safety or to the animal's welfare.
     The length of closures should give priority to wildlife needs.
  - Needed to minimize wildlife disturbance or displacement during sensitive times (e.g. winter, natal) or areas.
  - o Access poses and unacceptable risk to public safety during trail / feature / amenity maintenance and redevelopment.

### 8.3.4 Weeds & Invasive Plants

Recreation activities and trails can be a vector for introducing and spreading weeds and invasive plants. Weeds and invasive plants can negatively impact local ecosystems and wildlife. Though an inventory of weeds and invasive plants have not been undertaken along the trails, they are anticipated to be present in the study area due to past land uses and recreational use. Active management should be undertaken to ensure existing infestations are identified and appropriately treated, controlled, or removed and further introduction and spread is avoided.

- The District or trail stewardship group should consider engaging a Qualified Environmental Professional or partner (e.g. Okanagan and Similkameen Invasive Species Society) to undertake an inventory of weeds and invasive plant species along the trails and visitor infrastructure in the planning area and identify treatment prescriptions.
- The District or trail stewardship group should consider collaborating with the Okanagan and Similkameen Invasive Species Society and volunteers to appropriately treat and manage weeds and invasive plant infestations along the trail system.
- 3. The District or trail stewardship group should consider requiring a Construction Environmental Management Plan be prepared for any trail or amenity developments / upgrades that require the use of machinery. The plan should identify practices that will be implemented to mitigate introduction and spread of invasive species (e.g. hygiene to ensure machinery and equipment is free of soil and weeds when brought on site).

### 8.3.5 Special Events & Commercial Use

Special events and commercial use of the trail system can help to activate the network, provide desirable visitor services and grow the benefits the community receives from the trail system. The District and trail stewardship group should continue to support the approval of special events and commercial use of the trail system where and when they will positively contribute to the desired conditions set in this plan, enhance the visitor experience, and when it can be demonstrated that they will not result is unacceptable impacts to public safety, public access, trail sustainability, liability and ecological or cultural values.

The District's Parks Regulation Bylaw No. 2022-012 requires all special events and commercial use occurring on the trail system within Mount Conkle Park to obtain a park use permit which are issued in accordance with District procedures. For Crown land, the provincial Permission Policy allows non-commercial special / organized events (up to 200 participants) to be undertaken by non-commercial groups on Crown land subject to the conditions outlined in Appendix 3 of the policy. Should the trails on Crown lands be formalized under section 56 of FRPA, the Forest Recreation Regulation requires that all "competitive sporting events" and businesses occurring on recreation trails be authorized by a "recreation officer". Non-commercial organized events that exceed the maximum event capacity set in the Permission Policy or commercial events held on Crown lands require a temporary permit issued by the Province in keeping with the Adventure Tourism (Commercial Recreation) policy. Pending the trail authorization approach that is chosen, the District and Province should consider coordinating decisions about the approval of special events and commercial use proposals where those proposals cross jurisdictional boundaries.

### **Actions**

The District should consider developing / refining it's internal
procedures or developing a Special Events and Commercial
Use policy to guide issuance of Park Use Permits for
commercial, competitive and special event use of the trails on
District lands.



# 8.4 INSPECTIONS & ROUTINE MAINTENANCE

Regular inspections and proactive maintenance planning and maintenance improves visitor safety, protects investments in the trail system, reduces capital costs over time and manages risk and liability.

#### **Actions**

- If and when resources are available, the District or trail stewardship group should consider formalizing "Inspection and Maintenance Protocols" to guide inspection frequency, prioritization of maintenance deficiencies, documentation / record keeping, reporting, and accident tracking.
- If and when resources are available, the District or trail stewardship group should consider developing an annual maintenance / operating plan to identify the routine and non-routine maintenance activities that are prioritized to be resolved and operational funding requirements / requests.



### INSPECTION

The process of systematically reviewing current conditions to identify and document deficiencies and / or deviations from the prescribed conditions.

### **MAINTENANCE**

The process of returning the observed condition to or near the prescribed conditions.

# MAINTENANCE PLANNING

The process of reviewing inspection results, prioritizing the order in which identified deficiencies and routine maintenance activities will be addressed, assigning the resourcing to implement the required maintenance and documenting the work that was undertaken.

# 8.5 RISK MANAGEMENT & VOLUNTEER MANAGEMENT

In the context of trails, risk management is a systematic approach and process to identify and assess safety risks to visitors, volunteers and staff operating the trail system and determine the steps that will be taken to mitigate or control those safety risks and the adverse effects of safety incidents. Regardless of the activity, trail use and trail maintenance in natural environments comes with inherent safety risk and unpredictable climate / weather / fire risks. Accidents and injuries on the trail system are anticipated simply due to the inherent risks involved with hiking, trail running, mountain biking and equestrian use in a natural environment.

### **Occupiers Liability Act**

The <u>Occupiers Liability Act</u> provides protections for occupiers who allow recreational use of their property on recreational trails. The Act indicates that a person will have "willingly assumed all risks" when:

- Entry to the premises is for the purpose of a recreational activity,
- The premises are reasonably marked as a recreational trail,
- The premises are used for forestry or range purposes, vacant or undeveloped, forested or wilderness,
- The occupier receives no payment.

Section 3(3) of the Act further states that the occupier has "no duty of care in respect of risks willingly assumed by that person other than a duty not to:

- Create a danger with the intent to do harm to the person or damage the person's property, or
- Act with reckless disregard t the safety of the person or the integrity of the person's property".

While the Act provides sound protections for landowners, a thorough Risk Management System will further help to reduce the likelihood of accidents and injuries and ensure the landowner, District, and / or trail stewardship group, is meeting its duty of care owed to visitors as set out in the Occupiers Liability Act as well as worker safety obligations owed to volunteers working on the trail system. While risk management can not prevent all accidents from occurring, good risk management can help to limit the number and severity of accidents and control exposures to loss for landowners, the District and / or trail stewardship group.



Challenge, adventure, and risk are motivators for many trail users and critical to the visitor experience.

Removing risk and challenge is not necessary and would be inappropriate. However, appropriately planning for and effectively managing safety risk is essential.

- If and when resources are available, the District and trail stewardship group should implement good risk management practices regarding the trail system and trail operations including, but not limited to:
  - o Ensuring trails, features and amenities are designed and constructed to accepted standards or industry accepted practices.
  - o Hazard identification and risk assessment and controls.
  - o Ensuring trail inspections, prioritization, maintenance and documentation (see section 8.4).
  - o Providing visitor information & education (e.g. signage, code of conduct, difficulty ratings, etc.) (section 8.3.1).
  - o Implementation of a volunteer health and safety program.
  - o Accident reporting and analysis system.
- 2. If and when resources are available, the District or trail stewardship group should consider adopting / developing a volunteer agreement, volunteer job description(s), and volunteer health and safety program to ensure that volunteers who are maintaining and operating the trail system are managed the same as if they were "staff" when it comes to safety and training. This includes ensuring application of typical health and safety requirements such as work hazard assessments, development of and training on safe work practices, provision of personal protective equipment, technical trainings / certifications (e.g. power tools, chain saws, tree falling), field supervision, monitoring / reporting, incident investigation and records keeping.

### 8.6 ACTIVATION & PROGRAMMING

Activation and programming of the trail system has been limited and organic. Once the trail system is authorized, a deliberate effort could be focused on the activation and programming of the trail system, particularly activation and programming that targets beginner trail users, youth, racialized and equity deserving populations, newcomers, and residents with disabilities.

#### **Actions**

- 1. The District or trail stewardship group should consider encouraging community partners to provide:
  - o multi-activity "learn to" programs on the trail system.
  - o equity and inclusion-based trail programs (e.g. LGBTQ+, Women).
  - o adaptive recreation programs.
  - o Indigenous youth trail programs (e.g. Indigenous youth mountain biking).
- 2. The District or trail stewardship group should consider working with the Penticton Indian Band to determine if, and if so, how and where First Nation's culture, stories and places of significance can be integrated into the visitor experience and how the trail system can support Canada's Truth and Reconciliation calls to action (e.g. signage, Indigenous landmark identification, etc.).
- 3. The District or the trail stewardship group should consider working with the Summerland Museum, Okanagan Historical Society, Penticton Indian Band and others to prepare an interpretive plan for the trail system including interpretive signage as well as mobile device application-based interpretation. Key interpretive themes for the trail system could continue or be expanded to include:
  - Penticton Indian Band peoples, traditional use and traditional place names
  - o Culturally important plants (e.g. bitterroot)
  - Wildlife & ecosystems (e.g. Red / Blue / SARA listed species, Snakes, Badger, Mountain Goats, Winter Range, Grasslands)
  - o Early settlers of Summerland (e.g. Conkle, Millionaires Row)
  - Geology and geomorphology Volcanoes of the Okanagan



Supporting Truth & Reconciliation and Trail Activation Through the Secwépemc Landmarks Project

This initiative is creating awareness of the Secwépemc traditional territory through the installation of 100 trailhead posts, 8 landmark sculptures and 8 interpretive panels featuring oral histories, place names, culture and stories.

https://shuswaptrails.com/points









Figure 32 Wayfinders Landmark
Sculpture Identifying
Points of Importance to the
Secwépemc Peoples



Figure 33 Trailheads Post: Secwépemc Landmarks Project

### 8.7 TRAILS TOURISM

When planned and managed effectively, the Cartwright Mountain trails system can generate substantive economic benefits to community and regional businesses, support tourism and strengthen Summerland's reputation as a great place for families and workers to choose to live. Seventy-three percent (73%) of engagement participants recognized that the trail system can help to attract new and retain existing residents, 28% said it can help to attract new and retain existing businesses, 51% said the trails could help to grow the local and regional economy. Sixty percent of engagement participants strongly agreed (34%), agreed (11%) or somewhat agreed (15%) that the Cartwright Mountain trail system could and should become a more significant trails tourism destination while 27% disagreed. While there is moderate support for pursuing trails tourism, there is also concern about potential undesirable impacts (e.g. crowding, trail damage) that can result if tourism is not carefully managed.

Trail tourism readiness is a rating of how "ready" a trail destination is to welcome tourists, to be promoted as a travel-motivating destination, and how reliably and confidently the destination's trails ecosystem (Figure 34) can deliver quality trail experiences. Trans Canada Trail's National Guidelines for Evaluating Trails Tourism Readiness was used to assess the tourism readiness of the Cartwright Mountain trail system and the broader trails ecosystem in Summerland. Evaluation of the guidelines indicate that the Cartwright Mountain trail system and the region's trails tourism ecosystem is "Not Visitor Ready" (Figure 35). At "Not Visitor Ready", the trail system is not ready to be promoted to visitors nor is it ready for supporting tourism services to be developed around the trail system. Once implemented, the actions identified in this plan will advance the tourism readiness of the Cartwright Mountain trail system to "Market Ready", at which point the following actions could be implemented.

- Destination Summerland and the Thompson Okanagan
  Tourism Association should consider elevating general
  awareness of the trail system and approved parking
  locations and integrate the trail system into summer and
  winter visitor itineraries. The itineraries should integrate visitor
  services such as accommodations, food and beverage,
  transportation as well as other businesses, visitor attractions
  and experiences available in an around Summerland to help
  ensure out of town trail users support local businesses.
- Destination Summerland should consider developing a compelling trail tourism destination marketing and communications strategy to encourage both locals and tourists to choose Summerland and Summerland's local businesses for one of their trails tourism adventures.
- The District and the Province should remain receptive
  to issuing approvals to local businesses that wish to
  offer guided, instructional or other trails focused tourism
  experiences on the trail system so long as the desired
  resource conditions identified in this plan are being achieved.

Figure 34 Relationship Between Trail Tourism Readiness & Benefits (Justin Ellis)

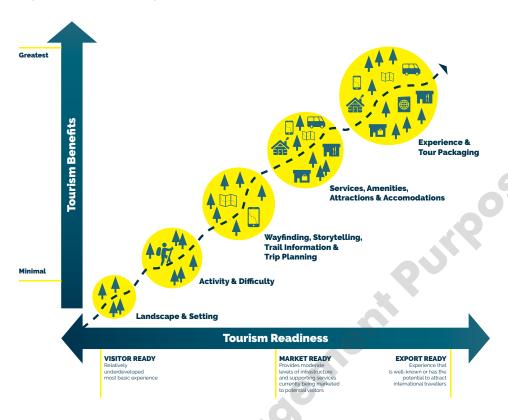
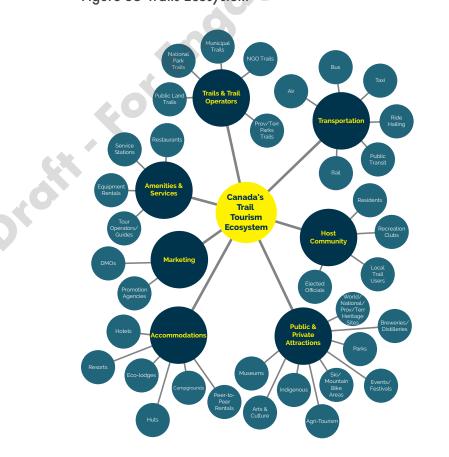


Figure 35 Trails Ecosystem



# 8.8 LAND USE PLANNING, OFFICIAL COMMUNITY PLAN & ZONING

The Cartwright Mountain area has long been used and recognized as an important recreation resource for the community and the region. The Official Community Plan's Future Land Use identifies the Crown land in the planning area as "Open Land" which includes trails and recreation as envisioned uses. However, the zoning bylaw zones Crown land parcels as "Forest Grazing". Recreation and trails are not identified as a principal or accessory use of the land.

The future Eco-Village, Vistas Neighbourhood and Deer Ridge residential developments overlap and may impact important sections of the trail system, change current access and greatly increase demand on the currently unauthorized trails. Careful future subdivision planning by the developers and the District are needed in order to ensure the connectivity of the key trails and provide sufficient and appropriately sited staging areas, community trail heads and amenities as identified in section 7.0.

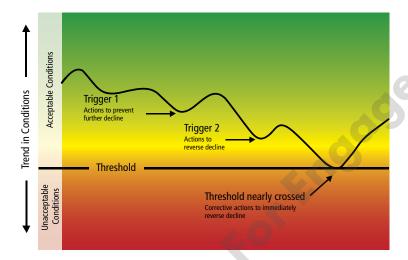
- 1. The District should work closely with developers to ensure that trail system and network of staging areas and community trailheads identified in this plan (section 7.0) are integrated into future development plans. Land should be acquired by the District through the subdivision process to provide for the necessary staging areas, community trails and trail connections and the District should collaborate with the respective developer to ensure that current trail connections that will be lost to development are re-routed generally as illustrated in this plan.
- 2. If / when future provincial land and resource management planning or forest landscape planning initiatives occur, the District and trail stewardship group should advocate for the Crown land parcels to continue to be recognized for their recreation values and establish recreation as a priority land use to ensure that other land uses will be managed in a way that maintains the area's recreation features, settings and visual values.
- 3. Upon authorization of the trail system on Crown lands (e.g. license of occupation), or parkland dedication to the District provided through development opportunities, the District should consider updating the zoning bylaw to zone land parcels in the area to permit trails, recreation, tourism and associated amenities, such as the P Parkland zoning designation.





Monitoring and evaluating whether the desired conditions set for the trail system are being achieved is a foundation of good trail management. Indicators that reflect the status of desired resource conditions have been identified and are presented in Appendix E. These indicators should be monitored and reported on over time. For each indicator, a trigger has been established (where possible) and should be used to signal when desired conditions are changing in a desirable or undesirable way and whether implementation of additional management actions are needed to bring current conditions back in line with the desired conditions. In addition to triggers, thresholds have been established (where possible) to clearly communicate the minimum acceptable condition.

Figure 36 Relationship Between Indicators, Triggers & Standard / Threshold



# **INDICATOR**

Specific, measurable variables that indicate the status of a specific desired condition.

# **STANDARD**

T.

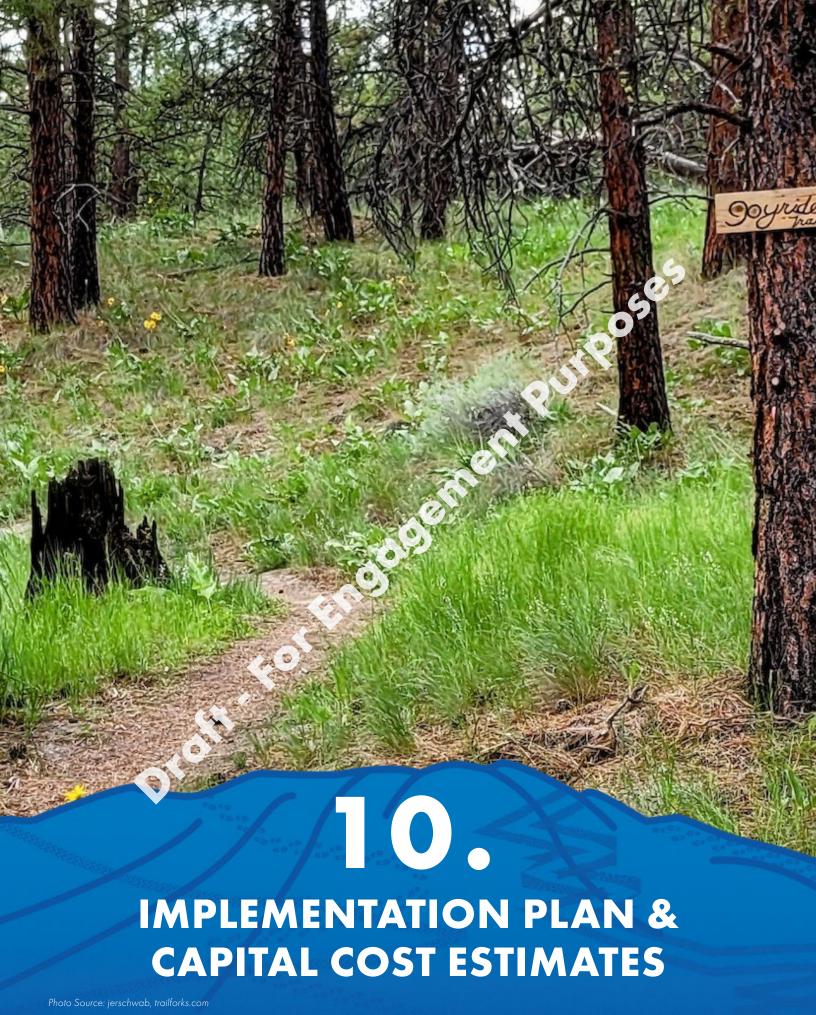
The minimum acceptable condition for change in indicators.

# TRIGGER

A condition of concern for an indicator that is enough to prompt a management response to ensure a standard is not crossed.

# MANAGEMENT ACTION

Implemented to preserve or restore desired conditions, generally in phases, after monitoring documents that a threshold is being approached or exceeded.



### **10.1 IMPLEMENTATION PLAN**

The proposed trail development plan and the trail authorization, governance, operations and management actions are envisioned to be implemented over the next 10-15 years. While this plan provides a shared vision and path forward, it represents a snapshot in time and will undoubtedly evolve over the years. Rather than a rigid action list, this plan is a framework for District staff, leadership and trail stewardship group decision making and will be used to identify the priorities that are to be funded and advanced.

The actions identified throughout the plan have been prioritized into the follow three implementation phases.

### Initial Actions | 1 - 2 Years

Strategy	Section & Action No.	Action			
Trail Development Plan					
Trail Reroutes & Enhancements	7.3(2)	Consider working proactively with the developer of parcels PID: 011-530-596 and PID: 016-595-378 throughout the land development process to ensure that the trail system and amenities outlined in this plan are integrated into the respective developments.			
Authorization, Governance, O	perations &	Management			
Trail Authorizations	8.1(1)	Based on recommendations from the Environmental Scan, consider undertaking a biophysical inventory and environmental impact assessment to determine if existing trails should be rerouted to avoid wildlife habitat features.			
	8.1(1)	Work with the Penticton Indian Band's preferred Archaeologist to complete Archaeological Overview Assessment of all proposed trails, trail re-routes, parking / staging area developments / improvements and infrastructure development. Undertake Pre-Field Reconnaissance Reports and/or Archaeological Impact Assessments as required.			
	8.1(2)	Consider working with private landowners to secure a lease, license or other similar agreement authorizing the District to temporarily provide, maintain and operate the trails that cross private lands.			
	8.1(3)	Investigate and consider pursuing authorization of the trail system on Crown lands through either a Forest Range Practices Act section 56/57 approval or a License of Occupation under the Land Act and sanctioning the full trail network.			
Governance Model & Trail Stewardship Group	8.2(1)	Investigate and consider establishing a multi-interest trail stewardship group to provide both governance and operations and maintenance of trail systems in the District (including Cartwright Mountain, Conkle Mountain, Giants Head and potentially others).			
	8.2(4)	Research and explore funding opportunities to implement the Plan's strategies and actions (grant applications, donations, sponsorships, etc.)			
Land Use Planning, Official Community Plan & Zoning	8.8 (1)	The District should work closely with developers to ensure that trail system and network of staging areas and community trailheads identified in this plan (section 7.0) are integrated into future development plans. Land should be acquired by the District through the subdivision process to provide for the necessary staging areas, community trails and trail connections and the District should collaborate with the respective developer to ensure that current trail connections that will be lost to development are re-routed generally as illustrated in this plan.			

# Short Term | 3 - 6 Years

	Section	
Strategy	&	Action
	Action No.	
Trail Development Plan	140.	
New Trails	7.2(1)	Consider engaging appropriately experienced local volunteers to design and build the following trails / trail
New Italis	7.2(.)	segments:
		N3 - Blue rated non-motorized single track multi-use trail connecting the Hermiston Road community trailhead to the Lower K2 / Chez Nic Connector trail intersection.
		N4 - Green rated non-motorized single track trail connecting Prairie Valley Rd. to Ottley Ave.
		N5 - Staircase to connect Flume Trail to Taylor Place (subject to feasibility).
Trail Reroutes & Enhancements	7.3(1)	R1 - Reroute the flume trail downslope of the existing alignment to avoid trespass on parcels PID: 015-237-435 and PID: 015-237-427. Co-locate trail with future sewer infrastructure.
		R2 - Reroute the existing Test of Humanity Trail alignment to avoid the Sunset Place private land parcels and connect into the Flume Trail.
		R3 - Reroute the Flume Trail to enter the proposed staging area on Denike St. Provide an additional reroute to improve the grade profile of the trail to the Denike St. intersection.
		R4 - Realign the existing trail to avoid the Solar Centre and provide a more sustainable trail grade and connection to a future Prairie Valley viewpoint overlooking Prairie Valley Road.
		R5 - From the new Eco Village staging area, relocate the Flume Trail to the north side of the flume line to avoid the steep eroding slope into the Solar Centre. Realign the unnamed north south segment of trail that connects the Test of Humanity Trail and Flume Line to integrate switchbacks and reduce the trail grade.
		R6 - Reroute the current Flume Trail alignment to the upslope / west of the 13 private land parcels along Taylor Place. Establish switchbacks to provide a more reasonable climb and sustainable grades from the current Flume Trail alignment to the elevation / height of land necessary to avoid the private land parcels and to provide a more natural southeastern loop for the Test of Humanity Trail. Create a new connection from the height of land to the Test of Humanity Trail.
		R7 - Realign the north end of the Flume Trail to establish a more sustainable descent to Cartwright Avenue community trailhead and loop connection to the Test of Humanity Trail.
		R8 - Reroute the equestrian bypass to connect into the Test of Humanity Trail main route and avoid unnecessary linear disturbance.
	<b>A</b> 6	R9 - Realign the mixed-use trail to start from the new proposed staging area west of McLarty Place.
	7.3(3)	Consider implementing the following trail tread enhancements to improve the quality and sustainability of the trails:
C.N.		E1- Develop a 2.5 m wide raised boardwalk along the Test of Humanity Youth loop north of the Eco Village to protect the wetland.
		E2 - Remove large cobble, restore proper draining and resolve erosion rills on the unnamed mixed-use trail leading to the summit of Cartwright Mountain.
O,	7.3(4)	Consider managing Family Jules, Clubber Lang, Joyride DH and Yahoo & Repeat trails as mountain bike optimized downhill only trails. All other trails in the system should continue to be managed as multi-use bi-directional trails.
	7.3(5)	Undertake routine trail maintenance activities to address identified trail sustainability problems (tread cupping, erosion, standing water, bench cuts, turn design).
	7.3(6)	Consider integrating more technical trail features into the trails to elevate the experience for visitors and to help satisfy their objectives (see section 7.3(6) for further details).
	7.3(7)	Consider working with grazing license holders to identify where improvements to fencing are needed and gates, walk / ride throughs, and cattle guards should be installed to ensure trail connectivity, minimize conflict between livestock and visitors and mitigate impacts of grazing on the trails.

		Section			
Strategy		& Action No.	Action		
Parking & Staging Areas		7.5(1)	Continue the development of the parking lot within the Eco Village cul du sac that is north of the Solar Centre Consider undertaking a design plan for the new staging area in the new District park space to the north east of the Solar Centre		
		7.5(2)	Consider working with the Deer Ridge developer and / or Province to assemble land for a new staging area in the Deer Ridge neighbourhood west of McLarty Place. Once land is assembled, consider undertaking a design plan for the staging area.		
		7.5(3)	Consider working with the Vistas neighbourhood developer to assemble land for a new staging area. Once land is assembled, consider undertaking a design plan for the staging area.		
		7.5(4)	Consider developing and maintaining a network of community trailheads that provide formalized access into the trail system from adjacent neighbourhoods for visitors who walk or cycle to the trail system.		
		7.5(5)	Consider working with the private landowner of parcel PID: 018-687-270 to explore the potential of establishing a future community trailhead and trail connections from Cartwright Avenue to the Flume Trail.		
Signage		7.1(1)	Consider adopting the sign typology and engaging a sign design professional to prepare the detailed design and content production of the signs proposed in the conceptual signage plan. Ensure the visual design of the signs is inspired by and compliments the natural setting.		
		7.7(2)	Upon completion of the sign design package, consider implementing the signage plan as presented.		
Winter Groom	ing	7.8(1)	Subject to confirmation of impacts to ungulate winter range, continue to provide a looped winter groomed trail experience.		
Authorization, G	overnance, Ope	rations & N	Management		
Governance M Stewardship G		8.2(2)	Once the trail stewardship group is established and the trail systems on District and Crown lands are authorized, consider establishing a contract / agreement with the trail stewardship group to operate and maintain the trail system.		
		8.2(3)	Consider providing recurring annual operating funding and capacity (e.g. equipment, materials) to support implementation of the trail stewardship group's annual operations and maintenance plans and, on a cost shared basis, capital funding to support capital priorities.		
Visitor Use Management	Bylaws & Regulation	8.3.2(1)	Consider reviewing and updating the Parks Regulation Bylaw No. 2022-012 to ensure that it addresses contemporary trail management issues.		
<b></b>	Temporary Trail System Closures	8.3.3(1)	Consider implementing temporary trail system closures as needed (e.g. conditions result in damage to trail tread, wildlife pose risk to public, minimize wildlife displacement / disturbance during sensitive times).		
	Weeds & Invasive Plants	8.3.4(1)	Consider undertaking an inventory of weeds and invasive plant species along the trails and visitor infrastructure in the planning area and identify treatment prescriptions.		
		8.3.4(3)	Consider requiring a Construction Environmental Management Plan be prepared for any trail or amenity developments / upgrades that require the use of machinery.		
Inspections & Routine Maintenance		8.4(1)	Consider formalizing "Inspection and Maintenance Protocols" to guide inspection frequency, prioritization of maintenance deficiencies, documentation / record keeping, reporting, and accident tracking.		
Land Use Planning, Official Community Plan & Zoning		8.8(2)	If / when future provincial land and resource management planning or forest landscape planning initiatives occur, advocate for the Crown land parcels to recognized for their recreation values and establish recreation as a priority land use.		

# Medium Term | 7 - 10 Years

Strategy	Action No.	Action
Trail Development Plan		
New Trails	7.2(1)	Consider engaging appropriately experienced local volunteers to design and build the following trails / trail segments:
		N1 - Blue rated double track mixed-use trail connecting Cartwright Summitt to existing green mixed-use trail.
		N2 - Blue rated non-motorized single track multi-use trail connecting the existing green mixed-use trail to the northern loop of the Test of Humanity Trail.
Trail Decommissioning	7.4(1)	Consider implementing trail decommissioning including 5.7 km of active decommissioning, 4.6 km of passive decommissioning and 8.4 km of trail abandonment.
Amenity Nodes	7.6(1)	Consider formalizing and enhancing the existing amenity nodes and develop three new amenity nodes:
		AN1 - Cartwright Mountain Summit
		Benches
		Picnic Table
		Interpretive signage     Wayfinding signage
		AN2 - Mixed Use Trail to Cartwright Mountain Summit
		Benches
		Interpretive signage
		Wayfinding signage
		AN3 - Joyride & Lower Family Jules Trail Intersection
		Bench
		AN 4 – Deer Ridge Trail Near Joyride Trail Intersection
		• Bench
		AN 5 – Joyride Trail Switchback / Climb
		Bench
		AN 6 – Eagles View Viewpoint
<i>/</i> .C		Benches
		Picnic Table
		Interpretive signage
6.38		Wayfinding signage
Otolin		Bike Repair Station
		AN 7 – Dragons Back Viewpoint on Hairway to Steven Trail
		Benches     Picnic Table
		Interpretive signage
<b>Y</b>		Wayfinding signage
		AN 8 – Test of Humanity Trail South Viewpoint
		Benches
		Interpretive signage
		AN 9 – Prairie Valley Viewpoint (future interest)
		Benches
		Interpretive signage
	7.6 (2)	Formalize and maintain the existing (or a suitable replacement) youth pump track with the Eco Village development.

Strategy		Action No.	Action
Authorization, Governance,	Operations & I	Manageme	ent
Visitor Use Management Visitor Information & Education		8.3.1(1)	Consider improving proactive visitor education and information regarding a) adventure smart & ride smart, b) Leave No Trace & Trail Etiquette, c) Rules of Use.
	Weeds & Invasive Plants	8.3.4(2)	Consider collaborating with the Okanagan and Similkameen Invasive Species Society and volunteers to appropriately treat and manage weeds and invasive plant infestations.
	Special Events & Commercial Use	8.3.5(1)	Consider developing / refining the District's internal procedures or developing a Special Events and Commercial Use policy to guide issuance of Park Use Permits for commercial, competitive and special event use of the trails on District lands.
Inspections & Routine Maintenance		8.4(2)	Consider developing an annual maintenance / operating plan to identify the routine and non-routine maintenance activities that are prioritized to be resolved and operational funding requirements / requests.
Risk Management & Volunteer Management		8.5(1)	Implement good risk management practices regarding the trail system and trail operations (e.g. design, hazard identification & control, inspections & maintenance, visitor information, volunteer health & safety program, accident reporting & analysis).
		8.5(2)	Consider adopting / developing a volunteer agreement, volunteer job description(s), and volunteer health and safety program.
Activation & Programming		8.6(1)	Consider encouraging community partners to provide programming on the trail system such as "learn to" programs, equity & inclusion programs, adaptive recreation programs, Indigenous youth programs.
		8.6(2)	Consider working with the Penticton Indian Band to determine if, and if so, how and where First Nation's culture, stories and places of significance can be integrated into the visitor experience and how the trail system can support Canada's Truth and Reconciliation.
Land Use Planning, Official Community Plan & Zoning		8.8(3)	Upon authorization of the trail system on Crown lands, or parkland dedication to the District provided through development opportunities, consider updating the zoning bylaw to zone land parcels in the area to permit trails, recreation, tourism and associated amenities, such as the P Parkland zoning designation.

# Long Term | 11 - 15 Years

	Action					
Strategy	No.	Action				
Trail Development Plan						
New Trails	7.2(2)	Consider undertaking feasibility study to develop an off-road non-motorized trail connection between the Rodeo Grounds staging area and the Cartwright Mountain trail system (N6).				
Authorization, Governo	ance, Operati	ons & Management				
Activation & Programming	8.6(3)	Consider working with the Summerland Museum, Okanagan Historical Society, Penticton Indian Band and others to prepare an interpretive plan for the trail system.				
Trails Tourism	8.7(1)	Consider elevating the general awareness of the trail system and approved parking locations and integrate the trail system into summer and winter visitor itineraries.				
	8.7(2)	Consider developing a compelling trail tourism destination marketing and communications strategy to encourage both locals and tourists to choose Summerland and Summerland's local businesses for one of their trails tourism adventures.				
	8.7(3)	The District and the Province should be receptive to issuing approvals to local businesses that wish to offer guided, instructional or other trails focused tourism experiences on the trail system so long as the desired resource conditions identified in this plan are being achieved.				

# **10.2 CAPITAL COST ESTIMATES**

Legend	
	Initial Actions (1-2 years)
	Short Term (3-6 years)
	Medium Term (7-10 years)
	Long Term (11-15 years)
	Deer Ridge & Vistas Future Neighbourhoods Staging Areas

Zone		Description	Qty	Unit	Cost	Item Total	Subtotal
Ν		New Trails					
N1		blue mixed-use	325	l.m.	\$75	\$24,375	
N2		blue non-motorized	1400	l.m.	\$75	\$105,000	
N3		blue non-motorized	175	l.m.	\$75	\$13,125	
N4		green non-motorized	225	l.m.	\$75	\$16,875	
N5		green non-motorized (staircase)	50	l.m.	\$1,500	\$75,000	
N6		green non-motorized	2125	l.m.	\$75	\$159,375	
						SUBTOTAL:	\$393,750
		Soft Costs - Desig	n, Surveys	s, Investig	ations, Permitt	ing, Studies:	\$75,000
R		Trail Re-routing					
R1		non-motorized green (easier)	191.9	l.m.	\$75	\$14,393	
R2		non-motorized blue (difficult)	371	l.m.	\$75	\$27,825	
R3		non-motorized green (easier)	46	l.m.	\$75	\$3,450	
R4		non-motorized blue (difficult)	207.4	l.m.	\$75	\$15,555	
R5	R5.1	non-motorized green (easier)	94.2	l.m.	\$75	\$7,065	
	R5.2	non-motorized blue (difficult)	104.2	l.m.	\$75	\$ <i>7</i> ,815	
R6	R6.1	non-motorized green (easier)	468.9	l.m.	\$75	\$35,168	
	R6.2	non-motorized blue (difficult)	55.7	l.m.	\$75	\$4,178	
R7		non-motorized blue (difficult)	312.1	l.m.	\$75	\$23,408	
R8		non-motorized blue (difficult)	56.5	l.m.	\$75	\$4,238	
R9		mixed use green (easier)	55.8	l.m.	\$75	\$4,185	
						SUBTOTAL:	\$147,278
		Soft Costs - Desig	n, Surveys	s, Investig	ations, Permitt	ing, Studies:	\$20,000
Е		Trail Tread Enhancements					
E1		2.5m wide raised boardwalk	50	l.m.	\$3,000	\$150,000	
E2		Remove large cobble, restore proper draining and resolve erosion rills on an unnamed mixed-use trail	1500	l.m.	\$50	\$75,000	
						SUBTOTAL:	\$225,000
		Soft Costs - Desig	n, Surveys	s, Investig	ations, Permitt	ing, Studies:	\$75,000
D		Trail Decommissioning					
D1		Active	5700	l.m.	\$20	\$114,000	
D2		Passive	4600	l.m.	\$5	\$23,000	
						SUBTOTAL:	\$137,000
		Soft Costs - Desig	n. Surveye	s. Investig	ations. Permitti		\$5,000

Zone		Description	Qty	Unit	Cost	Item Total	Subtotal
AN		Amenity Notes					
AN1		Cartwright Mountain Summit (Existing)					
	AN1.1	Universally Accessible Picnic Tables	1	ea	\$5,000	\$5,000	
	AN1.2	Benches	2	ea	\$3,000	\$6,000	
							\$11,000
AN2		Mixed Use Trail to Cartwright Mountain Summit (Existing)					
	AN2.1	Benches	2	ea	\$3,000	\$6,000	
							\$6,000
AN3		Joyride & Lower Family Jules Trail (Existing)					
	AN3.1	Benches	1	ea	\$3,000	\$3,000	
						4	\$3,000
AN4		Deer Ridge Trail Near Joyride Trail Intersection (Existing)					
	AN4.1	Benches	1	ea	\$3,000	\$3,000	
							\$3,000
AN5		Joyride Trail Switchback / Climb					
	AN5.1	Benches	1	ea	\$3,000	\$3,000	
			4				\$3,000
AN6		Eagles View Viewpoint (Existing)		) ·			
	AN6.1	Universally Accessible Picnic Tables	1	ea	\$5,000	\$5,000	
	AN6.2	Benches	2	ea	\$3,000	\$6,000	
	AN6.3	Bike Repair Station	1	ea	\$3,000	\$3,000	
							\$14,000
AN7		Dragons Back Viewpoint on Hairway to Steven Trail (New)					
	AN7.1	Universally Accessible Picnic Tables	1	ea	\$5,000	\$5,000	
	AN7.2	Benches	2	ea	\$3,000	\$6,000	
	AN7.3	Clearing & Grubbing, Levelling	1	l.s.	\$3,000	\$3,000	
		<b>*</b>					\$14,000
AN8		Test of Humanity Trail South Viewpoint (New)					
	AN8.1	Benches	2	ea	\$3,000	\$6,000	
	AN8.2	Clearing & Grubbing, Levelling	1	l.s.	\$3,000	\$3,000	
							\$9,000
AN9		Prairie Valley Viewpoint (future interest) (New)					
	AN9.1	Benches	2	ea	\$3,000	\$6,000	
	AN9.2	Clearing & Grubbing, Levelling	1	l.s.	\$3,000	\$3,000	
							\$9,000
						SUBTOTAL:	\$72,000
		Soft Costs - Design	n, Surveys	, Investig	ations, Permit	ting, Studies:	\$40,000

Zone	Description	Qty	Unit	Cost	Item Total	Subtotal
SA	Staging Areas					
SA1	Staging Area (North) - 0.19 Ha - (Vista)					
	Gateway sign & experience (including vehicle limiters)	1	l.s.	\$21,500	\$21,500	
	Parking for 20-30 vehicles (inlcuding designated accessible stalls)	1	l.s.	\$200,000	\$200,000	
	Gender Neutral, Universal Vault Toilet	1	ea	\$50,000	\$50,000	
	Universally Accessible Picnic Tables	3	ea	\$5,000	\$15,000	
	Shade Structure	1	l.s.	\$15,000	\$15,000	
	Animal Resistant Garbage Bins	1	ea	\$4,500	\$4,500	
	Potable Water Refill Station	1	ea	\$15,000	\$15,000	
	Bicycle Parking	1	ea	\$4,500	\$4,500	
	Bike Wash Station	1	ea	\$15,000	\$15,000	
	Bike Repair Station	1	ea	\$3,000	\$3,000	
	Invasive Species Boot Brush	1	ea	\$1,000	\$1,000	
	Electrical Power	1	l.s.	\$25,000	\$25,000	
	Security Lighting	1	l.s.	\$15,000	\$15,000	
					SUBTOTAL:	\$384,500
	Soft Costs - Design	ı, Surveys	, Investig	ations, Permitt	ing, Studies:	\$125,000
SA2	Staging Area (South) - 0.23 Ha (Eco Village)					
	Gateway sign & experience (including vehicle limiters)	1	l.s.	\$21,500	\$21,500	
	Parking for +/- 20 vehicles (inlcuding designated accessible stalls and tie-in to Denike St)	91	l.s.	\$150,000	\$150,000	
	Gender Neutral, Universal Vault Toilet	1	ea	\$50,000	\$50,000	
	Universally Accessible Picnic Tables	3	ea	\$5,000	\$15,000	
	Shade Structure	1	l.s.	\$15,000	\$15,000	
	Animal Resistant Garbage Bins	1	ea	\$4,500	\$4,500	
	Potable Water Refill Station	1	ea	\$15,000	\$15,000	
	Bicycle Parking	1	ea	\$4,500	\$4,500	
	Bike Wash Station	1	ea	\$15,000	\$15,000	
	Bike Repair Station	1	ea	\$3,000	\$3,000	
	Invasive Species Boot Brush	1	ea	\$1,000	\$1,000	
	Electrical Power	1	l.s.	\$5,000	\$5,000	
	Security Lighting	1	l.s.	\$15,000	\$15,000	
					SUBTOTAL:	\$314,500

Zone	Description	Qty	Unit		Cost	Item Total	Subtotal
SA3	Staging Area 3 (Deer Ridge)						
	Gateway sign & experience (including vehicle limiters)	1	l.s.		\$21,500	\$21,500	
	Parking for +/- 30 vehicles and 5 trucks & trailers (inlouding designated accessible stalls)	1	l.s.		\$300,000	\$300,000	
	Gender Neutral, Universal Vault Toilet	1	ea		\$50,000	\$50,000	
	Universally Accessible Picnic Tables	3	ea		\$5,000	\$15,000	
	Shade Structure	1	l.s.		\$15,000	\$15,000	
	Animal Resistant Garbage Bins	1	ea		\$4,500	\$4,500	
	Potable Water Refill Station	1	ea		\$15,000	\$15,000	
	Bicycle Parking	1	ea		\$4,500	\$4,500	
	Bike Wash Station	1	ea		\$15,000	\$15,000	
	Bike Repair Station	1	ea		\$3,000	\$3,000	
	Invasive Species Boot Brush	1	ea		\$1,000	\$1,000	
	Electrical Power	1	l.s.		\$15,000	\$15,000	
	Security Lighting	1	l.s.		\$15,000	\$15,000	
						SUBTOTAL:	\$474,500
	Soft Costs - Desig	n, Surveys	, Investig	ation	s, Permitti	ng, Studies:	\$125,000
S	Signage						
S1	Kiosk	3	ea		\$9,500	\$28,500	
S2	Wayfinding	64	ea		\$200	\$12,800	
S3	Park Boundary	13	ea		\$50	\$650	
S4	Advisory - trail intersection	29	ea		\$100	\$2,900	
S5	Advisory - downhill only trail	12	ea		\$100	\$1,200	
S6	Advisory - private property	1	ea		\$100	\$100	
S7	Advisory - private property stay on trail	15	ea		\$100	\$1,500	
S8	Interpretive	8	ea		\$1,000	\$8,000	
S9	Trailhead (including vehicle limiter)	40	ea		\$5,500	\$220,000	
S10	Caution/Warning - Cliff	2	ea		\$100	\$200	
S11	Gateway / Entrance	2	ea		\$9,500	\$19,000	
S11	Gateway / Entrance	2	ea		\$9,500	\$19,000 <b>SUBTOTAL:</b>	\$294,850
S11	Gateway / Entrance  Soft Costs - Design			ation		SUBTOTAL:	\$294,850 \$60,000
	Soft Costs - Desig			ation		SUBTOTAL:	
P P1				ation		SUBTOTAL:	
P	Pump Track Formalize and maintain the existing (or a suitable replacement) youth pump track within the Eco Village		, Investig	ation	s, Permitti	SUBTOTAL: ng, Studies:	

Zone	Description	Qty	Unit	Cost	Item Total	Subtotal
	SHORT-TERM SUBTOTAL					\$1,375,378
	Soft Costs - Design, Surveys, Investigations, Permitting, Studies					\$500,000
	Contingency (30%)					\$412,613
	SHORT-TERM TOTAL COSTS					\$2,287,991
	MEDIUM-TERM SUBTOTAL					\$413,375
	Soft Costs - Design, Surveys, Investigations, Permitting, Studies				6	\$95,000
	Contingency (30%)				08	\$124,013
	MEDIUM-TERM TOTAL COSTS				6	\$632,388
	LONG-TERM SUBTOTAL					\$159,375
	Soft Costs - Design, Surveys, Investigations, Permitting, Studies			100		\$35,000
	Contingency (30%)					\$47,813
	LONG-TERM TOTAL COSTS					\$242,188
	DEER RIDGE & VISTAS FUTURE NEIGHBOURHOODS STAGING AREAS					\$859,000
	Soft Costs - Design, Surveys, Investigations, Permitting, Studies					\$0
	Contingency (30%)					\$257,700
	DEER RIDGE & VISTAS FUTURE NEIGHBOURHOODS STAGING AREAS TOTAL COSTS					\$1,116,700
	SUBTOTAL (ALL ITEMS)					\$2,518,378
	Soft Costs - Design, Surveys, Investigations, Permitting, Studies					\$630,000
	Contingency (30%)					\$755,513
	TOTAL COSTS					\$3,903,891

<sup>\*</sup>Costing associated with trail construction and re-routing assumes the work will be completed by contractors in accordance with IMBA and provincial standards / best practices. If volunteers are used to undertake the works, the costs may be reduced.

<sup>\*</sup>While cost estimates associated with the Vistas and Deer Ridge staging areas have been included, those cost may be able to be avoided or reduced through the land development and negotiation process.



# APPENDIX A: TRAIL PLANNING & DESIGN GUIDANCE TOOLS

This appendix provides trail classification, design, decommissioning and risk-based maintenance prioritization guidance. This guidance has been developed to directly respond to trail management and design issues observed on the trail system. Information in this appendix is intended for trail manager(s), designers, builders and those responsible for maintaining the system.

#### TRAIL CLASSIFICATION

- Trails should continue to be classified in accordance with the classification system outlined in <u>National Guidelines for</u> <u>Classifying Multi-Use Trails in Canada</u>.
- The difficulty ratings assigned to trails that permit mountain biking should be rated in accordance with Recreation Sites and Trails BC's Mountain Bike Difficulty Rating Matrix if / when approved by the Province.
- In keeping with the National Guidelines for Classifying Multi-Use Trails in Canada, the characteristics and benefits should be weighed, and deliberate decisions should be made about whether future trails will be designated as multi-use, activity optimized or single use and, in keeping with the trail classification system, these decisions should be documented in a Trail Management Objective form and filed.

Figure 37 Trail Classification System - Trans Canada Trail

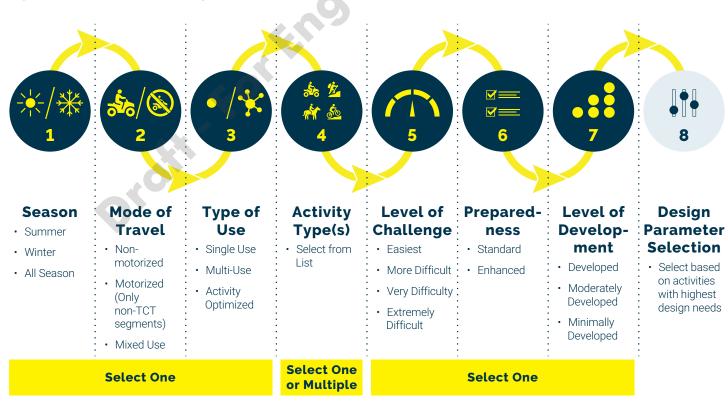


Figure 38 Characteristics & Considerations of Multi-Use, Activity Optimized & Single Use Trails

#### **Multi-Use Trails**

#### **Activity Optimized Trails**

#### Single Use Trails

- Permits multiple activities.
   Accommodate broadest range of activities.
- Maximizes trail length available to all activity types.
- Design is generic & does not optimize the experience for any particular activity.
- Generic design can result in unsatisfied user objectives & unauthorized trail building.
- Can increase activity conflict especially as visitation increases & activities diversify.

- Permits multiple activities but is designed and managed to optimize
- the experience for one specific activity.
- Contains purposeful features,
- routings or elements that enhance the trail experience for one of the approved activity types.
- Provides higher quality experiences, ensure user objectives satisfied.
- Reduce unsanctioned trail building.
- Can alleviate intra activity conflict.
- Can create demand for greater trail length.

- Permits one activity.
- Provides higher quality experiences, ensure user objectives satisfied.
- Can alleviate crowding & congestion.
- Requires much greater trail length and distrubance to satisfy various activity demands.
- Increased trail length increase construction & maintenace demands & costs.

## TRAIL ALIGNMENT, CONSTRUCTION & DRAINAGE GUIDANCE

Trails should be planned, designed and constructed or redeveloped to integrate the following guidance. Adhering to this guidance will help to address sustainability problems identified in the current trail system.

### **Identify Control Points Before Building**





Before building a new trail or re-routing / re-developing an existing trail, positive and negative control points should be identified. Positive control points are places that the visitors want to go to (e.g. viewpoint, unique feature). Negative control points are places that the trail system should avoid. Routing the trail to the positive control points and avoid the negative control points will elevate the visitor experience, reduce social trails and unauthorized trail building and limit impacts and visitor exposure to unsafe or undesirable places.

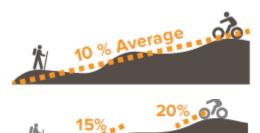
#### **Create Loops Not Out & Backs**

Looped trails provide more interesting and appealing trail experiences. Dead end or out and back trails can promote unauthorized trail building, social trails and a redundant trail experience.



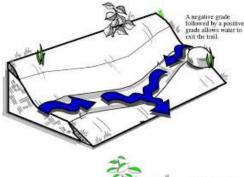
#### **Apply the Half Rule**

Trails should be designed to ensure their running grades do not exceed half of the grade of the side slope it is crossing. If it does, the trail is likely to capture surface water draining from the side slope, rather than allowing is to sheet over the trail, and increase erosion on the trail.



#### **Control Average & Maximum Trail Grades**

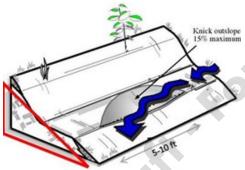
As a general rule, average grade of a trail should be 10% or less. To meet user objectives or accommodate terrain, short segments of trail may reach maximum grades of 20-30%. However, where steeper grades are integrated, they must be designed with appropriate water control features (e.g. grade reversals, knicks, etc).



#### **Utilize Rolling Contours, Grade Reversals & Knicks**

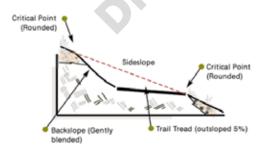
Rolling contour trails that integrate regular grade reversals should be used where sustained grade change is required. Integration of grade reversals with outsloped low points creates smaller "trail watersheds" which allows water to drain off of the tread more frequently. This reduces both the volume and velocity of water on the trail and limits erosion potential. Grade reversals should be regularly spaced along steeper segments of trail where water is travelling down the trail rather than across it.

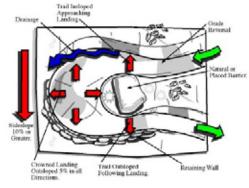
Knicks should be utilized on segments of trail with shallower grades where standing water occurs. To ensure drainage, knicks should be located where the adjacent ground is lower than the trail tread. Kicks are constructed as 3m diameter semi-circular depressions with a 10% outslope that direct water to the outside of the trail.

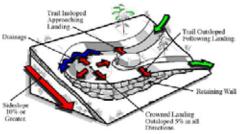


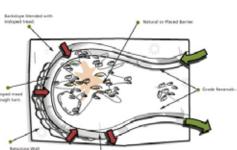
## Properly Design & Maintain Full & Partial Bench Cut Trails

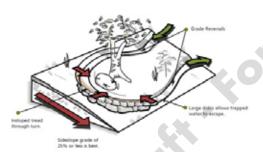
Bench cut trails are segments of trail that cut into and across the side of a hill. They can be full or partial bench cuts. Full bench cut trails are more sustainable and preferred. To be effective, care must be paid to properly design the trail tread cross slope and the backslope above and below the tread. Tread should be outsloped to 5%, back slopes should be shaped 1:1, critical points should be rounded, and the backslopes should be compacted.













#### Trail Turns - Switchbacks

Switchbacks are best sited on the gentlest grades on near level natural or built platforms which should be out sloped 5% in all directions. They should use a minimum turning radius of 1.8 m. Grade reversals should be integrated in above and below the turn. Approaches should be designed to scrub visitor speeds entering the turning platform to reduce brake bumps and maintenance in the corners. Switchbacks should be staggered and integrate natural features to limit shortcutting.

#### Trail Turns - In-Sloped Turns / Berms

In-sloped turns or berms are best sited on more gentle side slopes of up to 25%. Grade reversal should be included in advance of the turn. Approach above the turn should be relatively gentle grade (5-8%) to manage speed prior to the turn. Turn radius should be between 3-4.5m. Drain should be sited at bottom of turn to shed water. In-sloped turns should be positioned around natural features (e.g. tree, boulders) to minimize shortcutting. Sightlines should be kept clear above and below the turn as user will travel the turn at speed.

#### **Filters**

Filters are high-skill, low consequence obstacles that demonstrates the difficulty of the upcoming trail. Known as a qualifier obstacle, filters should be integrated at the start of all mountain bike optimized trails to provide visitors with the opportunity to self-choose the appropriateness of the trail for their ability.

#### TRAIL INTERSECTIONS

To improve visitor safety and reduce conflicts, intersections of multi-use trails and mountain bike optimized trails that do not contain an "over-under" feature should apply the following design strategies (Figure 39):

- Locate the intersection in an area with clear sightlines of both trails approaching the intersection. Manage vegetation to maintain the sightlines.
- The multi-use trail should be routed to provide a slight grade increase leading to the intersection. This will promote slower speeds on the multi-use trail and help to orient the trail users so they are more likely to be looking up as they approach the intersection.
- Integrate turns, choke points and / or technical trail feature on the mountain bike optimized trail in advance of the intersection.
   This will help to reduce speeds of the bikers.
- Install warning signage on the multi-use trail to warn users of the approaching intersection and to watch for fast moving bicycles.
- Install warning signage on the mountain bike optimized trail to warn users of the approaching intersection.

Figure 39 Multi-Use & Mountain Bike Optimized Trail Intersection Design Guidance



ement

#### TRAIL DECOMMISSIONING

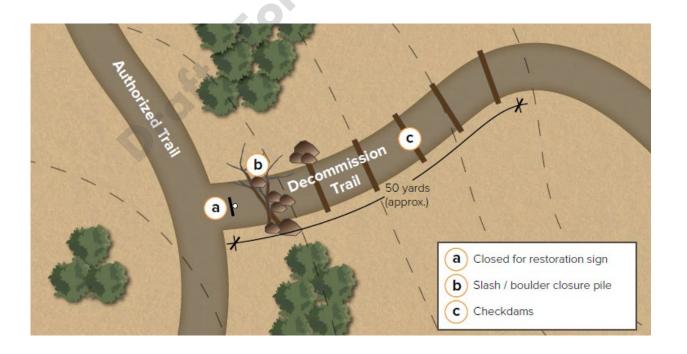
#### **Active Decommissioning**

Active trail decommissioning applies treatments that block and deter use, stop or prevent erosion, recontour and replant native vegetation, and enable the trail to return to a more natural state. As this type of decommissioning is considerably more expensive and resource intensive, active decommissioning is most appropriate for undesignated trails that are actively eroding, fostering the spread of invasives, and / or are near sensitive environmental and/or archaeological features.

- Install "Closed for Restoration" and regulatory signage at all entrances to the trail.
- Slash and / or boulders should be placed across the entire trail tread and corridor behind the signage to re-enforce the closure.
- Stabilize existing erosion issues and implement erosion control measures (e.g. boulder, check dams, erosion control blankets) where warranted along the trail but especially in the first 50 m of access points to the undesignated trail.

- Fill erosion gullies with soil or slash and/or re-contour deep erosion gullies and bench cuts to blend into the surrounding landform.
- Scarify soil and revegetate with an appropriate locally approved and certified seed mix.
- Actively treat invasive plant species
- Actively monitor and assure compliance.

Figure 40 Active Trail Decommissioning



#### Passive Decommissioning

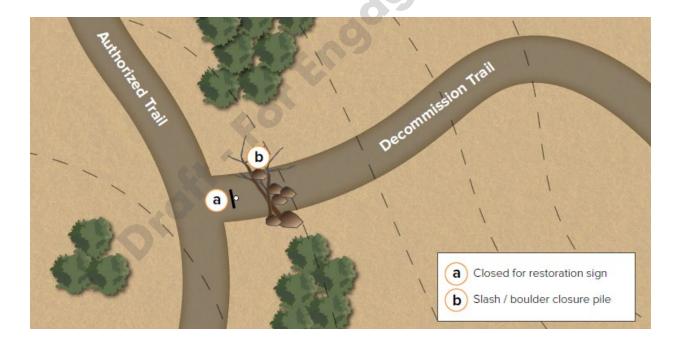
Passive trail decommissioning applies treatments focused on deterring use and allows the undesignated trail to re-naturalize over time. This decommissioning approach is most appropriate when the undesignated trail is generally stable, does not contain and is not susceptible to significant erosion, is not located in close proximity to sensitive environmental or archaeological features and where trail use / demand for access is expected to be minimal.

- Install "Closed for Restoration" and regulatory signage at all entrances to the trail.
- Slash and / or boulders should be placed across the entire trail tread and corridor behind the signage to re-enforce the closure.
- Identify any major erosion issues and treat those locations to avoid further erosion.
- Actively treat invasive plant species.
- Actively monitor and assure compliance.

#### Trail Abandonment

Other undesignated trails may not contribute to environmental, archaeological or other management problems but their current design and appeal or location makes them unnecessary or not viable for designation. These trails may continue to receive limited visitation but lack the appeal to receive significant use. While these trails would not be actively or passively decommissioned, they would be removed from all promotional materials (e.g. online apps, trailhead maps, etc.), would not be include in special events courses and would not be signed, inspected or maintained. These trails would be monitored over time to determine whether passive or actively decommissioning should be considered.

Figure 41 Passive Trail Decommissioning



#### RISK-BASED APPROACH TO PRIORITIZING TRAIL MAINTENANCE DEFICIENCIES

Maintenance deficiencies identified on the trails should be evaluated and prioritized through a risk-based approach (see figure below). The following criteria, which are presented in priority order, should also be used to inform prioritization of identified deficiencies:

- Minimize visitor and employee safety hazards.
- Minimize threats to investment in the trails / features / infrastructure.
- Maintain public access & visitor experience.
- Protect natural and cultural resources.

- Improve cosmetics & aesthetics.
- Elevate the convenience of access for the public and /or operations.

The protocol should also contain digital inspection and maintenance log / database to track when a) inspections occurred, the results, and identified deficiencies, b) user condition / injury reports, c), prioritization of deficiencies and routine maintenance tasks, and d) when and what action was taken to address the deficiency and / or routine maintenance tasks.

Figure 42 Risk Based Ranking System for Prioritizing Maintenance Deficiencies (McElhanney - Saasak' Hill Trails)

		Fre	quen	CV - Likel	ihood of a deficiency	resulting in loss or oc	currence	
Categor	у	Te	rm		ı	Definition		
4		Very F	requent	Possibility	of repeated occurren	nce (many times durir	ng use)	
3		Fred	quent	Possibility	of isolated occurren	ce (several times duri	ng use)	
2		Occa	sional	Likelihood	Likelihood of occurring sometime (likely in overall use)			
1		Infre	quent	Possible i	t will occur but not lik	ely to.		
<b>Severity</b> - When a deficiency creates a hazard, these are the consequences if a loss were to occur								
Category	1	'erm	Pe	eople	Property	Environment	Public Image, Reputation & Disruption	
4	Ma	ajor	Fa	atality	Impact >\$100,000	Reportable Occurrence	Government intervention	
3			ent, long- njury or s	Impact < \$100,000 but > \$50,000	Standards Not Met	Owner Intervention		
2	Se	rious	Record	dable Injury	Impact < \$50,000 but > \$ 5,000	Site Conditions Unacceptabl e	Community Attention	
1	Mi	nor	On-site/	No Treatment	Impact < \$1,000	No Impact	Individual or none	

		Frequency				
		4	3	2	1	
ty (	4	16	12	8	4	
eri	3	12	9	6	3	
Sev	2	8	6	4	2	
,	1	4	3	2	1	

#### How-to prioritize maintenance:

Using the Frequency x Severity matrix to the right follow the steps:

- 1. Determine the Frequency Category
- 2. Determine the Severity Category
- 3. Multiply the two numbers
- Determine the **Priority** Category by using the chart below.

Priori	ty Category	Definition
"A"	Immediate (8-16)	Deficiency requires urgent attention and must be resolved immediately. Trail may be closed until issue is addressed. Please notify the land manager immediately. This issue should be addressed within 24-48 hours.
"B"	Future (4- 6)	Requires future attention in order to meet Trail Management Objectives. To be resolved in 30 days.
"C"	OK (1-3)	There is limited consequences or likelihood of this deficiency creating a hazard that will result in an increase of severity.

# APPENDIX B: SIGN TYPOLOGY, TYPICAL LOCATIONS & CONTENT

Sign Type	Sign Precedent	Typical Location	Typical Content
Staging Areas, Trai	lheads & On-Trail		4
Gateway / Entrance Feature		Entrance to the trail system leaving the staging area	Trail System Name
Kiosk	Three Blind Mice    Commence   Co	Staging Areas	Trail System Name Indigenous Place Name & Territorial Acknowledgement Exclusion of Liability & Assumption of Risk Map of trails symbolized by mode, difficult & style Trail style definitions (technical, flow) Difficulty rating symbols & descriptions Technical trail feature symbols & description Amenity symbols & locations on map Permitted / Prohibited activities Park rules Adventure Smart Leave No Trace Trail Forks QR code Emergency number & GPS coordinate Wildfire reporting Reporting maintenance / condition concerns & reporting accidents Partner logos (designed to be interchangeable)

Sign Type	Sign Precedent	Typical Location	Typical Content
Trailhead & Wayfinding	WONDERLAND  MTB UPHILL ONLY  2-WAY HIKING  ACCESS TO ONTHE ROCKS	Individual trailheads & intersections.	Trail name Map & You Are Here pin (optional) Trail difficulty rating Permitted / Prohibited activities Trail type (technical, freeride, adaptive) Designated direction of travel (where its not two way) Cautions (e.g. two traffic pass with caution, yield hierarchy instructions) GPS location (optional)
Advisory - Technical Trail Feature	TTFs - Technical Trail Features  TTFs - Technical Trail Features  TITS - Technical Trail Features	Approximately 10m before TTFs that are rated more difficult than the rating of the trail or that have higher risk or consequence for injury.	Caution statement TTF symbol & description Technical difficulty Ride around direction if ride around provided

Sign Type	Sign Precedent	Typical Location	Typical Content
Advisory - Trail Intersection / Merge	TRAL MERIE AARAS	Approximately 10m before intersection of two trails. Installed in all directions for merging trails	Caution statement     Trail merge icon and / or description
Advisory – Downhill Only Trail	EXITORLY	Intersection of the terminus of down hill only trails.	No entry symbol     Downhill trail only description
Advisory – Private Property Boundary No Trespassing	Private property No Trespassing	Private property boundary where public access not permitted	Private Property – No Trespassing
Advisory – Private Property Stay on Trail	Entering Private Property Stay on Trail	Private property boundary where public access is permitted	

Sign Type	Sign Precedent	Typical Location	Typical Content
Park Boundary	Entering Willmore Wilderness Park	Intersection of trails with park boundary	Park name Permitted / prohibited activities
Caution / Warning	CAUTION!  TRAIL WORK AHEAD Please slow down and be prepared to dismount. Thank you.  Slow Down and Use Caution	Approximately 10m in advance of any hazards or temporary changes in trail conditions.	Caution statement Hazard symbol or description
TCT Identifier	TRANS CAMADA TRAIL — KANATA ASCOMATIK ANTITI  MITKMAW TRAIL SIGNAGE	Trailheads, intersections & amenity nodes along the TCT	Trans Canada Trail TCT translation to First Nation language (optional)
Interpretive	Various types.	Staging areas, amenity nodes	See interpretive themes
Mountain Bike Skills Skills Area Entry	SKILLS ZONE  YOU HUST READ THESE RULES THAT IS 1900 OF BETTING STOLEY  **Desire your learn file.**  **Enew your learn file.**  **Enew your learn file.**  **Enew your learn file.**  **De parks to strangerment of sill filters  **De parks to strangerment of sill filters  **Delarists are assembleding. Fill false better and possible yet experimented.  **Delarists are assembleding.**  **Delarists are assembleding.**  **Delarists are assembleding.**  **SILLS ZONE TRAIL RATINGS.**  **APVANCIB**  **APVANCIB**  **APVANCIB**  **APVANCIB**  **APVANCIB**  **LEASTONE MEMBLES AND	Entrance to skills area.	Risk warning Safety practices Rules of use Progression recommendation Equipment requirements Technical difficulty ratings with descriptions Emergency number

Sign Type	Sign Precedent	Typical Location	Typical Content
Skills Area Feature	DROPS  ALI MATERIA DE CONTREMANA DE LETY  INCREASINO DEFICULIT  ALI MATERIA DE CONTREMANA DE LETY  ALI MATERIA DE LETY  ALI MATE	Entry / start of TTF in Technical Skills Area.	Risk warning Feature type Technical difficulty ratings Progression & technique recommendations Emergency number
Jump Line	VOUNUST READ THESE PLUS  VOUNUST READ THESE PLUS  Vous at your son risk  Anney your sinds. Bits within your solidy This you is unasponded  To see own of other rights at all comes Instructure are manufact, Full face between and pooling are strongly recommended  Dust to sub-between jumps  Emergency—William  No parts showed  JUMP ZONE TRAIL RATINOS  IN REMARKS  IN REMARKS  AREANCED  AREANCED  Languages  AREANCED  Languages  Languages  Languages  Languages  Languages	Start of jump lines in Technical Skills Area	Jump line name Technical difficulty rating Directional arrow

## APPENDIX C: CROWN LAND TRAIL AUTHORIZATION OPTIONS

This appendix presents and provides basic details regarding the different options for authorizing trails on Crown lands. While continuing with the status quo where trails remain unauthorized is an option and may seem like an easier option, it is not recommended. It is understood that current District and Provincial resources are limited thus formally authorizing the trails network will need to take some time to implement. There are two options for authorizing trails on Crown Lands 1) Section 56 / 57 approvals under the Forest and Range Practices Act including entering into a Partnership Agreement with the Province and 2) pursuing a License of Occupation under the Land Act. The table below provides a high-level overview of the options while further details regarding each option are described below.

	Authorization Options			
	Status Quo – Unauthorized Trails	FRPA Section 56/57	License of Occupation	
Trails are authorized and have land status.	No	Yes (if section 56 approval)	Yes	
Trails and recreation values will be considered in resource & land management planning decisions by the Province, tenure holders or resource development.	No	Yes (if section 56 approval)	Yes	
Rental fee for access to Crown land.	No	No	Yes	
Eligible for annual provincial capacity funding.	No	Yes	No	
Eligible to pursue provincial grants to improve / operate trail system (e.g. capital, operations).	No (most grants no require trails to be authorized)	Yes	Yes	
Trail uses can be regulated (e.g. prohibiting off-road vehicle).	No	Yes	Yes	
Trail stewardship group can be formalized and recognized as responsible for operations and maintenance of the trail system.	No	Yes	Yes	
Entering into a <u>Partnership Agreement</u> with the Province and compliance with the associated conditions and Provincial standards is required.	No	Yes	No (LOO holder able to choose standards to adhere to)	
Eligibility for provincial Stewardship Partners Insurance Program (general liability & accidental death and dismemberment) coverage.	No	Yes	No	
Visitor amenities and infrastructure (e.g. technical trail features) can be constructed.	No	Yes	Yes	
Minor vegetation clearing (e.g. fallen tree) can occur along the trails.	Yes	Yes	Yes	
Hand or machine earthworks to repair trails / re-route trails can occur.	No	Yes	Yes	
Trail system can be formally programmed, activated and promoted.	No	Yes	Yes	
Races and special events can be authorized.	Yes (through FRPA or Adventure Tourism Policy pending nature of the event)	Yes	Yes	
Trail passes could be implemented if desired.	No	Yes	Yes	

#### Option 1: Forest and Range Practices Act (FRPA) Sections 56, 57 & 58 Approval

Section 56 of FRPA enables the minister (or delegate - District Recreation Officer) to "establish" interpretive forest sites. recreation sites and recreation trails. Recreation trails established under this section must receive consideration in resource planning and thus have some level of protection from future resource extraction activities. Trails are usually only designated under section 56 when a partnership agreement is in place with the organization that is maintaining the trail. Section 57 allows the minister (or delegate - District Recreation Officer) to authorize the construction, rehabilitation and maintenance of trails and other recreational facilities. This section is used to grant 3rd parties permission to build and maintain trails. Approval under section 57 does not grant any level of protection for the trails from future resource development. Section 58 allows the Minister of designate to restrict or prohibit recreational or non-recreational use of an area or trail for the protection and management of public recreation resources on Crown land. This section can be used to restrict or close areas to specific activities (e.g. Off-Road Vehicles).

Widely recognized as the most common option for sanctioning trails on Crown land, the District, or a future trail stewardship group, would apply to the Province for a section 57 authorization using the "Proposal for Construction or Maintenance of Trails or Recreation Facilities on Crown Land" application. The application should be for a "trail area" rather than the individual trails. The local Recreation Officer has indicated that, due to current capacity limitations, the District, or future trail stewardship group, would be expected to lead all initial referrals and engagements with First Nations, Crown land tenure holders, adjacent private landowners and recreational interests and work to obtain letters of support which would need to accompany the application. Upon approval, the District should enter into a Partnership Agreement with RSTBC. The Partnership Agreement outlines the conditions of the authorization and commits the holder to maintaining and managing the trails to RSTBC specified standards. Agreement holders may also receive some level of capacity and / or financial support from RSTBC for management of the trail system. Upon execution of the Partnership Agreement, RSTBC would make a determination of whether the trail system / trail area will be "established" (status) under section 56 of FRPA which would then provide the trails a level of protection. As part of the application, the District should request that a section 58 closure be applied to the trail area to prohibit off-road vehicle use as well as class 2 and 3 e-bike use.

#### **Option 2: A Licence of Occupation**

The District could apply to the Province for a License of Occupation for the trail system under the Land Act. A Licence of Occupation, which is normally issued for a term of 10 years or less, may be issued where minimal improvements are proposed. where there are potentially multiple users of a site, where survey is not required or when the land is located in remote areas and legal survey costs required for lease or right of way are prohibitive, and where Government wishes to retain future options and management control over the use of the lands. A Licence of Occupation conveys fewer rights than a lease. It conveys nonexclusive use for the purpose described, is not a registerable interest, and does not require a survey. A Licence of Occupation does not confer a right to the exclusive use and occupancy of the land. A Licence of Occupation does not allow the tenure holder to curtail public access over the licence area except where it would impact the licensees' right to use the land and the Province can authorize overlapping and layering of tenures. This District would have full management of the trail system, without needing to enter into a Partnership Agreement, and the License of Occupation may enable the District to establish the proposed trail system as a District park and be managed subject to the District's Parks Regulation Bylaw.

In evaluating the options, the District should note that RSTBC's District Recreation Officer indicated that RSTBC is views providing section 57/56 trail approvals for unsanctioned trail systems less favourably where those trail system are a) on Crown lands immediately adjacent to urban centers, b) the trail system experiences intense visitation, and c) where the service demands and expectations from the public exceed backcountry the level of service standard of RSTBC. It was also noted that, though not provincial policy, RSTBC will not in practice sanction a trail on Crown lands that leads into private lands unless a statutory right of way, registered easement or other similar approval that "runs with the land" is provided for the private land trail segment. Given the above, the Recreation Officer suggested that a License of Occupation held by the District (or Regional District) would be a more appropriate mechanism to enable the sanctioning of the proposed trail system on Crown land.

# APPENDIX D: TRAIL STEWARDSHIP GROUP GOVERNANCE MODEL, REPRESENTATION & ROLES & RESPONSIBILITIES

Different trail system governance models exist and often include:

- Direct ownership and operation by government organizations.
- Government ownership and private sector contracted operations.
- Government ownership with operations delivered through a partnership / contract with a single activity (e.g. mountain biking) focused trail stewardship group.
- Government ownership with operations delivered through a partnership / contract with a multi-interest (e.g. multiple activities, environment, First Nations, landowners) stewardship group.
- Disposition of land for a trails purpose to a single activity or multi-interest stewardship group.

Given the District's limited capacity to directly operate and manage the trails, the broad diversity of interests in trail system, and the long history of trail related volunteerism, a "Government ownership with operations delivered through a partnership / contract with a multi-interest stewardship group" governance model is recommended. Such a model can help to ensure the full range of interests are considered in decision making, increase capacity, and create efficiencies for sharing of resources, strategic / master planning, trail development applications, trail building, maintenance, management, activation and marketing. Once formed, the trail stewardship group should be registered as a non-profit organization under the Society Act of British Columbia.

#### **Proposed Organization Representation**

Operating independently from District Council, but ideally with committed and recurring annual capacity support from the District, the board of the stewardship group should seek representation from:

- All recreational interests (Hiking / Walking, Trail Running, Mountain Biking, Fat Biking, Horseback Riding / Rodeo Grounds Equine Development Committee, Snowshoeing)
- Wildlife / Environmental Organization / Qualified Professional
- Adjacent Private Landowners
- Destination Summerland
- Accessibility / Adaptive Recreation
- Equity, Diversity, Inclusion
- Land Managers

As landowners / managers, the District of Summerland, Recreation Sites & Trails BC, and Penticton Indian Band should have standing advisory positions on the trail stewardship group.

#### **Proposed Mandate**

The mandate of the trail stewardship group should be to:

 Represent and work collaboratively with all non-motorized and motorized recreation activities, First Nations, landowners / managers, environmental stewardship groups and equity / diversity / inclusion groups to sanction, develop, improve, manage, maintain and activate the trail systems on Cartwright and Conkle Mountains and ensure the trail systems provide exceptional, diverse and in-demand visitor experiences, is environmentally responsible, physically connected, inclusive and meets the most current trail standards.

The trail stewardship group should:

- Provide a mechanism for the diverse interests in the trail system to work effectively and efficiently together, integrate interests, and foster collaboration and coordination.
- Champion the implementation of this plan and its strategies and actions.
- Establish annual priorities and undertake annual operational plans and 5-year capital plans.
- Develop, maintain and operate the trail system, features and amenities – including planning, design, construction, inspection and maintenance.
- Promote and enhance responsible recreational use of the trails and encourage the safe and compliant use of the trail system.
- Encourage / undertake stewardship activities to improve the quality and sustainability of the trail system and area.
- Encourage and support partners with the activation and programming of the trail system.
- Collect data and monitor conditions of the trails, visitation, and benefits the trails bring to the community and region.
- Provide advice to landowners / managers on trail development, management and maintenance.
- Advocate for investment in trails and land use decisions that maintain the connectivity of the trail system. Champion and communicating the benefits of the trail system and trails tourism within the District, region and to elected officials.

#### **Proposed Roles & Responsibilities**

Operation and management of the trail system requires the implementation of many different tasks. Responsibility for implementing these tasks varies between the trail stewardship group, government regulators and other partners. The table below provides an overview of the major operational tasks and the role and responsibilities for leading or supporting their implementation. Note, the role of the Province will vary depending on which trail authorization approach is pursued. The Province would be more involved in operations should a section 57 approval and 56 establishment be pursued and much less involved if a License of Occupation is pursued.

		Role / Responsibility	6
Operational Task		Lead	Support
Authorization & Approvals	Preparation of development applications (trails, features, amenities) including engagement	Stewardship Group	District
	Application referrals	District, Province	
	Approvals	District, Province	
Funding	Grant application & procurement of grants	Stewardship Group	District
Procurement	Recurring annual operating funding & capital funding	District	Province
Trail System	Master Planning & Trail Management Objective setting	Stewardship Group	District, Province
Planning	Determining development / redevelopment needs for trail, features & amenities	Stewardship Group	District, Province
Trail, Feature,	Trail, feature & decommissioning concept & detailed design	Stewardship Group, Contractor	District, Province
<b>Amenity Design</b>	Trail, feature, decommission construction	Stewardship Group, Contractor	District, Province
& Construction	Construction Procurement & construction management	Stewardship Group	District
	Visitor amenity and infrastructure design	District, Contractor	Stewardship Group
	Visitor amenity and infrastructure construction procurement, construction management & construction	District, Contractor	Stewardship Group
	Visitor amenity & infrastructure construction procurement & construction management	District, Contractor	
Inspection &	Routine & non-routine trail & feature inspection	Stewardship Group	District, Province
Maintenance	Routine & non-routine amenity & infrastructure inspection	District, Contractor	
	Maintenance prioritization, planning & scheduling	Stewardship Group, District	
	Routine maintenance of trails, features and on-trail amenities	Stewardship Group, District / Regional District (for KVR Trail / TCT)	
	Capital replacement / asset management planning	Stewardship Group, District	
Volunteer	Volunteer recruitment, training & management	Stewardship Group	District
Management	Volunteer trail maintenance days	Stewardship Group	District
Park / Visitor	Program planning	Partners	District, Stewardship Group
Programming	Program delivery	Partners	District, Stewardship Group
Visitor	Trail system website	Stewardship Group, District	Destination Summerland
Information, Education,	Web / mobile application data validation & updates (TrailForks, All Trails)	Stewardship Group	
Marketing &	On-site visitor education / stewardship events / days	Stewardship Group, District	Province
Promotion	Trail system and program promotion & marketing	Stewardship Group, District	Destination Summerland

Permit issuance (e.g. specific public complaints)  Visitor / public complaints compliance patrols & experimental public to make the patrols and the provided public patrols are patrols and the provided public publ	line & bylaw / regulation development ecial events, commercial use)	District, Province (pending trail authorization mechanism)  District, Province	Support
Permit issuance (e.g. specific problems)  Visitor / public complaints compliance patrols & experimental printing that improvement, results and collection & Visitation & Visitors capital & Operational International Internationa	ecial events, commercial use)	authorization mechanism)	
Permit issuance (e.g. specific problem)  Visitor / public complaints  Compliance patrols & et Habitat improvement, resulting the problem of the public complaints and problem of the public complaints and public public complaints and public com		District, Province	
Compliance patrols & e  Environmental Habitat improvement, re Initiatives  Data Collection & Visitation & Visitors  Capital & Operational I  Volunteer Investment	nts		Stewardship Group (referral review)
Environmental Habitat improvement, resulting Initiatives  Data Collection & Visitation & Visitors  Capital & Operational I Volunteer Investment		Stewardship Group, District	
Data Collection & Visitation & Visitors  Monitoring Capital & Operational I  Volunteer Investment	nforcement	District, Province	6
Monitoring  Capital & Operational I  Volunteer Investment	storation & invasive species control	Environmental Organization, District, Province	Stewardship Group
Volunteer Investment		Stewardship Group	District
	nvestments	Stewardship Group	District
Environmental Features		Stewardship Group	District
		Environmental Organization, Qualified Progressional	District
OtoH*.			

# APPENDIX E: MONITORING INDICATORS, TRIGGERS & THRESHOLDS

Desired Resource Condition (abbreviated)	Indicator	Data Source	Trigger	Threshold
Quality & Memorable Visitor Experience	es			6
The Cartwright Mountain trail system continues to attract visitors from the District, the region and	Total number of visitors (local & tourists) to the planning area	Mobile Data (e.g. Propulso)	Multi-year decline in visitation.	Declining trend in visitation.
beyond to enjoy the trails.	Proportion of visitors by origin.	Mobile Data (e.g. Propulso)	Multi-year decline in ratio of local vs tourist visits.	Declining trend in the ratio of locals to tourists.
A high quality mixed use and non-motorized stacked looped multi-use trail networks.	Proportion of visitors reporting they are satisfied or very satisfied with their mixed use and non-motorized trail experience.	Visitor survey	90% satisfied or very satisfied.	95% of visitors are satisfied or very satisfied with their trail experience.
The trail system is deliberately designed to target beginner and intermediate trail users while providing some opportunity for skill development and progression to a more advanced difficulty.	Proportion of total trail length by difficulty rating (e.g. white, green, blue, black)	Trail Inventory	Any change in trail system distribution from the following:  Blue – most  Green – second most  Black – third most  White – least	Any change in distribution of trail system difficulty from trigger.
Quality visitor comfort and convenience amenities at staging areas & on trail.	Proportion of visitors reporting they are satisfied or very satisfied with the supply and quality of comfort and convenience amenities at staging areas and on trail.	Visitor survey	<95% satisfied or very satisfied.	90% are satisfied or very satisfied.
A formalized and welcoming sense of arrival to the trail system and the information that require to have a safe, responsible and enjoyable trail experience.	Proportion of visitors reporting they felt welcomed at the staging areas.  Proportion of visitors reporting that staging areas provided effective and sufficient information to enable them to have a responsible and enjoyable trail experience.	Visitor survey	<95% report a welcoming sense of arrival. <95% report effective & sufficient information.	90% of visitors report a welcoming sense of arrival at staging areas. 90% of visitors indicate that the information provided at staging areas is effective and sufficient.
Visitors arrive at the trailheads informed and prepared (equipment and skills) to travel the trail system safely and responsibly. Intensity of emergency responses does not increase.	No. of emergency responses for trail users per visitor.	Local emergency service records, big data visitation estimates	Any increase from baseline.	Any increase from baseline.
Trail system provides engaging opportunities for visitors to learn.	Proportion of visitors reporting that they left the trail system with a greater awareness, understanding and appreciation of interpretive themes than when they arrived.	Visitor survey	80% or below report a greater awareness, understanding and appreciation.	75% of visitors report leaving the trail system with a greater awareness, understanding and appreciation than when they arrived.
The trail system and associated amenities (e.g. staging area) supports and sustainably accommodates high quality special events and races in the warm season.	No. of sanctioned events hosted on the trail system annually.	Access permit records	Any decrease from baseline.	A minimum of 2 sanctioned events are held in over the summer and fall seasons

Desired Resource Condition (abbreviated)	Indicator	Data Source	Trigger	Threshold
A Sustainable Trail System				
The trail system is sanctioned by the respective landowners / managers.	Length of unsanctioned (non- status) trail in the system.	Trail inventory	Any amount of unsanctioned trail.	Less than 100% of trail is sanctioned.
Unsanctioned trail development and use does not occur.				1 m of unsanctioned trail construction.
	Number of non-compliance incidents of OHVs and ORMs travelling off designated trails.	Public complaints to and enforcement actions taken by trail managers / compliance officers.	Any increase from baseline.	Incidents are decreasing from the baseline.
Disturbance of ungulates during the winter is minimized in the Mule Deer Winter Range RMZ.	Ungulate use of winter range.	Provincial biologists	Any decrease from baseline.	Any decrease from baseline.
On-trail snake mortality is avoided.	No. of reported snake mortality incidents.	Reports to trail stewardship group	Any increase from baseline.	Any increase from baseline.
Wildlife habitat features (hibernacula's, dens, wildlife trees, etc.) are avoided during trail planning and development and, if found, are buffered and protected through trail re-routing.	No. of wildlife habitat features that are inadequately buffered / avoided by trail system.	Trail Inventory, Ecological Inventory	Any wildlife habitat features are not avoided / buffered.	Any wildlife habitat features are not avoided / buffered.
Human wildlife conflicts with bears, cougars and ungulates are minimized.	No. of human wildlife conflicts reported annually per visitor.	Visitor reports to the Stewardship Group	Any increase from baseline.	The ratio of reported human wildlife conflicts per visitor does not increase and is ideally reduced from baseline.
Trail conditions are aligned with Trail Management Objective.	No. / Length of trail sustainability problems per km of trail.	Trail inventory & condition assessment.	Any increase from baseline.	There will be no increase in the No. / Length of trail sustainability problems per km of trail.
	Proportion of trail that meets TMO design parameters.	Trail inventory & condition assessment.	Any decrease below 100%	95% of sanctioned trail length will meet the TMO design parameters.
Visitors are compliant with the rules of use and apply responsible recreation practices. Interactions between trail users are positive, respectful and user conflicts are minimal.	No. of compliance actions / enforcement actions taken per patrol day.	Bylaw Officer Records	Any increase from baseline.	No reported increase in non-compliance by enforcement officers.
	Annual No. of visitor use conflict complaints per visitor.	Complaints to Stewardship Group, Big Data Visitation Estimates	Any increase from baseline.	No more than 10% of complaints are about visitor use conflicts.
	Proportion of surveyed visitors (Locals & tourists) that report visitor conflicts negatively impacted their experience.	Visitor survey	Any increase from baseline.	No more than 10% of surveyed visitors indicate that visitor conflicts negatively impacted their experience
First Nation's Values are Protected				
Trails are routed, re-routed, upgraded and maintained to avoid impacts to known or unknown archaeological sites or other Penticton Indian Band values	The amount of trail overlapping areas of archaeological potential.	Trail Inventory, Arch Overview Assessment	Any – should trigger Preliminary Field Reconnaissance	Trails avoid areas of archaeological potential or are cleared through a PFR or AIA (if needed).
Penticton Indian Band members continue to practice their traditional, cultural and spiritual activities on the Mountain	No. of complaints from Penticton Indian Band leadership that trails and trail use are negatively impacts traditional, cultural and spiritual activities.	Stewardship Group / District / RSTBC reports	1 or more complaints.	No reported complaints are received.

Desired Resource Condition (abbreviated)	Indicator	Data Source	Trigger	Threshold		
Visitors to the trail system are informed of the Penticton Indian Band's traditional territory and educated about their peoples, languages, culture and Truth and Reconciliation.	Proportion of visitors reporting that they left the trail system with a greater awareness of Penticton Indian Band's traditional territory, languages, culture and Truth and Reconciliation.	Visitor survey	<80% or below report a greater awareness, understanding and appreciation.	75% of visitors report leaving the trail system with a greater awareness, understanding and appreciation than when they arrived.		
A Community Supported Trail System						
District residents and adjacent landowners are supportive of the trails and investments in maintaining the trail system.	Proportion of residents that are support or strongly supportive of trails and investments in them.	Resident survey	Any decrease from baseline.	95% of residents are supportive or strongly supportive of trails.		
Visitation to and use of the trails does not create unacceptable impacts on adjacent private property owners.  Visitors do not trespass on private lands adjacent to the trail system.	No. of complaints per year from adjacent property owners about impacts and trespass.	Written complaints to District / Stewardship Group	Any increase from baseline.	0 complaints per year.		
Local elected officials understand benefits of and support investment in trails.	Proportion of municipal elected officials that are supportive or strongly supportive of the trail system and investment in it.	Council & MLA survey	Any decrease from baseline.	95% of municipal elected officials are supportive or strongly supportive.		
A Collaboratively Stewarded & Effectively Resourced Trail System						
A Trails Stewardship Group, representing all interests in the trail system, is formalized and is championing the planning, development, maintenance and operations of the sanctioned (status) trail system.	Establishment of a Trail Stewardship Group.	N/A	No trail manager is established.	Multi-stakeholder Stewardship Group is established, has adopted bylaws, and is meeting regularly to advance implementation of this plan.  Stewardship Group (or District) enters into partnership agreements and accepts accountability for maintaining the trail system.		
Engaged and passionate trail volunteers.	No. of volunteers taking part in trail stewardship events.	Event tracking.	Any decrease from baseline.	Volunteerism focused on the trails system increases continually.		
Businesses that benefit from the trails provide financial and capacity support for the trail system.	Amount of money contributed by local businesses for trail maintenance / management / stewardship.	Business survey, Stewardship Group tracking	Any decrease from baseline.	Amount of money contributed by local business increases continually.		
The Trail Stewardship Group and trails ecosystem is sustainably resourced.	Annual capital and operational budgets allocated for trails development, maintenance, and management.	District Reporting, Stewardship Group Reporting	N/A	Annual capital and operations budgets expended on trails increases continually.		

## REFERENCES

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**Draft - For Engagement Purposes** 

