

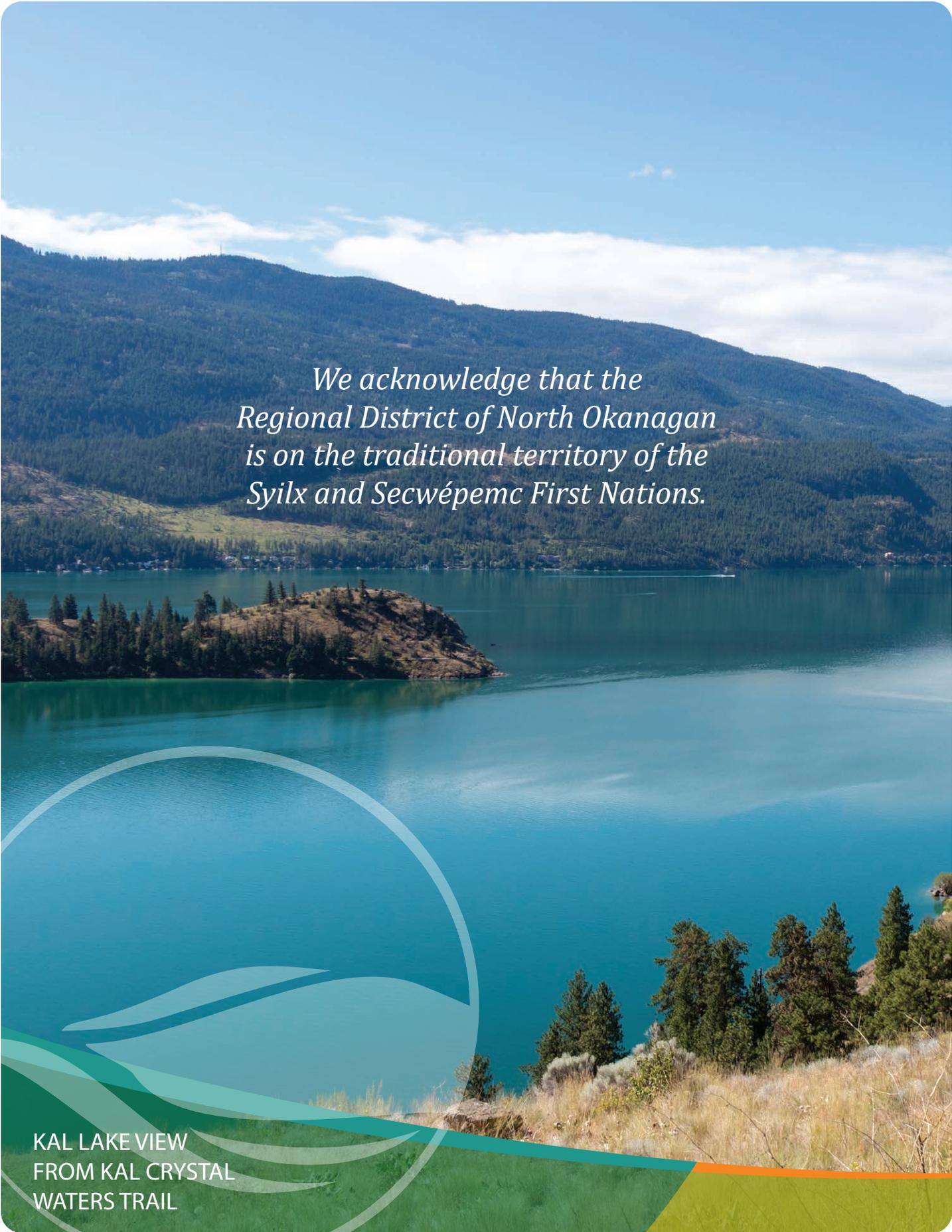


2022 - 2032

# Greater Vernon Natural Space and Trails Master Plan

Making Natural Connections

REGIONAL DISTRICT NORTH OKANAGAN



*We acknowledge that the  
Regional District of North Okanagan  
is on the traditional territory of the  
Syilx and Secwépemc First Nations.*

KAL LAKE VIEW  
FROM KAL CRYSTAL  
WATERS TRAIL

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GREY CANAL -  
COLDSTREAM RANCLANDS  
/Richard Rolke

## Executive Summary

Greater Vernon’s trails and natural spaces provide many benefits to the region, such as the protection of sensitive ecosystems and historic/cultural features, as well as connecting people and communities. These assets have a significant positive impact on the quality of life in the region and make it one of the best places in the world to live. However, population growth and associated development are a significant threat to the

conservation of natural areas in Greater Vernon.

Focused on 2023-2033, this plan will provide a comprehensive review of the current state of trails and natural spaces. It will define the desired goals that our trails and natural spaces are working to achieve; and identify how our trails and natural spaces network will be integrated with other natural spaces, parks, and trail systems

in the Greater Vernon area and broader region. This plan identifies general acquisition and connection priorities, and articulates strategies and actions to enhance our trails and natural spaces into the future. A key to accomplishing the vision of the plan is through partnerships, especially for land acquisition. Other levels of government as well as partner organizations can play a significant role.

Development of the plan was influenced by stakeholder planning, as well as various local, regional, provincial, and national policies and plans. Our residents, stakeholders, and partners are passionate advocates and stewards of our trails and natural spaces. Their planning efforts have contributed and informed to the foundation of this master plan and have provided key take aways that guide its direction. Through the review of these contributing documents, relevant trends were analysed and considered in the future shaping for Greater Vernon trails and natural spaces.

The vision for the Greater Vernon Trails, and Natural Spaces Master Plan was developed based on community input, direction from previous planning efforts, background research, and leadership direction from the Greater Vernon Advisory Committee. It describes a long-term future, and serves as a snapshot of the spirit and intent for the services. It inspires actions to progress towards this end.

Through realization of this vision, we have developed four main goals with associated strategies to guide proposed improvements:

-  Greater Vernon’s ecologically and culturally important areas are protected through acquisition, advocacy, and management of formally designated natural spaces.
-  Our Greater Vernon communities and natural spaces are linked through a connected network of ecologically healthy, sustainably managed, and well-maintained trails.
-  People are more connected with each other and with nature through our well-maintained, diverse, and well-distributed network of trails and natural spaces. Gaps in less serviced areas or land types have been addressed.
-  Advocate and build capacity and support for sustainable and diverse natural spaces and trail networks owned and managed by other service providers and partners within Greater Vernon.

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*Our natural spaces help protect our natural assets, such as key ecosystems to support biodiversity and natural or cultural features, and connect people with nature. Providing passive recreation that is well dispersed, and provides convenience and ease of access to allow for short trips that benefits the health of our community while maintaining ecological integrity. Our natural spaces complement the significant systems of parks provided by other organizations.*

*Our network of trails offer a variety of trail types that link and animate our natural spaces and connect through Greater Vernon. Interjurisdictional in nature, our trails provide ecological corridors, connect people and communities, and link local and regional trails provided by other organizations.*



## OKANAGAN RAIL TRAIL

# Introduction

Greater Vernon is surrounded by incredible natural spaces and trails that improve the quality of life for residents and visitors of the region. They are the foundation of a unique sense of place, making Greater Vernon a desirable place to live and a world-class destination

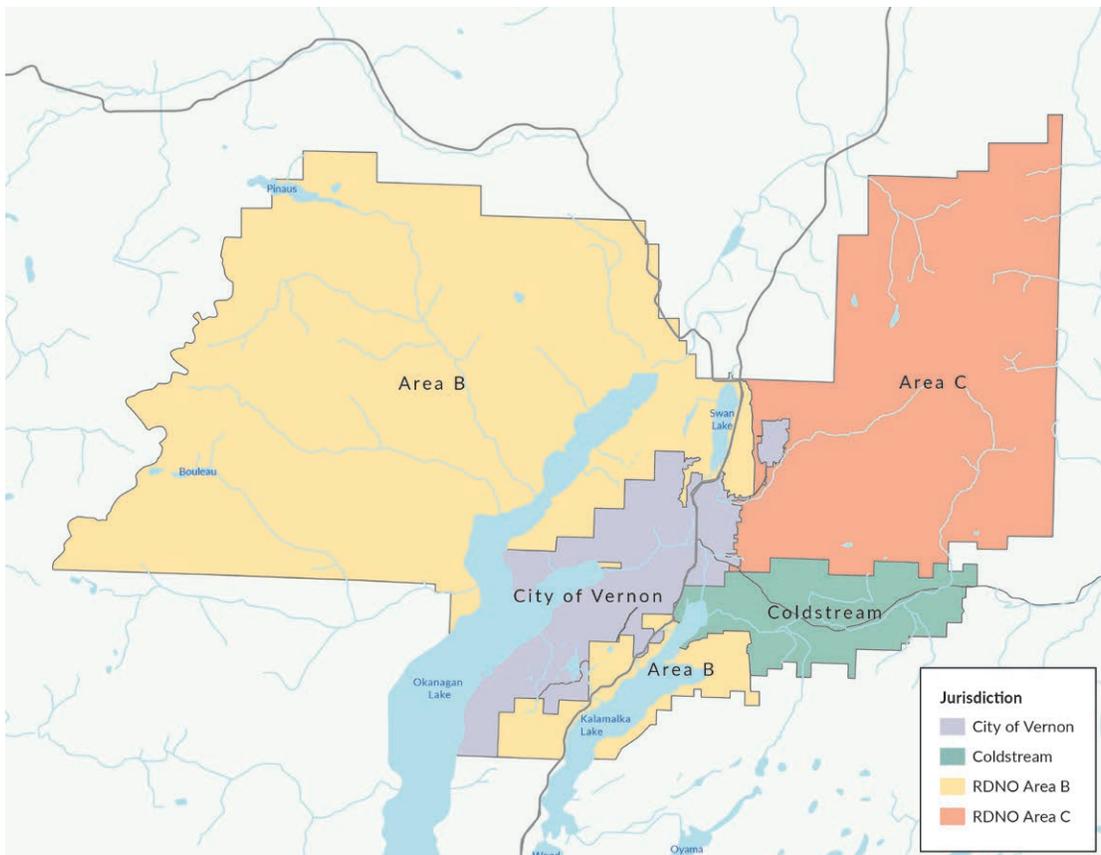
to visit. Our trails and natural spaces protect and sustain endangered wildlife and their habitats, clean the air we breathe and water we rely on, and reduce carbon emissions that are driving climate change; they are places of cultural and spiritual importance and provide

recreation opportunities that enhance our residents' quality of life and physical and mental well-being. They grow our connection with, and appreciation of, nature. Investment in our trails and natural spaces into the future will have a cascading flow of benefits throughout the region.

## PURPOSE AND SCOPE OF THE PLAN

The Regional District of North Okanagan (RDNO) provides a Greater Vernon Trails and Natural Spaces service to the Greater Vernon region, which includes the City of Vernon, District of Coldstream, and Electoral Areas B and C (Greater Vernon, as shown in Figure 1). This service is separate and distinct from the network of local parks and trails provided by the municipalities and electoral areas in Greater Vernon and the provincial parks and resort areas that provide public access to their parks and trails, but complements them by providing trail networks that cross jurisdictional boundaries and connect and provide access through our natural area parks. This plan is a framework that guides planning, acquisition, policies, development, and management of trails and natural spaces within the Greater Vernon Trails and Natural Spaces service.

RDNO's collection of natural spaces and trails have served the Greater Vernon area for many years. We have successfully increased the amount of land within our natural space network and have grown and diversified trails throughout the region. New challenges continue to emerge. We see increased expectations from a growing population to conserve more of our region's natural spaces, and a desire for greater access to outdoor recreation opportunities. Careful planning and deliberate decision-making will guide our network into the future.



*Figure 1 - Greater Vernon Area: Participating Jurisdictions within the RDNO Greater Vernon Trails and Natural Spaces Service*

### **Focused on 2023-2033, this plan:**

- provides a comprehensive review of the current state of trails and natural spaces;
- defines the desired goals that our trails and natural spaces are working to achieve;
- identifies how our trails and natural spaces network will be integrated with other natural spaces, parks, and trail systems in the Greater Vernon area and broader region;
- identifies general acquisition and connection priorities;
- articulates strategies and actions to enhance our trails and natural spaces into the future;
- clarifies organizational roles and links of community and volunteer service support; and,
- establishes quantitative and qualitative performance targets to measure our progress;

### **The scope of this service includes:**

- natural areas with the primary purpose of ecological conservation and secondary purpose of passive recreation, and are often larger in size (or have the ability and intention to achieve a larger size) to balance both purposes (+/- 25 ha).
- trail systems that cross jurisdictional boundaries within Greater Vernon (e.g. Grey Canal trail), or connect to or through our natural areas.



**Natural area parks**  
+/- 25 ha



**Trail systems that cross jurisdictional boundaries (e.g. Grey Canal trail)**

## PLANNING AREA AND BACKGROUND

In 1978, the Greater Vernon Parks, Recreation, and Culture Service was established under Supplementary Letters Patent granted in 1976. In 2001, it converted to a bylaw-based service where many changes occurred to improve the efficiency of the service. It included a network of natural spaces, sport and recreation-focused parks, and beaches. In 2018, the RDNO and its member municipalities agreed to transfer the responsibility of planning, management, and operations of existing local parks (including sports fields and beaches), as well as the acquisition of local parks and associated facilities and amenities, to the municipality or Electoral Area within which they reside. This transfer allowed municipalities and electoral areas to have autonomy over and respond to unique community needs within local parks. Under this agreement, RDNO remains responsible for the planning, management, and future acquisition of trails and natural spaces through the Greater Vernon Trails and Natural Spaces service. This plan provides a guide to plan, design, build and manage trails and natural spaces for the next ten years, 2023-2033, including an estimated resource list that will inform the update of Development Cost Charge bylaws and asset and financial planning.



### *What is a “Natural Space”?*

*Natural spaces are areas that are relatively undisturbed, or in the process of recovering from human disturbance. They help to protect biodiversity and environmentally sensitive habitats or features. These areas generally require less routine or intensive management activities. Where appropriate, natural spaces can also provide passive outdoor recreation (e.g. hiking) or opportunities to preserve areas of cultural or historical significance.*

## PLANNING CONTEXT

Our stakeholders are passionate advocates and stewards of our trails and natural spaces. Their planning efforts, summarized in the list below, have informed the foundation of this master plan:

- Ribbons of Green Trails Plan (1993)
- Ribbons of Green Trails Plan, 2013 – 2033 (2014)
- Okanagan Rail Trail Master Plan and associated development plans
- North Okanagan Naturalist Club Preservers of Nature: Protecting Natural Areas in the North Okanagan (2020)
- Okanagan Collaborative Conservation Program’s Biodiversity Strategy (2014)
- Swan Lake Nature Reserve Park Management Plan (2020-2030)

*Ecosystem services are the benefits people obtain from natural ecosystems, such as clean water and air, nutrient cycling, and mitigation of extreme weather and flooding.*



### **Key takeaways from the review of these and other guiding documents include:**

- A network of conservation-focused natural spaces should be acquired and managed to protect environmentally sensitive areas, provide habitat connectivity, sustain ecosystem services, adapt to climate change, and protect viewscales.
- To improve biodiversity in a patchwork of natural spaces in urban areas, research shows that it’s important to consider factors such as size and quality, pattern and connectedness of natural spaces.<sup>1</sup>
- An interconnected network of trails provided by all parties should provide a diversity of passive recreation opportunities. Trails should connect residents to our communities, major destinations, natural spaces, parks, and neighbouring regions.

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<sup>1</sup> Lepczyk et al. 2017. *Biodiversity in the City: Fundamental questions for understanding the ecology of urban green spaces for biodiversity conservation.*



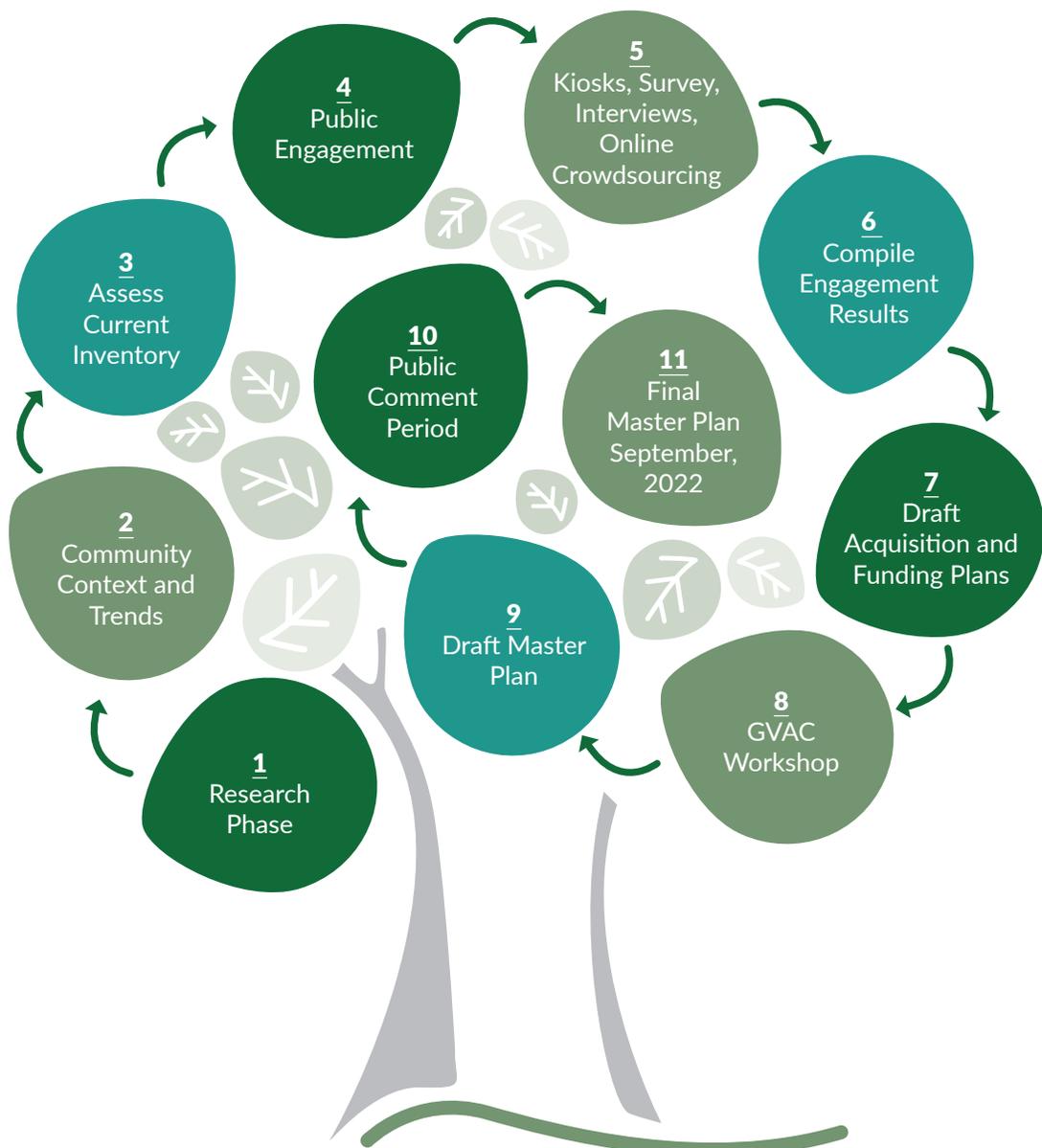
**BX RANCH**



*Passive recreation includes activities that are sensitive to the ecological value of the site and include activities such as hiking, biking, bird watching, etc.*

Decisions about the future of trails and natural spaces influence, and are influenced by various local, regional, provincial, and national policies and plans. Our planning and management decisions must align with the foundations and priorities set in these policies and plans. As they are updated they should reflect the priorities in this master plan. The policies and plans that were reviewed and informed the master plan are illustrated in Table 1 - Key Referenced Planning Documents.

## Planning Process



*Figure 2 - planning process for the greater vernon trails and natural spaces master plan*



**Table 1 - Key Referenced Planning Documents**

<b>Local</b>	<ul style="list-style-type: none"><li>• City of Vernon OCP (2020) and Parks Master Plan (2019)</li><li>• District of Coldstream OCP (2016) and Parks Master Plan (2016)</li><li>• Electoral Areas B &amp; C OCP (2014) and Parks Master Plan (2019)</li></ul>
<b>Regional</b>	<ul style="list-style-type: none"><li>• RDNO Regional Growth Strategy (2019)</li><li>• Biodiversity Conservation Strategy for the Okanagan Region (2014)</li><li>• Thompson Okanagan Regional Tourism Strategy (2019)</li><li>• Okanagan Climate Projections Report (2020)</li></ul>
<b>Provincial</b>	<ul style="list-style-type: none"><li>• Provincial Trails Strategy (2013)</li><li>• B.C. on the Move: A 10-Year Transportation Plan (2015)</li><li>• B.C. Declaration on the Rights of Indigenous Peoples (2019)</li><li>• Kalamalka Lake Park Management Plan (2019)</li><li>• Silver Star Provincial Park: Draft Management Plan Public Feedback (2020)</li></ul>
<b>National</b>	<ul style="list-style-type: none"><li>• Parks for All (2017)</li><li>• Framework for Recreation in Canada (2015)</li><li>• One with Nature: A Renewed Approach to Land and Freshwater Conservation in Canada (2020)</li><li>• National trails classification guidelines (Trans Canada Trail 2021)</li></ul>

# Context and Trends

## COMMUNITY CONTEXT

Our region is growing and changing. In 2021, Greater Vernon was home to 63,475 residents and is the largest urban area within the Regional District, accounting for 69% of the total population. It is estimated that our population in Greater Vernon grew by 10% since 2016, and estimates from the 2011 Regional Growth Strategy (population schedule updated in 2019) suggest this level of growth will continue in the coming years.

**Table 2 - Population Trends for Greater Vernon - 2016-2031**

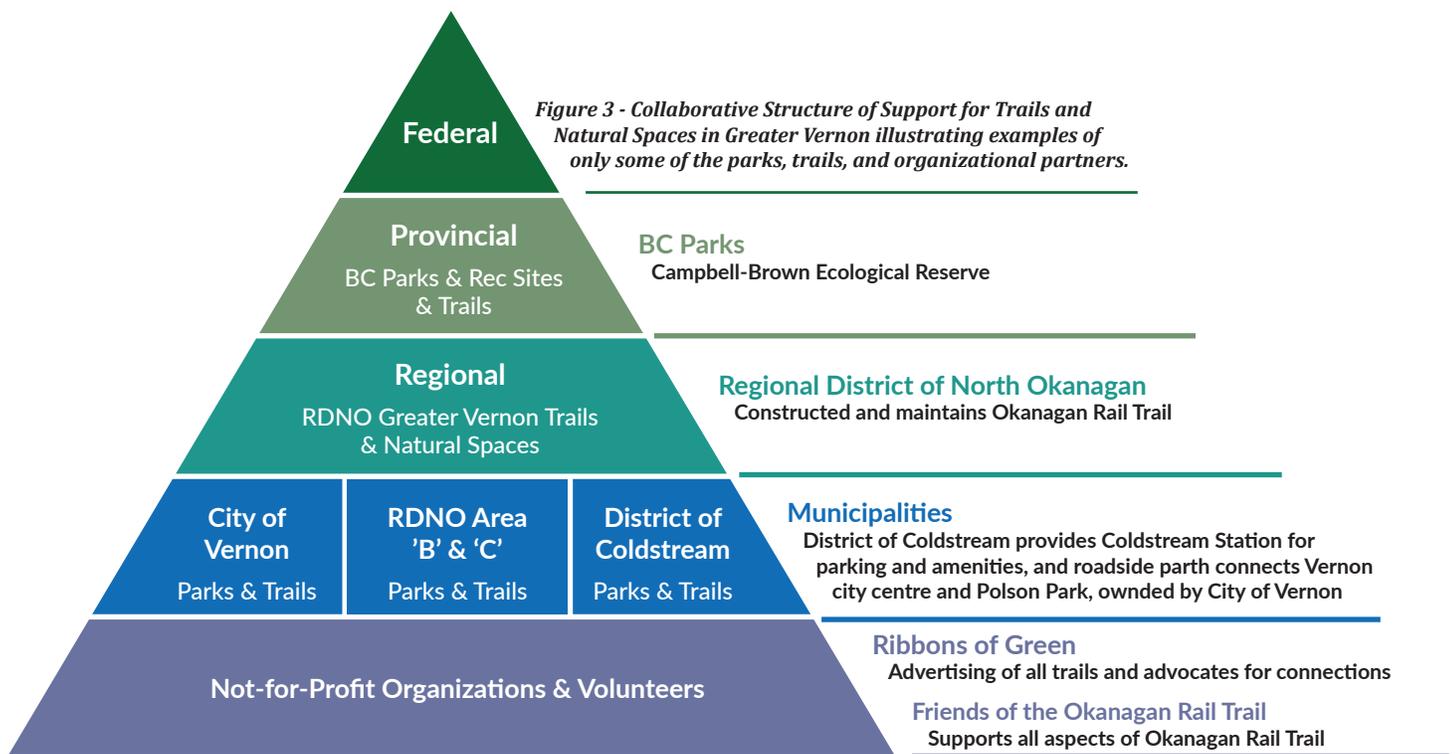
	2016 (actual)	2021 (actual)	2031 (projected <sup>2</sup> )	% projected population change (2021-2031)
Vernon	40,116	44,519	47,340	6.3%
Coldstream	10,648	11,171	12,791	14.5%
Area B	3,203	3,274	3,062	-6.5%
Area C	3,870	4,511	3,650	-19.1%
<b>TOTAL</b>	<b>57,837</b>	<b>63,475</b>	<b>66,843</b>	<b>5.3%</b>

Our community has a higher than average population of people over the age of 65 compared to the provincial average, however due to cost of living and COVID-19 impacts, we are seeing an influx of young families move into the area from larger communities. Both of these groups have a high interest in having access to outdoor recreation opportunities to support their desired quality of life. A growing population will add increasing pressure to our existing network of natural spaces and trails.

<sup>2</sup> RDNO. 2011. *Regional District of North Okanagan Regional Growth Strategy - One Region, One Future*

## ORGANIZATIONAL ROLES AND LINKS

Growing and protecting our network of trails and natural spaces in the region is a shared effort between local and senior levels of government and not-for-profit organizations. The RDNO works collaboratively with the City of Vernon, District of Coldstream, Electoral Areas B and C, BC Parks, land conservation organizations, and dedicated volunteers. We share the responsibility of providing and managing different portions of the region’s 492.5 km of trails and 8,000 ha network of natural spaces.



Our trails and natural spaces are supported by a dedicated network of volunteers (organizations and individuals) that advocate for, and actively contribute to the stewardship of our trails and natural spaces. Organizations such as, but not limited to, the Ribbons of Green Trails Society, Friends of the Okanagan Rail Trail, Nature Conservancy of the North Okanagan, North Okanagan Naturalists Club, North Okanagan Cycling Society, and Vernon Outdoors Club dedicate countless hours each year to advancing our system to where it is today. The success of this plan relies on the continued support for and from these organizations. The Greater Vernon Trails and Natural Spaces Working Group provides an opportunity to increase communication and collaboration between RDNO and these organizations.

## TRENDS

Being mindful of the latest trends and their effects on opportunities for our trails and natural spaces is essential in developing a long-term plan. The following trends have helped to shape the master plan:



### Active Transportation

With growing awareness of physical and mental health benefits, reduced carbon emissions and financial savings, the proportion of people choosing active transportation is growing as an alternative to driving and even public transport. This trend has been reinforced during the COVID-19 pandemic. A quality interconnected and efficient active transportation network is required to enable residents and the region to realize the benefits of active transportation. Active Transportation is led by local government partners who maintain the road network, but trails and natural spaces can provide an important contribution to this network.



### A Growing Role for Regional Natural Spaces in Meeting International Conservation Targets

Once thought to be the role of the Federal and Provincial governments, regional and local natural spaces networks are being relied on to play a significant role in meeting national and international conservation targets. Regional and local governments have considerable ability to establish new natural spaces that make meaningful contributions to conservation and Canada's commitment to protect 30% of land and freshwater by 2030. The International Union of the Conservation of Nature (IUCN) recommends a target of 17% of the world's land and inland waters be protected.



### Anti-Social Behaviours and Social Challenges in Parks and Natural Spaces

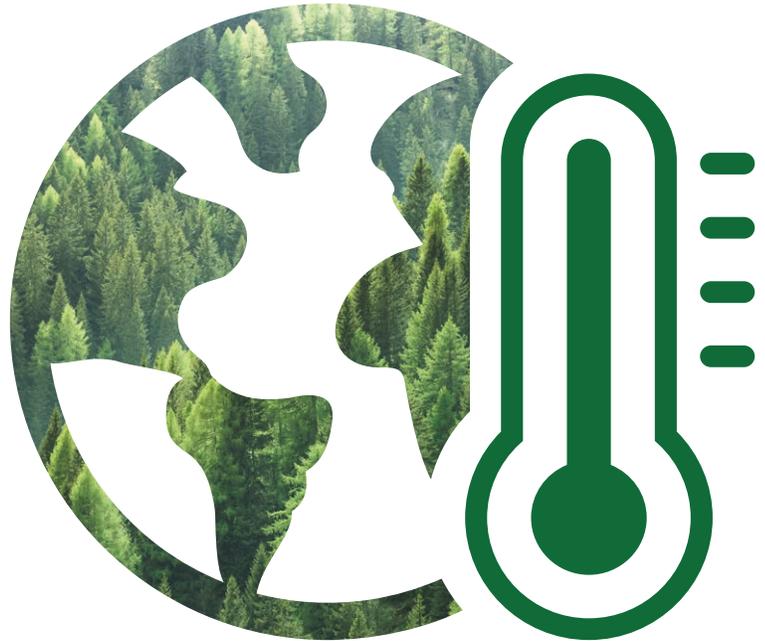
Trails and natural spaces are experiencing increased incidents of self-destructive and anti-social behaviours (e.g., drug and alcohol use, violence, vandalism) and can become camp sites for those experiencing housing insecurity. Managers are finding themselves on the front lines of highly complex social issues that extend beyond their training, mandate, and capacity. Public pressure to address these complex health, safety and environmental concerns, and growing user conflicts can be intense.

## Climate Change

Climate change is expected to bring a number of changes locally<sup>3</sup>:

- Warmer year-round temperatures;
- Considerably hotter and drier summers;
- Increased duration of growing season;
- Increased precipitation across all seasons except summer; and
- Shifting seasons (shorter winter, longer summers).

Climate will further stress and potentially alter the distribution of plant and wildlife species and the quality of habitats which will be particularly problematic for some species at risk. As ecosystems are lost or damaged, their capacity to capture and store carbon is diminished and further exacerbates climate change. Climate change effects (e.g., increased mid-day temperatures, wildfire smoke, etc.) are expected to influence the type, timing, and location of recreational activities. These changes further challenge the conventional planning and management of our trails and natural spaces.



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<sup>3</sup> *Climate Projections for the Okanagan Region. February, 2020. [https://www.rdco.com/en/environment/resources/Documents/2020--OK\\_Climate\\_Projections\\_Report\\_Final.pdf](https://www.rdco.com/en/environment/resources/Documents/2020--OK_Climate_Projections_Report_Final.pdf)*



### **COVID-19 Resulted in an Unprecedented Outdoor Recreation Boom**

COVID-19 has dramatically changed outdoor recreation participation. Visitation to trails and natural spaces has grown exponentially, including significant increases in those who are new to outdoor recreation. In addition to increasing volumes of use, the temporal patterns of visitation have also shifted. Greater visitation is occurring during previously less busy times (e.g., mid-week, early morning, later evening).



### **Development, Conversion & Fragmentation of Sensitive Ecosystems & Ecosystem Processes**

Development pressure in the region continues to grow and much of this development is occurring on or near our most sensitive ecosystems. This pressure leads to the conversion and fragmentation of ecologically important areas and reduced opportunity to connect trails. Given the urbanization and development in the region, important ecosystem processes such as wildfire have been excluded or suppressed. Ecosystems in the region evolved with and rely upon fire, and its suppression has changed both our grassland and forested ecosystems, leading to much denser forests and forest encroachment into grasslands and altered habitat value.



### **Equity & Inclusion**

Significant efforts are occurring throughout North America to ensure that trails and natural spaces are welcoming and inclusive environments for all peoples regardless of ethnicity, gender, income, age, ability, or identity. With a focus on improving inclusion and equity, deliberate attention is being placed on how and where investments in trails and natural spaces are made, where they are located and how they are designed and managed.



## Growing Population

The region's population continues to grow as does its popularity as a major tourism destination. Our residents and the visitors to the region are passionate outdoor enthusiasts and visitation to our trails and natural spaces is growing rapidly. Growth in visitation, including visitation by those who are new to outdoor recreation, is resulting in more impacts (e.g., litter, off-trail travel, unsanctioned trail building, wildlife harassment) and conflicts which are elevating pressures on our management and operational capacity, and increasing the need to ensure we are more actively managing visitation. Data and information are fundamental to good management but acquiring and maintaining data on visitation, visitors and the condition of trails and natural spaces can be challenging and expensive.

Trails and natural spaces are recognized as a key part of the climate change solution. Investing in trails and natural spaces is widely accepted as a strategy to help slow climate change by creating places that can sequester and store carbon. Trails and natural spaces also serve as green infrastructure that can help the region more readily adapt to the effects of climate change (e.g., flood mitigation and control).

Top priorities for conservation within the North Okanagan include:

- **riparian habitats:** an analysis found that 100% of the Water Birch-Red-osier dogwood riparian plant community is gone from the City of Vernon;
- **valley bottom** is only 22% of the Okanagan region but contains a disproportionate amount of very high and high biodiversity classes;
- **wetlands** including marshes, swamps, and wet meadows that are used by at risk species for some or all of their lifecycles;
- **grasslands and shrub-steppe** support many rare wildlife species; and,
- **non-vegetated rocky outcrops** are key for many threatened wildflower species on which endangered butterflies and other species depend.

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*Keeping Nature in Our Future: a Biodiversity Conservation Strategy for the Okanagan Region, 2014*

*Okanagan Wetlands Action Plan, 2019*



## **Increasing Land Values**

Land values in the region continue to increase rapidly and significantly. Assessed values have increased 3-10% in the region between 2020 and 2021 alone, while the median price for a house in the region has grown from \$339,000 in 2016 to approximately \$665,000 in July of 2021. Land acquisition for conservation and trail connections is expensive and often exceeds available acquisition funds. Acquiring land will continue to become more challenging, just as some of the most ecologically important areas face land development pressures.



## **Recreation Activities are Rapidly Evolving**

The rapid evolution of recreation is creating new demands on our trails and natural spaces. Many of these activities are being undertaken without deliberate decision making or proper infrastructure. Increases in unauthorized trail building, elevated conflicts between users, and growing recreational impacts are challenging our managers. Technology such as the electrification of bicycles, off-road motorcycles, off-road vehicles, scooters, and one-wheels are requiring natural space and trail managers to reconsider their traditional approaches to managing the impacts of recreation and conflicts between user groups, and to ensure that the right activities are occurring in the right places. Meanwhile, the popularity of activities such as mountain biking and long-distance endurance trail running have dramatically increased. Mobile crowdsource technologies such as TrailForks, Strava, and All Trails together with social media are making it much easier to find trails and natural spaces. Recreation will continue to evolve which will require managers to apply more deliberate adaptive management strategies in our trails and natural spaces.



### **Resourcing for the Demands of Today and Tomorrow**

Our trails and natural spaces services are funded primarily through property taxes. Operating and capital budgets have been increasing, particularly over the last five years. With the increased use of our trails and natural spaces, it will be important as our system grows, that an accompanying commitment to resourcing is made to ensure a sustainable and high-quality service.



### **Service Delivery through Partnerships**

With increasing demands on limited resources, some local governments are cultivating partnerships with volunteer organizations to assist in the delivery of services. For example, at the Regional District of Central Okanagan (RDCO) resources for a volunteer coordinator position were allocated to support volunteer and “friends of” groups, and engage them in meaningful volunteer activities in support of park maintenance and park projects. This was also supported through the development of a volunteer program guide and a grant program.



### **Truth & Reconciliation**

Trails and natural spaces are opportunities to support truth and reconciliation with Indigenous communities. They are also an opportunity to help non-Indigenous people develop a deeper understanding and appreciation of the land Canadians reside on, Indigenous peoples and cultures, and to foster new relationships. This enhanced understanding will lead to healthier relationships, stronger communities, and potential partnerships with Indigenous communities.

## BENEFITS OF PARKS AND TRAILS

Investing in our natural spaces and trails can provide a great return to our region, even if residents choose not to visit or experience them directly. Reflecting on the benefits of investing in natural spaces and trails through the lens of the four pillars of sustainability, as shown in Table 3, helps ground the rationale for investment.

**Table 3 - The Four Pillars of Sustainability as They Relate to the Benefits of Parks and Trails**



### Environmental

Build a culture of conservation and connection to nature

Protect and restore biodiversity

Provide essential ecological services (e.g., water filtration, pollination, climate regulation)

Enhance resilience and adaption to climate change

Mitigate risk from extreme weather events



### Social

Increase social interaction, cohesion, and inclusion

Build community pride

Grow learning and appreciation of the region's history and culture

Improve physical health of residents and reduce mortality

Reduce mental health problems

Build positive self-esteem and confidence

Reduce anti-social and delinquent behaviours

Livability of the region



### Economic

Grow our outdoor recreation and visitor economy, diversify the regional economy

Create new direct and indirect jobs

Attract new and retain existing skilled labour and businesses

Stimulate capital and business investment in the region

Increase land values and regional and local government revenues

Serve as important assets to deliver core government services and programs.



### Cultural

Support reconciliation with First Nations communities

Support the continuation of traditional practices

Protect spiritual and culturally sensitive sites

Preserve viewscales and a sense of place

Activate spaces through art and interpretation

Protect historical features



GREY CANAL TRAIL/Richard Rolke

## Engagement Summary

Our residents, stakeholders, and partners are passionate about trails and natural spaces. We know that they care and want to be involved in helping to shape the future. Achieving the priorities we have collaboratively

developed will be a team effort with the Regional District. As such, we set out to design and deliver a meaningful engagement process that allowed anyone with interest in the future of our trails and natural space system to help shape their future.

## ENGAGEMENT PROCESS

To make the engagement process as accessible as possible, four tactics were utilized to gather input:

- In-park conversation kiosks
- Household online survey
- Community and stakeholder virtual interviews
- Online interactive crowdsource mapping platform

The engagement program was designed in compliance with all COVID-19 health orders from the provincial health officer. COVID-19 limited the ability to implement extensive in-person engagements.

## WHAT WE HEARD

Seven (7) themes emerged from each of the engagement tactics. Please see the *Greater Vernon Natural Spaces and Trails What We Heard Report* for full details on the engagement input.

Participants identified a need to:

- **expand and connect** our trails and natural spaces system;
- **protect** the region's most sensitive ecosystems and habitats;
- **enhance** the function, quality, and appeal of our existing trails and natural spaces;
- ensure our trails and natural spaces systems **include** all visitors, regardless of ability, ethnicity, or orientation;
- better **manage** our network and visitors;
- **animate** our natural spaces and trails to enrich the experience and deepen the understanding and appreciation of visitors; and,
- **promote** our trails and natural spaces to make visitation easier.

### Engagement by the Numbers



19 community/Stakeholder  
Interviews/Perspectives



974 online  
survey responses



40 Conversation  
kiosk attendees



327 Online  
mapping responses



7 emerging  
themes

## Expand and Connect

- Habitat and landscape connectivity emerged as an essential priority to support wildlife and ecological processes.
- Expand and connect the existing trail network. Specific areas include Vernon and Armstrong; Vernon and Silver Star; BX Ranchlands trails to surrounding trails; Grey Canal trail to surrounding trails around Vernon; Kalamalka Lake Beach and the Okanagan Rail Trail to Middleton Mountain, including eastern access.
- More non-motorized multi-use pathways, hiking trails, purpose-built mountain bike trails, and off-road vehicle trails.
- Two areas not part of the trails and natural spaces service received public support: additional overnight camping spaces, and greater water access and boat launches for non-motorized boats.

## Protect

- Protect more of the region's natural spaces and important habitats for landscape connectivity in larger protected areas, particularly as the human population grows. The O'Keefe Range, Commonage, BX Ranchlands, and Swan Lake shores were locations identified.
- Participants expressed concerns regarding residential overdevelopment, expanding vineyard developments, and escalating land costs.
- *The Preservers of Nature: Protecting Natural Areas in the North Okanagan report produced by the North Okanagan Naturalists' Club (May 2020), provides recommendations for lands that are important for future protection.*



## Enhance

- Expand or improve parking areas, washroom access, and the quality of park amenities.
- Enhance the quality and consistency of signage, including wayfinding, interpretive, responsible use, and regulatory.
- Provide a broader diversity of trail opportunities, including hiking/walking, mountain biking, equestrian, and off-road vehicle use.
- Improve the management of visitors and growing conflicts between users.
- Manage trails and natural spaces to protect and restore native plant communities and remove invasive species. Manage fuels to reduce wildfire risk.
- Enhance access to winter recreation opportunities and experiences in trails and natural spaces.
- Increase dog-friendly and off-leash spaces and beach access.
- Implement amenities such as lighting and cameras to improve safety near urban areas.

## Include

- Improve the universal accessibility of trails and amenities, particularly for those with mobility concerns or limitations.
- Review the cultural accessibility of the trails to ensure that all citizens feel welcome.



*“Myriad opportunities for recreation in our area exist. Accessibility for disabled persons is an area where a concentration of effort could enhance the area for all.”*

## Manage

- Improve communication and coordination between local and regional governments and community organizations supporting trail development and maintenance.
- Address visitor management issues relating to improper disposal of garbage and animal waste, and inappropriate or prohibited uses of trails and natural spaces. Residents are supportive of increased education versus increased enforcement tactics.
- Implement a system to better track utilization and visitation levels to proactively manage spaces.
- Develop management plans for individual sites or trails in the network.
- Implement visitor management best practices and active management to alleviate existing issues and growing user conflicts.
- Prepare adjacent landowners with education to ensure the impacts of trails and natural spaces on these landowners are minimized.
- Foster volunteer and stewardship opportunities with improved recognition of volunteers and community partners.

## Animate

- Increased programming and interpretation to elevate visitor experience. Expand nature-based and conservation programming and initiatives.

## Promote

- Increased access to information about trails and natural spaces and how to find and enjoy them.
- Ensure trails and natural spaces are prominently featured as tourism drivers to the region.

*“Think of the amount of money people spend to go to Europe to ride a bike for a week, this could easily be a great source of tourism income in the Okanagan if the trails and pathways were linked and made sense. We’re getting there, but it’s definitely a green, worthwhile project. After all the travel restrictions this year, anything that gets local tourism back will be worth it.”*

*Participant*

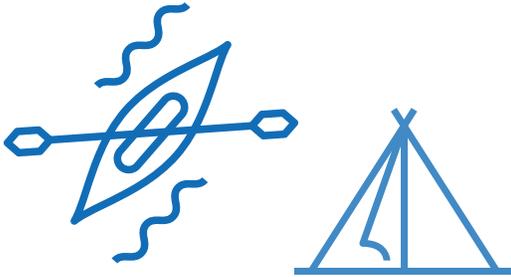
Greater Vernon  
Natural Spaces and Trails:  
What We Heard



Motivation for Trail and  
Natural Space Utilization

**83%** Physical Health

**80%** Enjoyment



**Top Activities:**

- Lake/beach activities
- Camping
- Cycling



**90%**  
**agree**

the RDNO should  
establish more trails  
in Greater Vernon



**93% Visited**

Natural Spaces  
or Trails



Natural Spaces & Trails are important to quality of life

**86% agree**

## Top Winter Activities:

- Snowshoeing
- Cross country skiing



**88% agree** the RDNO should establish more natural spaces in Greater Vernon

### Limitation to visiting trails and natural spaces



**36%**  
crowded conditions



**33%**  
off-road vehicles



**30%**  
a lack of time



MIDDLETON  
MOUNTAIN TRAIL

# Current Inventory + Analysis

## NATURAL SPACES

### Inventory

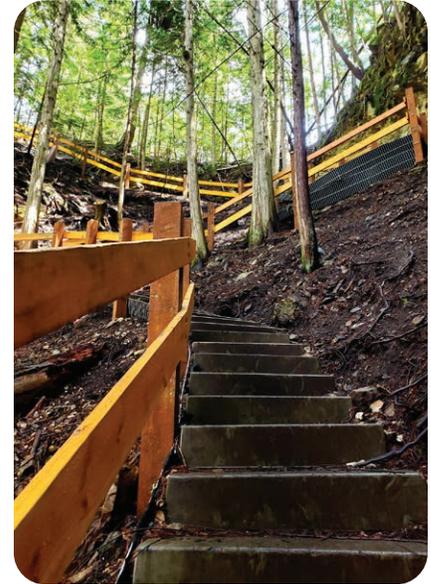
We currently have seven designated natural spaces within the Greater Vernon Trails and Natural Spaces service (Figure 4). In addition to these sites, the land within the service includes several small sections that serve as greenways adjacent to our inter-jurisdictional trails and the Greater Vernon Athletics Park. The greenways will be considered as part of our trail network. The Greater Vernon Athletics Park is outside the scope of the Greater Vernon Trails and Natural Areas service and will be addressed separately.

To analyze our supply of natural spaces, we first must decide on an appropriate assessment methodology.

### Supply Analysis Models

There are a variety of ways to measure parkland supply. Historically, a quantitative standard approach was considered standard practice, where acquisition targets were established by area acquired/capita. In 2015, Metro Vancouver undertook a study of parklands supply research in preparation for an update to their Regional Parks Plan and Acquisition Strategy. Their findings have been summarized into three approaches: quantitative, ecological gap-assessment, and human-based needs<sup>4</sup> (Appendix A).

Based on these findings, this plan recommends a hybrid approach based on gap assessment and human-based needs, with quantitative measures used primarily for benchmarking. Gap assessment considers the amount and type of lands required based on scientific targets (e.g. targeting lands with higher biodiversity). A human-based approach considers the public desires for parklands and the carrying capacity of our natural spaces as they become busier (Appendix A).

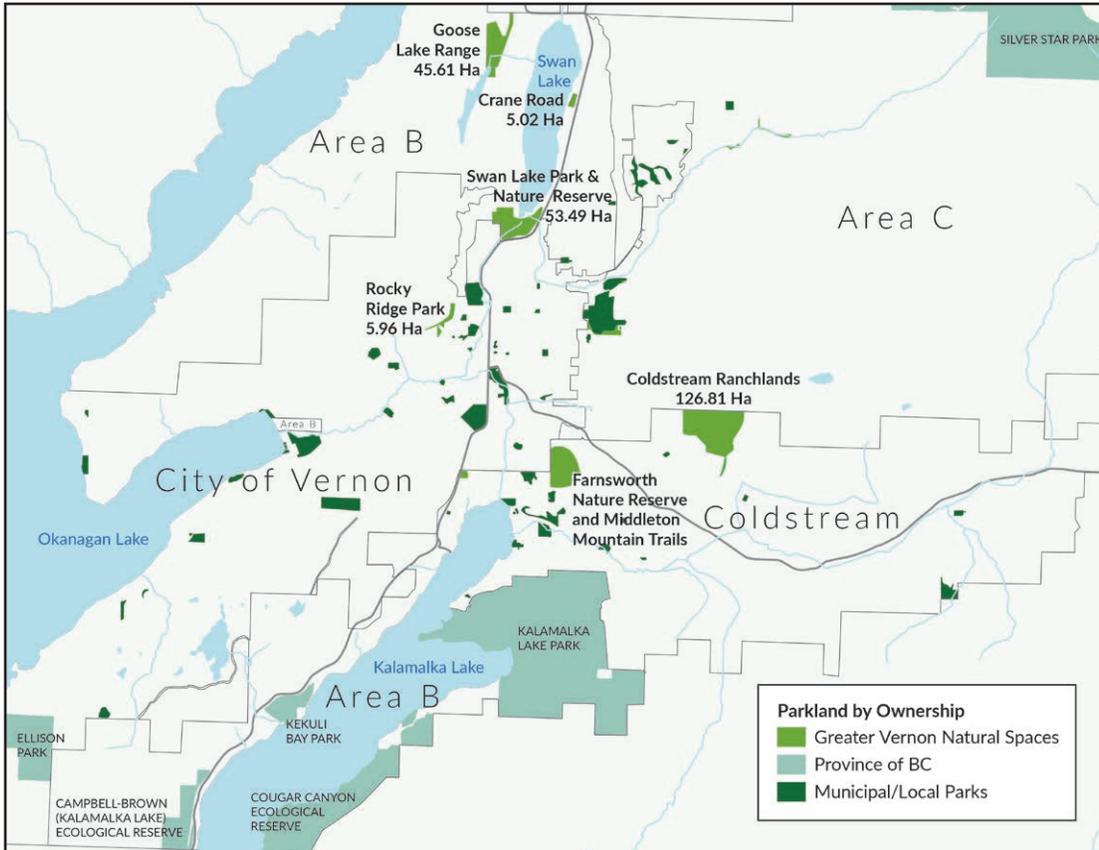


### Carrying Capacity

*Carrying capacity of a park or natural space is the number of people that it can support without resulting in environmental or experiential degradation.*

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<sup>4</sup> Metro Vancouver Parklands Regional Supply Research, 2015



**Figure 4 - Current Natural Spaces of the RDNO's Greater Vernon Trails and Natural Spaces Service**

### Supply Analysis of Greater Vernon Natural Areas

Totalling approximately 295 ha (not including the Greater Vernon Athletics Park property), the current natural spaces formally protected through the RDNO Greater Vernon Trails and Natural Spaces Service account for approximately 0.3% of the Greater Vernon area (112,436 ha). If all formally protected areas are counted, 7.1% of the Greater Vernon area is currently protected as natural space (approximately 8,000 Ha).

Within the next ten years, the population of Greater Vernon is expected to increase by >5%<sup>5</sup>. With the emerging trend of people relocating from urban to rural areas resulting from the COVID-19 pandemic, it is likely the increase could be as great as 22% should we see average growth per annum closer to 2%.

<sup>5</sup> Regional District of North Okanagan Regional Growth Strategy, 2011

**Table 4 - Summary of Natural Areas and Parkland by Primary Objective**

	PRIMARY OBJECTIVE	
	Natural Area	Recreation
Province of BC (Silver Star CRA ≈1,200 ha)	7,552 ha	-
Greater Vernon Trails & Natural Spaces Service	295 ha	4 ha (GV Athletics Park)
City of Vernon	54 ha	168 ha
District of Coldstream	23 ha	45 ha
RDNO Electoral Area ‘B’ and ‘C’	71 ha	22 ha
Land Trust Covenants	≈ 2 ha	-
<b>TOTAL</b>	<b>7,997 ha</b>	<b>239 ha</b>

**Baseline Supply Analysis - Hectares (ha)/1000 Residents**

If we use the standard benchmark of Protected Area (ha)/1000 Residents, and consider all area protected as natural space, regardless of ownership, Greater Vernon with its population of 63,475 (2021) has 126 ha/1000 residents.

If we calculate the same using only those natural spaces within the Greater Vernon Trails and Natural Space service, we find that our natural spaces provide 4.65 ha/1000 residents.

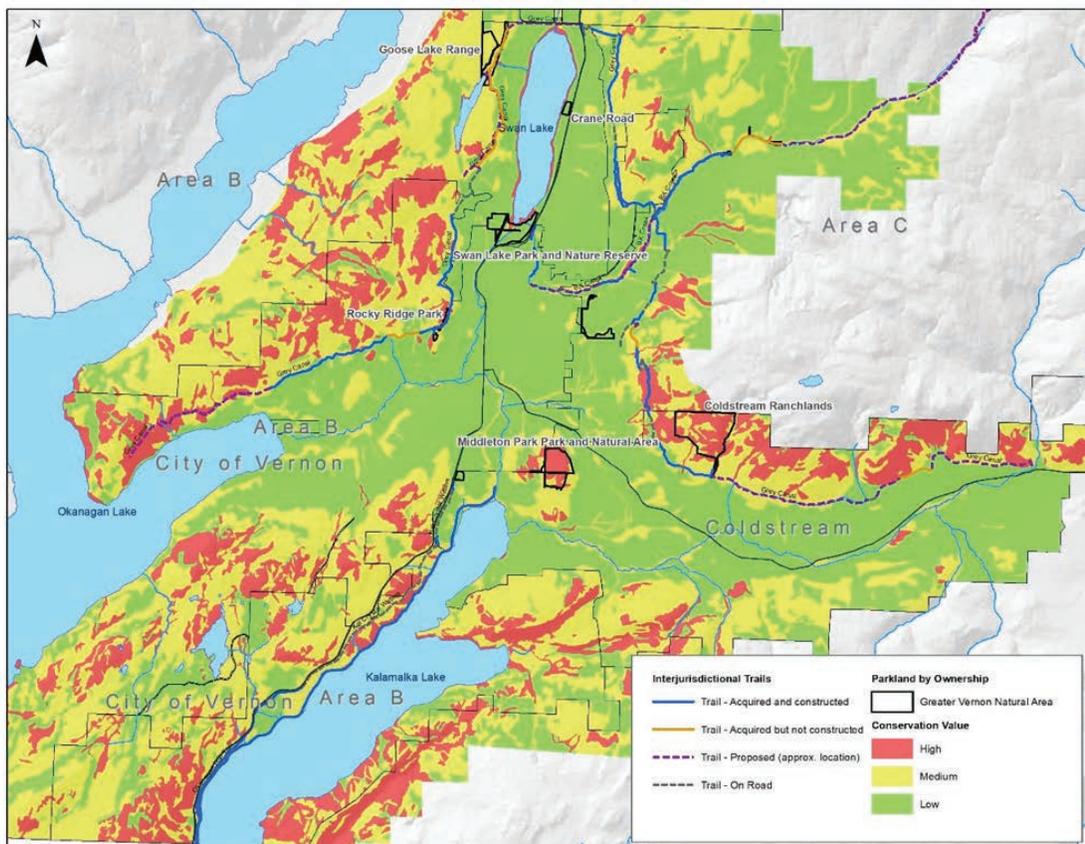
To provide a baseline comparison, the Capital Regional District has 35 ha/1,000. The Capital Regional District has not set an acquisition area target. Additionally, the Regional District of Central Okanagan has set a target of securing 12 ha/1,000 population within their service (not including federal, provincial, or municipal parks).

The usefulness of community comparisons can be challenging since it does not consider the impact of visitors on natural spaces, which may vary significantly between communities. Nevertheless, an area per population calculation helps us create a correlation between our natural spaces and our population that can be used to help forecast future needs; particularly as they pertain to providing passive recreation opportunities.

## Gap-Assessment Analysis

When considering a gap assessment analysis, there are several areas to review including those with high conservation rankings, high relative biodiversity, landscape ecology (wildlife corridors, habitat types, etc.), and potential risks or effects of climate change on lands being considered for parkland acquisition or their potential for climate change mitigation. Key areas for protection in Greater Vernon are wetlands and grasslands. Some grassland protection has been achieved through the acquisition of Coldstream Ranchlands, Farnsworth Nature Reserve and Middleton Mountain trails, Rocky Ridge Park, and Goose Lake Range (Figure 5). Natural spaces that protect wetlands include Swan Lake Nature Reserve Park, and Crane Road. For these lands to continue to achieve the intended natural values, ongoing site management of visitors and passive recreation activity will be essential.

A total of 140 ha of our natural spaces (58.6%) are comprised of high-ranking SEI Conservation Value area.



*Figure 5 – Sensitive Ecosystem Inventory (SEI) Data (2007) by Conservation Value*

The **Sensitive Ecosystem Inventory (SEI)** of the Coldstream Vernon area was initiated in 2005 to provide inventory information on rare and fragile ecosystems that can be used for ecologically sustainable land use and development planning.

Terrestrial Ecosystem Mapping (TEM) was used as a base to develop a Sensitive Ecosystems theme map that included **conservation rankings**. The inventory was compiled through aerial photograph interpretation and field sampling in the summer of 2007, and draft ecosystem mapping was completed in 2006 and revised in the fall and winter of 2007 – 2008 following field sampling.

The project area covers private land, provincial parks, protected areas and ecological reserves, and small areas of crown land.

Informed by the SEI conservation ranking and incorporation of additional species and habitat information, the Okanagan Collaborative Conservation Program (OCCP) undertook the development of *A Biodiversity Conservation Strategy for the Okanagan Region*. This strategy was completed in 2014 and provided data on **relative biodiversity**.

## Map Decision Tool Type

### Conservation Rankings

Which ecosystems are the most important for conservation?

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### Relative Biodiversity

What are the "hotspots", i.e., areas of greatest importance for biodiversity?

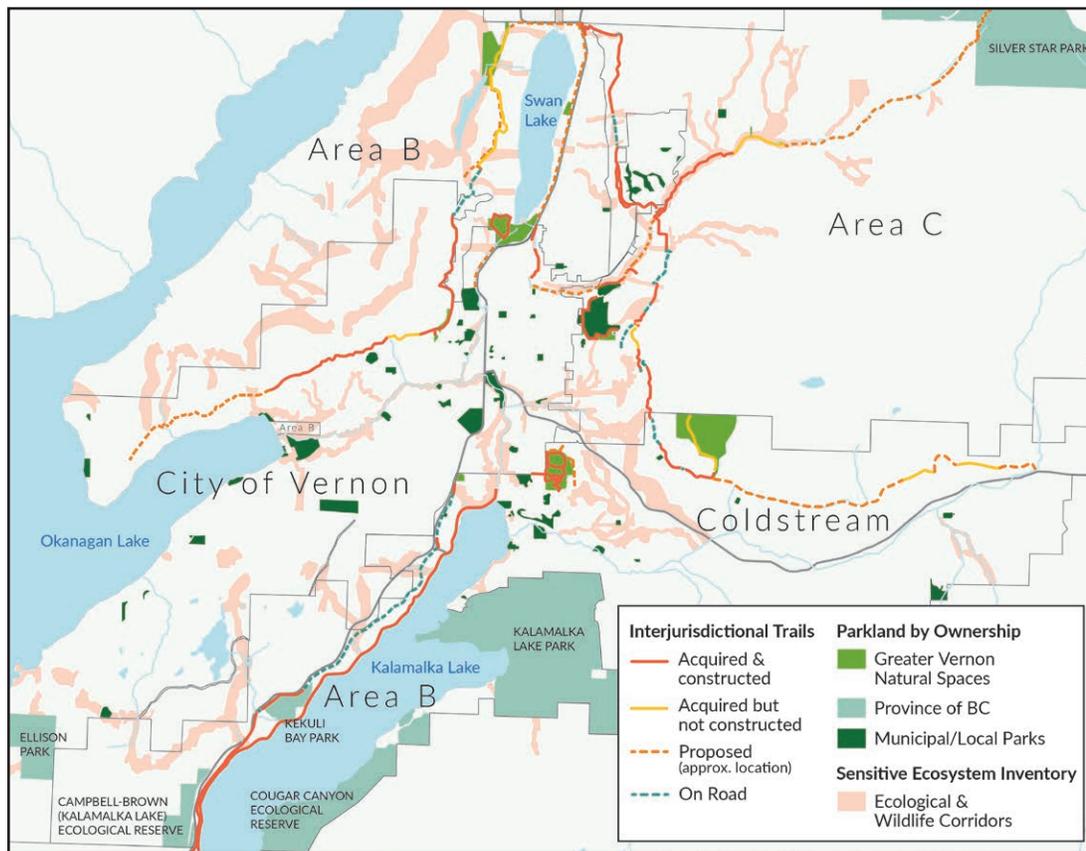
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### Wildlife Connectivity

How are habitats linked to form an interconnected network that allows wildlife movement?

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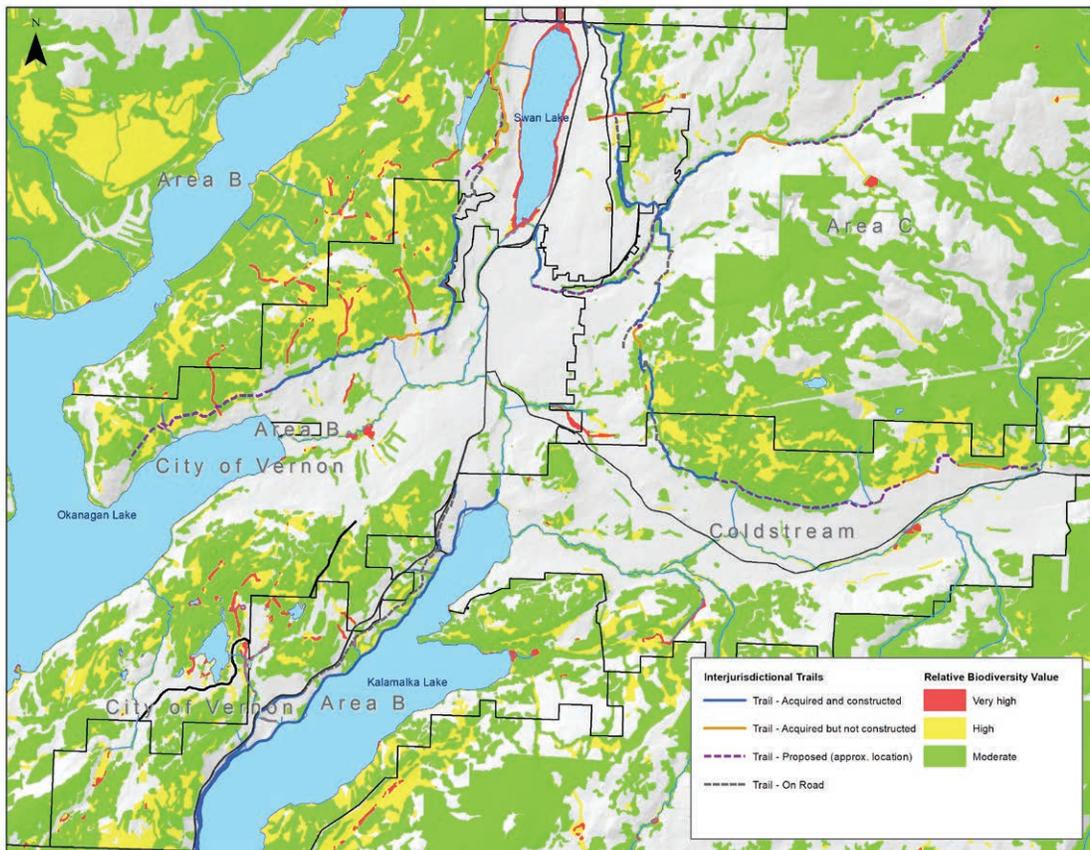
Areas of high conservation value and relatively low development that do not have significant existing protection, and could be considered for future natural spaces acquisition include: the Commonage area, grassland slopes south-west of Swan Lake, an additional section of Grey Canal trail on lower Middleton Mountain, riparian draws on the south-west faces surrounding Becker Lake/Noble Canyon, and south-facing slopes and riparian areas of the Beachcomber Bay area (Okanagan Lake south of Kin Beach). These areas also have wildlife and ecological corridor values (Figure 6).



**Figure 6 - Sensitive Ecosystem Inventory - Ecological and Wildlife Corridors (2007)**

In addition to Swan Lake Nature Reserve and Crane Road, there are connections left to acquire within our inter-jurisdictional trails that will close gaps in wildlife corridors between our natural areas, such as those gaps persisting in the BX Creek Trail.

Another important measurement is relative biodiversity. Data for relative biodiversity was developed by the Okanagan Collaborative Conservation Program, informed by the Sensitive Ecosystem Inventory (SEI) data<sup>6</sup>, and modelled to identify the areas of greatest ecological and biodiversity significance<sup>7</sup>. The modeling used to create the data considered the following characteristics: conservation ranking, wetlands, antelope brush, potential riparian habitat, habitat patch size (larger areas provide higher potential for biodiversity), and distance to roads<sup>6</sup> (Figure 7).



**Figure 7 - Areas of Moderate to High Relative Biodiversity (2013)**

<sup>6</sup> Sensitive Ecosystem Inventory: Coldstream – Vernon, 2007, [https://a100.gov.bc.ca/pub/acat/documents/r15353/ColdstreamVernonSEIreport\\_final\\_1239219082455\\_bb6ec58ff5975128aa583f7031371578b7c09772eda0c94001ac33ee20859d51.pdf](https://a100.gov.bc.ca/pub/acat/documents/r15353/ColdstreamVernonSEIreport_final_1239219082455_bb6ec58ff5975128aa583f7031371578b7c09772eda0c94001ac33ee20859d51.pdf)

<sup>7</sup> A Biodiversity Conservation Summary for the Okanagan Region, 2013, [https://a100.gov.bc.ca/pub/acat/documents/r42389/BioConAnalOkReg\\_1403285119396\\_3283876638.pdf](https://a100.gov.bc.ca/pub/acat/documents/r42389/BioConAnalOkReg_1403285119396_3283876638.pdf)

Natural spaces with the highest relative biodiversity include the grassland-laden properties of the Coldstream Ranchlands, Farnsworth Nature Reserve and Middleton Mountain trails, commonage (including Rose's Pond), and Goose Lake Range out to Adventure Bay. There are also high to moderate areas adjacent to our current and proposed inter-jurisdictional trail networks.

### **Human-Based Assessment**

Kalamalka Lake Provincial Park is a key destination for mountain biking. At over 1,600 ha, it has provided ample space and has been programmed to attempt to balance ecological value with passive recreation. As the interest in mountain biking and hiking increases, more pressure is being felt by Kalamalka Lake Park and other large provincial parks to provide both protection of ecological values such as biodiversity, and connection through passive recreation. This pressure is flowing over into our natural spaces, and we are experiencing an increase in activities and use that is greater than the carrying capacity of our natural spaces, such as the level of mountain biking occurring within the highly biodiverse Coldstream Ranchlands. Acquiring more and larger lands will help ensure that we can balance the protection of ecological value and passive recreation.

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### **Existing Natural Spaces: Condition Assessment**

The condition of our natural spaces influences whether they will be visited and enjoyed by our residents. In preparation for this planning process, each of our natural spaces was reviewed. More specifically, the condition, naturalness and integration of low impact design practices, inclusivity, availability and condition of comfort and convenience amenities, design and ambiance, and capacity to manage visitation were rapidly assessed at each natural space.

The analysis suggests that our natural spaces are generally meeting expectations. However, several important opportunities for improvement were identified, including:

- expanding and enhancing staging and parking areas;
- consistently reviewing and, where appropriate, improving the quality of comfort and convenience amenities and signage as needs are identified;
- providing universally accessible and inclusive opportunities;
- enhancing the quality, supply, and diversity of trails within natural spaces;
- developing and including interpretive and learning opportunities;
- providing active programming to deepen visitor connection to and appreciation of the site; and,
- ensuring natural value through visitor management.

# TRAILS

## Classification

The RDNO provides a variety of trail types which allows for inclusive use of our trails. Our trails are classified into four main categories: Rail Trail, Major Multi-Use, Minor Multi-Use and Nature Trails

### Rail Trail

**Amount of Use:** High

**Types of Use:** Walking, jogging, cycling, maintenance vehicles

**Surface:** Paved or well compacted granular material with base and drainage

**Accessibility:** Universal accessibility where topography and location allow.



*Trail classifications help determine trail construction, servicing levels, and cost impacts. Our trails are non-motorized, multi-use trails that support all-season use, though servicing is limited or absent during the snowy season. None of our trails have been optimized for any particular trail activity.*

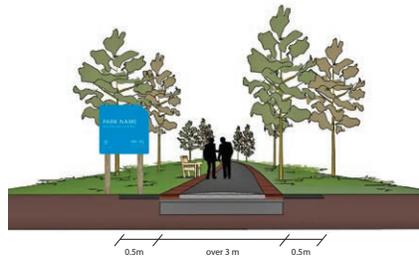
### Major Multi-Use

**Amount of Use:** High

**Types of Use:** Walking, jogging, cycling, maintenance vehicles

**Surface:** Paved or well compacted granular material with base and drainage

**Accessibility:** Universal accessibility where topography and location allow.



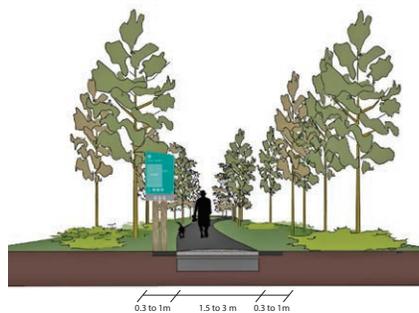
### Minor Multi-Use

**Amount of Use:** Moderate

**Types of Use:** Hiking, jogging, cross-country mountain biking

**Surface:** Gravel or other granular material

**Accessibility:** Accessible where possible



### Nature Trails

**Amount of Use:** Low

**Types of Use:** Hiking, trail running, mountain biking, horseback riding (where potential conflicting use is low)

**Surface:** Compacted mineral soil

**Accessibility:** Beginner to advanced trail user groups



## Trails Inventory

Of the 492.5 km of trails in Greater Vernon, the RDNO currently manages and operates 50.5 km (10%) of constructed trails through the Greater Vernon Trails and Natural Spaces Service (Table 5).

**Table 5 - Kilometres of Greater Vernon Trails by Classification**

		TOTAL KM	Rail Trail	Length by Class		
				Major Multi-Use	Minor Multi-Use	Nature Trail
Inter-jurisdictional Trails (060) *exc. On-road	Grey Canal	19.6km	-	4.8km	10.3km	4.5km
	Okanagan Rail	12.5km	12.5km	-	-	-
	BX Creek	4.3km	-	1.2km	-	3.1km
	Kal / Crystal Waters	6.5km	-	4.9km	-	1.6km
Natural Space Trails (060)	Swan Lake	1.8km	-	-	-	1.8km
	Farnsworth Nature Reserve and Middleton Mtn. Trails	4.5km	-	-	-	4.5km
	BX Ranch	2.3km	-	-	2.3km	-
	<b>SUB TOTAL</b>	<b>50.5</b>	<b>12.5</b>	<b>10.9</b>	<b>14.4</b>	<b>13.7</b>

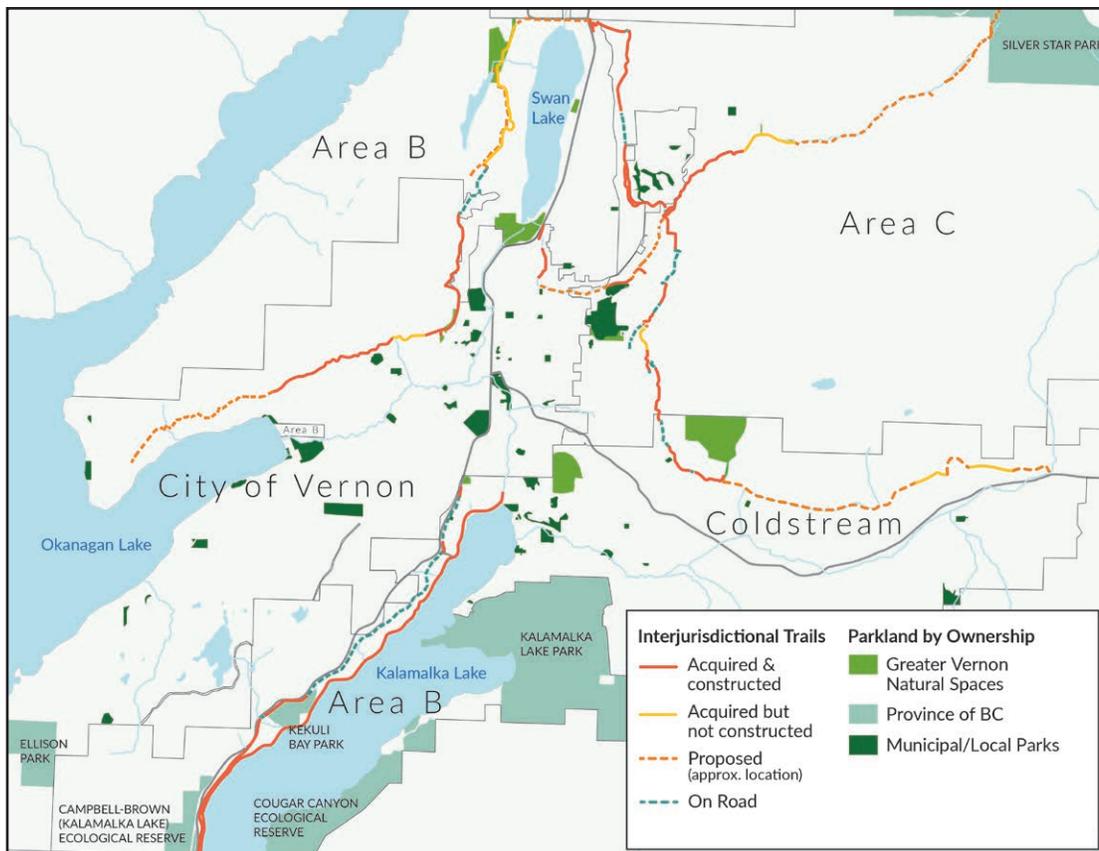
Our trails are being planned and developed to create connections between our communities and our natural spaces. They are referred to as “inter-jurisdictional trails,” and trails that are within our natural spaces, or “natural space trails.”

## Inter-jurisdictional Trails

Though we continue our efforts to expand the connectivity of these trails, the inter-jurisdictional trail network is currently comprised of the following individual trails:

- Grey Canal Trail
- BX Creek Trail
- Okanagan Rail Trail
- Kal / Crystal Waters Trail

These trails are shown in Figure 8, broken out by sections that have been constructed, sections yet to be constructed, and proposed connections that show the approximate location of future connections.



**Figure 8 - Inter-jurisdictional Trails of the Greater Vernon Trails and Natural Spaces Service**

In addition to being immensely popular local recreation assets, these trails can contribute to our local economy by continuing to be major tourist attractions that motivate visitors to come to Greater Vernon from across the regional district, the province, and beyond.

### **Natural Space Trails**

In addition to our inter-jurisdictional trails, we manage approximately 8.6 km of formalized trails within our natural spaces. These trails/networks enhance the recreation experience within our natural spaces and provide opportunities for physical activity and connection to nature. Natural space trails/trail systems include:

- Swan Lake Trail
- Farnsworth Nature Reserve and Middleton Mountain trails
- BX Ranch Trail

A key objective of natural space trails is to balance passive recreation activities and the protection of biodiversity and ecological value of our natural spaces (Figure 9).

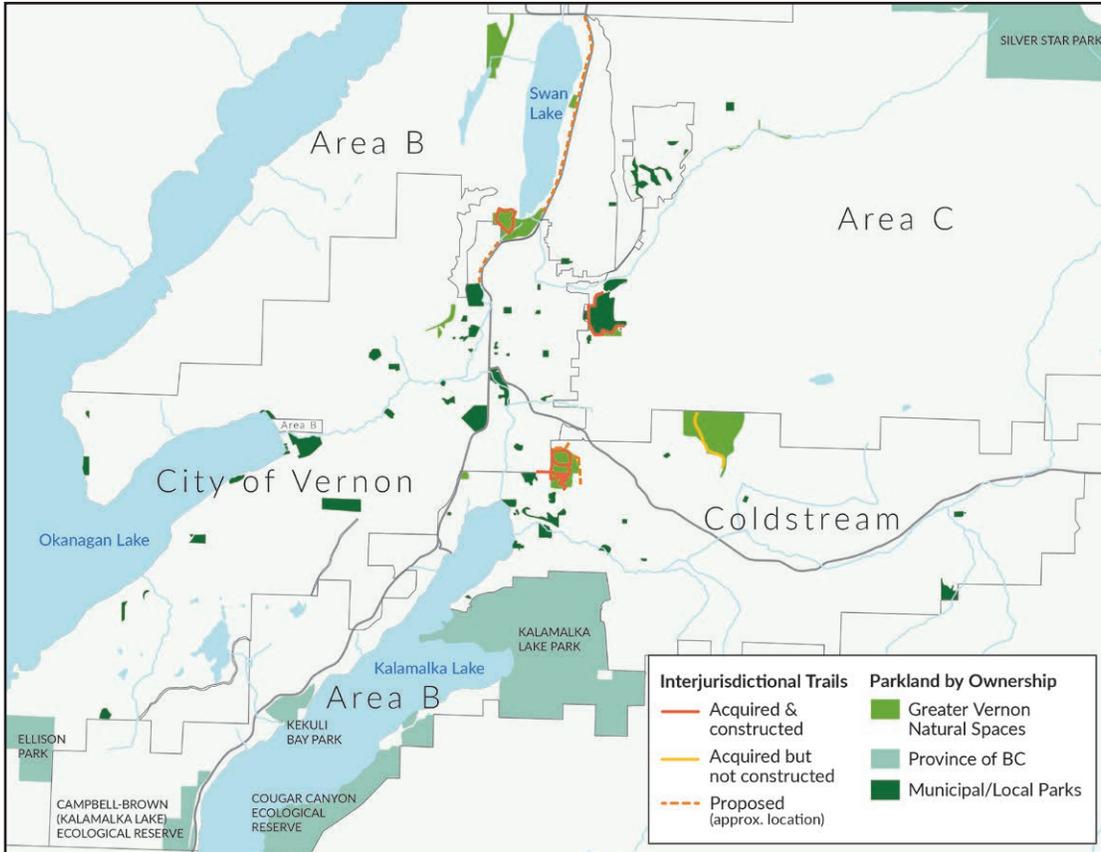
### **Trails and Conservation**

Trails can also contribute to ecological and biodiversity protection. Through the protection of key corridors (Figure 10), trails can play a vital role in connecting into and between our communities and natural areas, for the benefit of its human visitors and its flora and fauna residents.

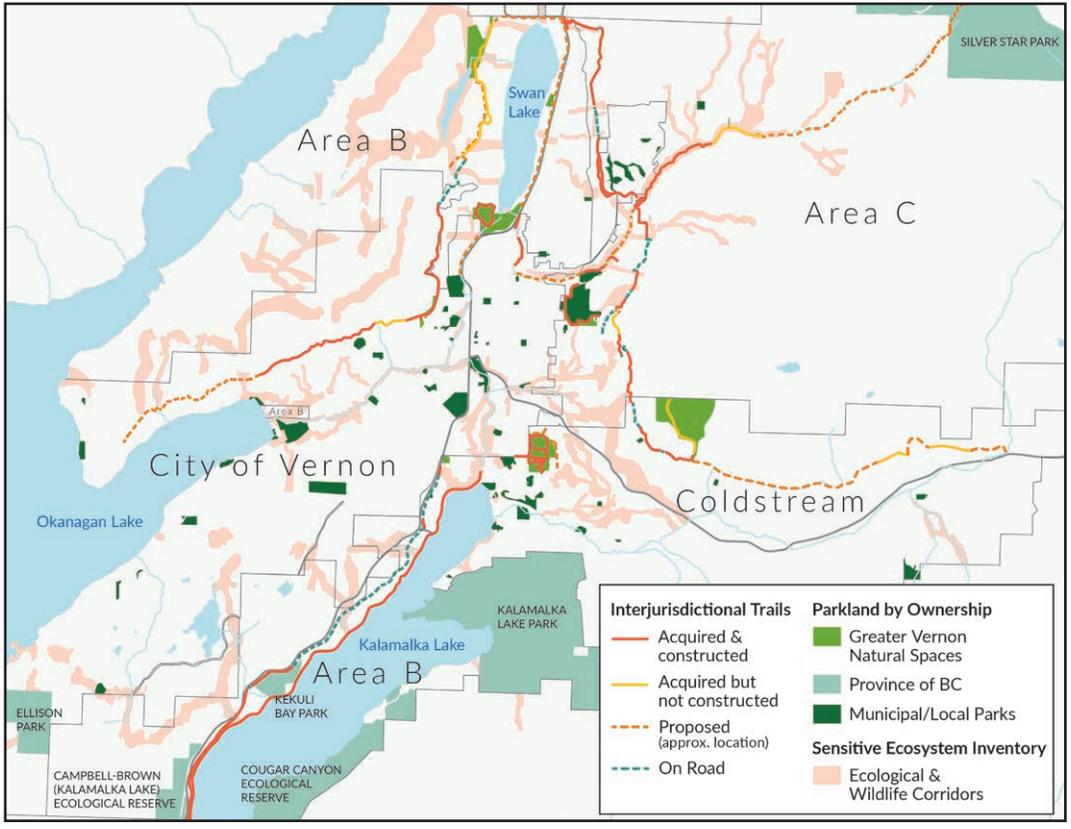
Balancing the protection of key ecological and wildlife corridors, and the passive recreation provided by trails may require consideration of the trail width required in order to achieve a balance of both objectives.

### **Trail Tenure**

Within our inter-jurisdictional trails shown as acquired and constructed there is approximately 2,225 linear metres of network that are at risk due to tenure insecurity. These sections have been constructed and are currently used through non-formalized or term-based agreements. However, the impermanence of the tenure creates risk to the long-term sustainability of the trail. Securing these sections of trail will be critical to ensuring a contiguous trail network.



**Figure 9 - Greater Vernon Natural Space Trails**



**Figure 10 - Greater Vernon Trails as they relate to SEI ecological and wildlife corridors**

## **Existing Trails: Condition Assessment**

A quality trail is essential to providing a positive visitor experience. A rapid field assessment was undertaken to evaluate the general condition of our trails based on the standards identified by their classification. The assessment found the following:

- 60% of our trail length is in excellent condition,
- 30% of our trail length is in satisfactory condition, and
- 10% of our trail length is below expectations.

Those trails falling below expectation are scheduled for improvements in the 2022 five-year capital plan.

Though our trails are generally in good condition, we know there is an opportunity to improve them. These opportunities include:

- Adding more gateway features and improving the sense of arrival at trailheads;
- Incorporating interpretation signage and opportunities to deepen the visitor experience;
- Creating trails opportunities that offer universal accessibility and inclusion;
- Adding amenities such as washrooms or portable toilets at major trailheads; and,
- Improving areas of standing water and poor drainage.

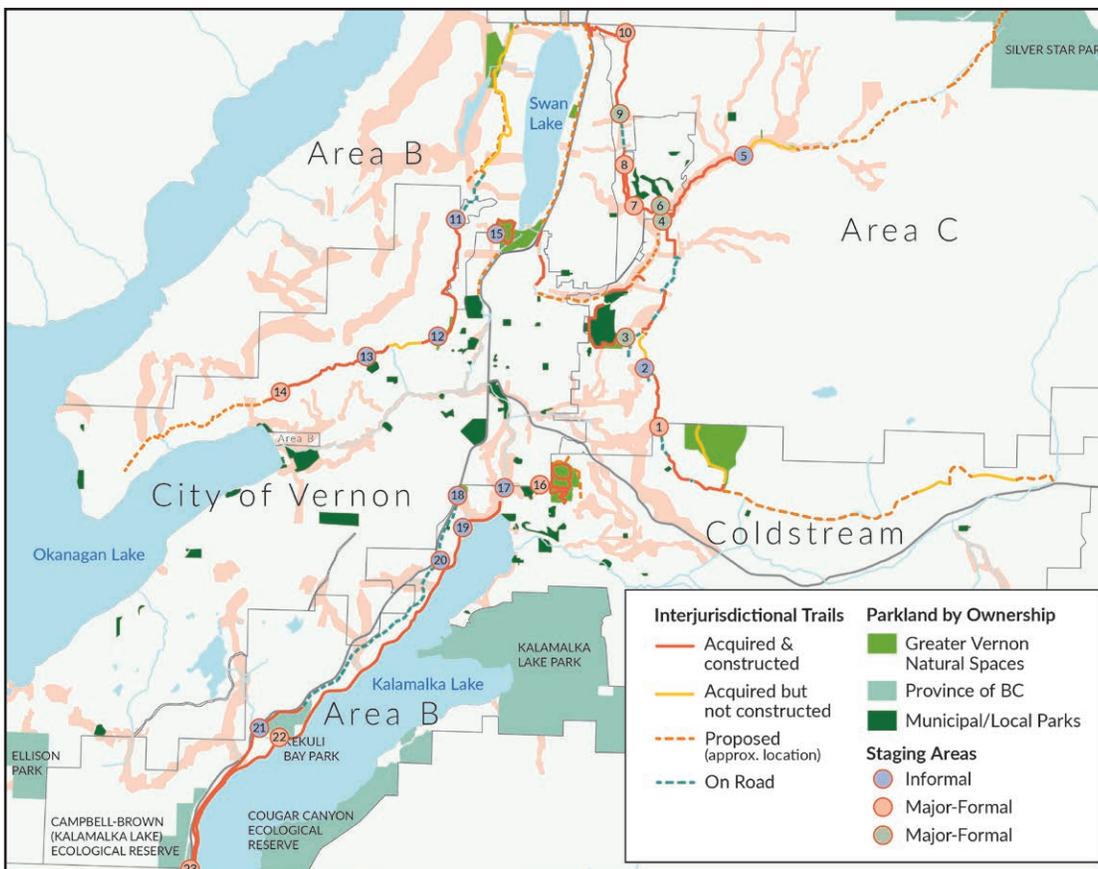
It is also important to consider resourcing new trail construction to ensure a sustainable maintenance program and high-quality service levels.

## **Service and Amenity Analysis**

RDNO trails are accessed through a network of staging and parking areas that can be categorized as major or minor. Major staging areas typically provide a deliberate sense of arrival or gateway to the trail, have greater parking capacity, and provide an increased range of visitor amenities and services. Minor staging areas are typically smaller, may or may not provide parking, and often provide few to no visitor amenities. Of the 23 staging areas identified, thirteen (13) are major, and eight (8) are minor.

In addition to inventorying the staging areas, we assessed their ownership, condition, and accessibility. We found that:

- 8 of the 23 staging areas do not have a formalized ownership, or tenure for the use of the property by the RDNO (Figure 11). One of these staging areas (#7) is a major staging area that serves the Grey Canal Trail. Informal staging areas constitute a risk to the network should use as a staging area no longer be permitted by the land owner.
- 11 of the 12 major staging areas are in good condition with the Swan Lake staging area (#15) in fair condition and requiring some upgrades and maintenance.
- 7 of the 11 minor staging areas (including those that are informal) are in good condition, with the remaining 4 (#'s 6, 9, 14, 23) in fair condition and requiring some upgrades or maintenance.
- Only 6 of the 23 staging areas are universally accessible (#'s: 13, 17, 18, 19, 20, and 22).



**Figure 11 - Greater Vernon Trails and Natural Space Staging Areas**



Though conditions varied across our staging and parking areas, the most common condition issues include:

- undersized parking capacity;
- undefined and poor vehicular circulation and parking stall definition; and,
- degraded parking area surfacing.

Amenities can significantly enhance or detract from a visitor’s comfort and convenience. For some visitors, comfort and convenience amenities are essential to their safety and enjoyment and, pending their design, can improve or limit the inclusiveness and universal accessibility. Our standard amenities by trail classification are listed in Appendix D: Natural Space and Trail Management Matrix.

Like amenities, signage may not motivate residents and visitors to come to our trails and natural spaces; however, it is necessary and provides a fundamental service that helps residents and visitors find our trails and natural spaces, enjoy them responsibly and safely, and enables us to communicate the rules for the site. Signage also helps us share the ecological, Indigenous, historical, and cultural values of the site and enrich and deepen the visitor’s experience through education and interpretation. As illustrated below, we have developed and installed a wide diversity of sign types in our trails and natural spaces, including:

- Gateway features and trailhead kiosks,
- Wayfinding markers, warning, regulatory, and emergency contact, and
- Educational and interpretive.





Though we have been working to enhance our signage system in the past few years, a critical review of our signs indicates we have more work to do. We found that:

- Trailhead and staging area signs do not contain critical site and trail information to allow visitors to confirm that the trail and site is appropriate for their abilities,
- Signage helping visitors find the trails and natural spaces from nearby roadways is not consistently provided, and
- Interpretive and educational signage is limited or not provided, missing opportunities to enrich the visitor experience and deepen their understanding of the site.

## Areas of Interest for Future Natural Space or Trail Acquisitions

Most of the following areas of interest have been identified in previous plans, including the *Ribbons of Green Trails Plan, 2013 – 2033* (2014) and North Okanagan Naturalist Club *Preservers of Nature: Protecting Natural Areas in the North Okanagan* (2020).

Trail/Natural Space	Locations/Details
Adventure Bay Area	Possible natural space acquisition/trail connections
BX Creek Trail	Various locations, extending the existing trail potentially from 48th Avenue to Silver Star park
Ellison Area	Possible additions/connections to existing Provincial Park
Commonage Area	Rose's pond Natural area/trail connections
Kalamalka Provincial Park Area	Possible additions/connections to existing Provincial Park
Swan Lake	Natural space/trail connections to existing Swan Lake Reserve, i.e. east side of Swan Lake Possible Vernon Creek trail connection to existing Swan Lake Reserve
Foothills Knoll	Natural space at the top of the knoll (Jackass Mtn)
Goose Lake Area	Expand existing natural space/trail connections
Grey Canal	Various locations: <ul style="list-style-type: none"> <li>• extending existing trail east towards Noble Canyon,</li> <li>• Goose Lake connections</li> <li>• extending trail around north end of Swan Lake, (connecting east and west sides)</li> <li>• extending trail west towards Adventure Bay</li> </ul>
Kal/Crystal to Predator	Connections from Kal/Crystal trail to Predator Ridge area
Middleton Mountain	Expand existing natural space/trail network
Turtle Mountain	Expand existing natural space/trail network



## Vision + Goals

The vision describes the long-term future for this Greater Vernon Trails and Natural Spaces Master Plan. It serves as a snapshot of the spirit and intent for the service, and inspires action to progress towards this end.

The vision for the Greater Vernon Trails and Natural Spaces Master Plan was developed based on: community input, direction from previous planning efforts, background research, and leadership direction from the Greater Vernon Advisory Committee.

## VISION

The Greater Vernon Trails and Natural Spaces service holds and maintains a diverse, distributed, and sustainable network of publicly-owned natural spaces and trails that protect natural assets and connect people with nature.

Our natural spaces help protect our natural assets, such as key ecosystems to support biodiversity and natural or cultural features, and connect people with nature. Providing passive recreation that is well dispersed, and provides convenience and ease of access to allow for short trips that benefits the health of our community while maintaining ecological integrity, our natural spaces complement the significant systems of parks provided by other organizations.

Our network of trails offers a variety of trail types that link and animate our natural spaces, and connect through Greater Vernon. Inter-jurisdictional in nature, our trails provide ecological corridors, connect people and communities, and link local and regional trails provided by other organizations.

## GUIDING PRINCIPLES

The guiding principles set out the values of the service and provide a set of rules to help ensure that service decisions and actions remain consistent with the vision. Throughout our work, we strive to be:



**Nature-focused:** the protection of important natural areas and ecosystems, is the foundation of what we do.



**Inter-connected:** our work nurtures the essential connection between people and nature, people and each other, and the connection of Greater Vernon through our trail system.



**Inclusive:** ensuring an inclusive environment is essential to our success.



**Collaborative:** we are part of a stewardship team, and we work with others to improve the livability and ecological health of Greater Vernon.



**Knowledge-based:** decision-making is informed by data and science, and incorporates indigenous knowledge. We learn from others and share our knowledge generously.



**Adaptive:** our environment and technology continue to change, so we take an adaptive management approach informed by learning, innovation, and evaluation.

## GOALS

Goals support the realization of the vision by providing a framework and measurable direction for planning and projects. Goals act as a 'checklist' for proposed improvements; if a proposed project meets one or more of the identified goals, it will support the realization of the vision for the Greater Vernon Trails and Natural Spaces service.



### GOAL 1

Greater Vernon's ecologically and culturally important areas are protected through acquisition, advocacy, and management of formally designated natural spaces.

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### GOAL 2

Our Greater Vernon communities and natural spaces are linked through a connected network of ecologically healthy, sustainably managed, and well-maintained trails.

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### GOAL 3

People are more connected with each other and with nature through our well-maintained, diverse, and well-distributed network of trails and natural spaces. Gaps in less serviced areas or land types have been addressed.

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### GOAL 4

Advocate and build capacity and support for sustainable and diverse natural spaces and trail networks owned and managed by other service providers and partners within Greater Vernon.

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To move us forward in progressing our goals, we have identified ten primary strategies and associated actions that fall within four key areas:

### Plan and Design

- Identify specific ecological, and historical and culturally significant areas in Greater Vernon.
- Plan and design for sustainable and site-appropriate development and use of natural areas and trails.
- Create and apply a collaborative and inclusive approach to natural area and trail planning and design.

### Secure and Fund

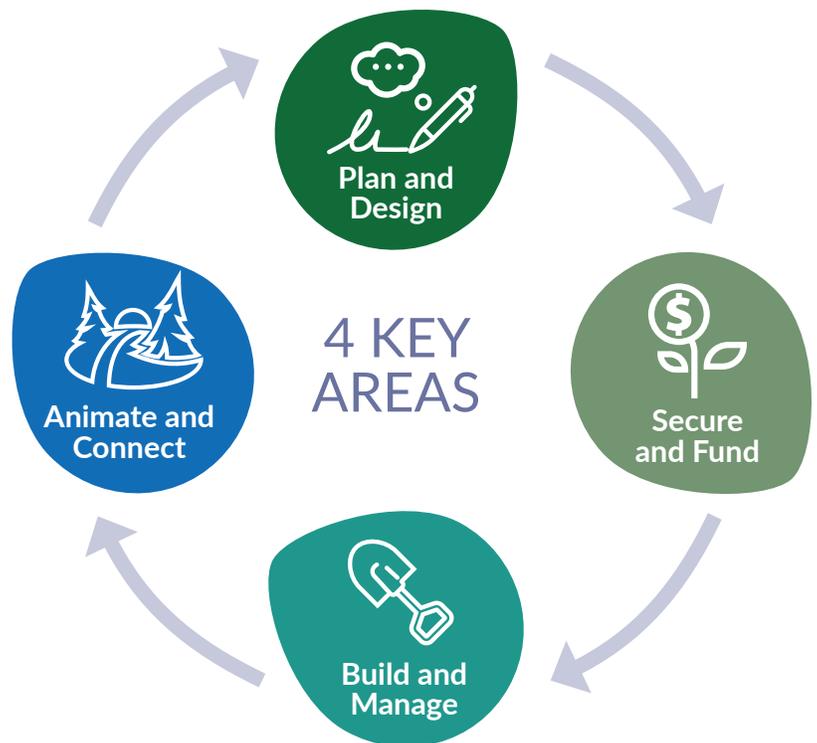
- Secure land that can protect natural, historic and cultural areas and connect Greater Vernon trail systems.
- Protect natural and cultural features through non-acquisition strategies or advocacy where appropriate.
- Update and expand financial tools.

### Build and Manage

- Build and maintain for sustainability.
- Manage for protection of natural, historic and cultural areas and features.

### Animate and Connect

- Provide and promote passive recreation and volunteer opportunities that deepen people’s connection to nature.
- Measure and communicate progress toward goals within the plan to elected leaders and the public.





BX CREEK TRAIL

# Strategies and Actions

## PLAN & DESIGN

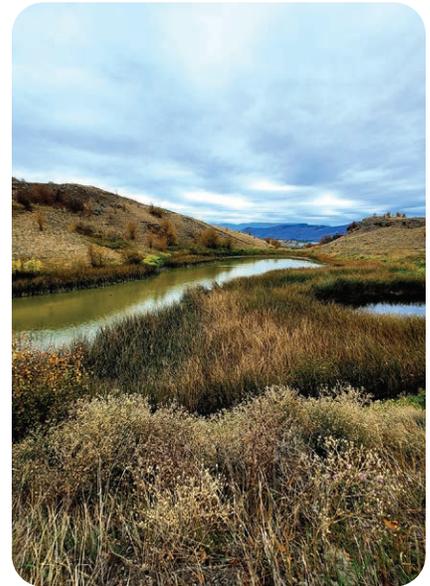
# Strategy 1.

Identify ecological and culturally significant areas in Greater Vernon.

To protect our local, natural ecosystems and key habitats, we need to know what requires protection. Culturally significant features, like the Grey Canal flumes, can help to animate our trails and natural areas through unique experiences and learning opportunities. Identifying key natural and cultural areas and features to protect will allow us to be strategic about our acquisitions and advocacy, and focus on not only protecting, but restoring those areas and features for the benefit of future generations.

### Actions

- 1.1 Review and update (if required) the 1994 Greater Vernon Natural Areas and Features Inventory to inform the priority areas for protection within the *Greater Vernon Trails and Natural Areas Land Acquisition Strategy*.
- 1.2 Work with the Greater Vernon Museum and Archives and local Indigenous communities to identify culturally significant areas and features in natural areas and trails as appropriate, and those that could be considered for protection through acquisition or other available land protection tools.
- 1.3 Support research that updates information that will inform identification of natural and culturally significant areas and features, such as the sensitive ecosystem inventory and biodiversity strategy updates.



## PLAN AND DESIGN

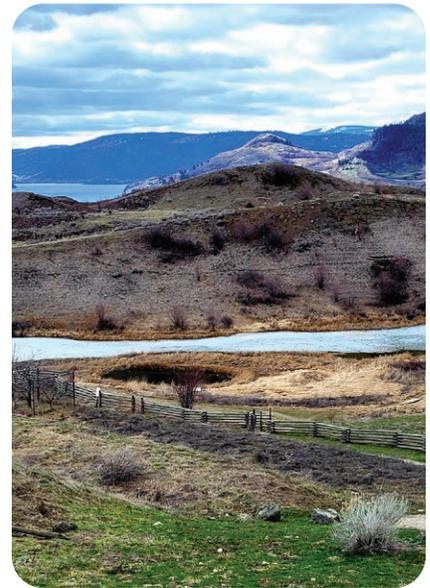
# Strategy 2.

Plan and design for sustainable and site-appropriate development and use of natural areas and trails.

To support the goals, we need to plan and design for site-appropriate activities that strike the appropriate balance between protection and connection through passive recreation. Proactive and collaborative planning is more likely to result in designs that can achieve our goals and be respected by users.

### Actions

- 2.1 Cultivate opportunities to invite specialists, academic institutions, and stewardship practitioners with environmental expertise to provide advice on integration of biodiversity considerations into natural area planning and design.
- 2.2 Develop detailed management plans for natural spaces that apply the Protect-Connect Continuum to provide the right balance between ecological conservation and public use of natural spaces.
- 2.3 Design trails to help reduce carbon emissions and resiliency to climate change, and to ensure safety, accessibility, and unique experiences while considering appropriate activities.



## PLAN AND DESIGN

# Strategy 3.

Create and apply a collaborative and inclusive approach to natural area and trail planning and design.

We are just one part of the network of organizations stewarding our trails and natural spaces, and we are more effective when we work together. Ensuring everyone feels ownership and belonging within our natural spaces and trails will help build our local capacity and support.

### Actions

- 3.1 Work with community organizations, adjacent municipalities, Provincial and Federal Governments, and local Indigenous communities to clarify roles and advocate for greater protection and connectivity of trails and natural spaces, regardless of ownership or management responsibility.
- 3.2 Collaboratively develop a framework to guide, where appropriate, working together with First Nations in planning and stewarding our natural areas and trails.
- 3.3 Regularly collect user/usage data to understand the carrying capacity of natural areas and trails, identify barriers to use or where overuse controls may be required, and inform and evaluate planning and management decisions.



## SECURE AND FUND

# Strategy 4.

Secure land to protect natural and cultural areas and connect inter-jurisdictional trails systems.

A key strategy of this plan is the acquisition of lands associated with the protection of key natural and cultural areas and features, and the completion and increased access to our Greater Vernon trail system.

### Actions

- 4.1 Actively grow the system with input from the community, as identified in a separate *Greater Vernon Trails and Natural Areas Land Acquisition Strategy*, including key natural areas and trails.
- 4.2 For natural space and trail acquisition opportunities not identified in the strategy, apply the *Acquisition Decision Framework* within the *Greater Vernon Trails and Natural Areas Land Acquisition Strategy* (Appendix C) for decision-making to determine acquisition interest and the appropriate organization and strategy to acquire and own.
- 4.3 Review and update land acquisition strategies every three (3) years to be adaptive to the changing area and a growing population.
- 4.4 Realign out-of-scope properties with more appropriate services when possible (ex. Greater Vernon Athletics Park).
- 4.5 Acquire off-road connections for trails where possible (e.g. portions of Grey Canal that are located on-road). (See Fig. 10).

### CONSERVATION COVENANTS

*A conservation covenant is a specific Section 219 covenant under the Land Title Act that is registered on the title to ecologically sensitive land (either lots or portions of lots). The covenant requires landowners to preserve natural and cultural features of the land, while still retaining ownership and appropriate use. Because it is registered on title to the land, it remains in effect after the land is sold or transferred, binding future owners of the land to the terms of the covenant. Many are a three-way agreement between the landowner, the local government and a conservation organization as this provides the best long-term protection and the best use of resources to manage and monitor the land.*

## SECURE AND FUND

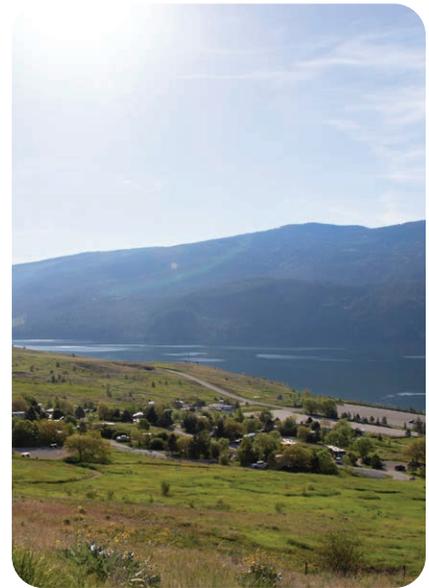
# Strategy 5.

Protect natural and cultural features and provide passive recreation opportunities through non-acquisition strategies where appropriate.

There are many partners that steward protection of natural and cultural features, and the provision of park space for recreation within nature. We must leverage this collaboration and recognize where acquisition is suitable, and where other partners may be more appropriate.

### Actions

- 5.1 Where appropriate, work with land trust organizations to protect lands with a high ecological value that may not be optimal or available for acquisition, through conservation covenants or other mechanisms.
- 5.2 Work with participant jurisdictions to protect existing, expanded, or new natural areas and trail greenways through land-use planning tools such as development setbacks and landscape buffers, and identify these lands within their respective Official Community Plans.
- 5.3 Consider zoning tools, special designations, and advocacy for protection by other levels of government.
- 5.4 Advocate for more support for passive recreation activities on Crown land (such as mountain biking), from provincial providers of natural areas and recreation.
- 5.5 Consider joint property acquisition or joint land assembly where similar goals are shared, and management objectives are aligned.
- 5.6 Support initiatives to allow for public use of private trails and natural spaces.
- 5.7 Encourage the development of active transportation strategies and on-road connections between trails and greenspaces, in collaboration with local government partners.



## SECURE AND FUND

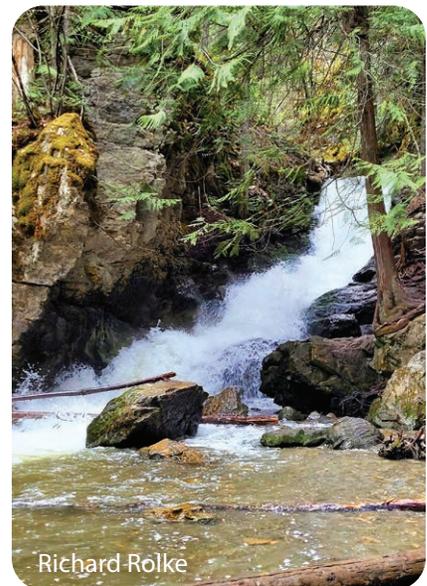
# Strategy 6.

Update and expand financial tools.

Our financial tools, such as taxation, DCC's, borrowing, or grants, are how we can move forward with key parts of our plan for growth of our network. Ensuring that the source of funding is sustainable and appropriate for our service needs is critical for the successful implementation of the plan.

### Actions

- 6.1 Update the Greater Vernon Trail and Natural Spaces Development Cost Charge Bylaw based on this plan.
- 6.2 Incorporate a process with new land acquisitions that ensures sustainable commitment to funding development and ongoing maintenance of natural spaces or trails upon acquisition.
- 6.3 Ensure that the operating budget requirements based on the approved level of service are reflected in the five-year financial plan.
- 6.4 Develop an implementation plan for the Greater Vernon Trails and Natural Spaces Land Acquisition Strategy that includes flexibility to consider emerging opportunities.
- 6.5 Undertake a feasibility study for a North Okanagan regional service that would provide a venue for discussion around planning and funding trail connections between service areas and other communities, and exploring interest in larger, inter-municipal land acquisitions.



Richard Rolke

## BUILD AND MANAGE

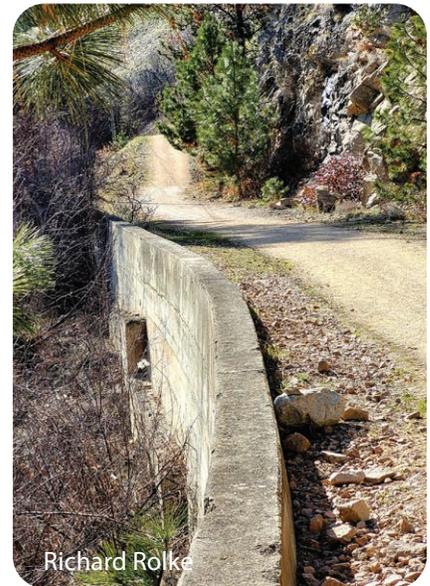
# Strategy 7.

Build and maintain for sustainability.

Ensuring sustainable service delivery requires that we consider our current and future needs. A proactive approach will mitigate financial impacts and ensure a sustained, high-quality system of trails and natural spaces.

### Actions

- 7.1 Build trails for intended use informed by the *Natural Space and Trails Management Matrix* and guided by the Trail Classification and Design Standards.
- 7.2 Track trails and natural space assets within an asset inventory and management plan to inform sustainable capital plans for renewal.
- 7.3 Track and manage user feedback to improve processes and identify opportunities for infrastructure and investment.
- 7.4 Identify and formalize appropriate opportunities to collaborate with local community groups for the benefit of trail or natural space maintenance or development.



## BUILD AND MANAGE

# Strategy 8.

Manage for protection of natural and cultural areas and features.

Culturally significant features like the Grey Canal flumes or important viewsapes can help to animate our trails and natural areas through unique experiences and learning opportunities, as well as protecting these assets for the future.

### Actions

- 8.1 Update bylaws, policies, and signage as necessary to manage risk and better regulate the use of natural spaces and trails in line with the *Natural Space and Trail Management Matrix* (Appendix D: Natural Space and Trail Management Matrix).
- 8.2 Utilize communication tools, such as social media and signage to help reduce negative behaviours and activity within trails and natural spaces and to educate the public.
- 8.3 Manage and restore natural spaces to protect biodiversity, mitigate risk, and incorporate resiliency for climate change (e.g. manage fuels through prescribed burns/mechanical treatments, manage invasive species, restore key habitats).
- 8.4 Inventory priority areas for the protection of culturally significant areas, including scenic or experiential value.
- 8.5 Work with appropriate partners to add on-site interpretive signage and other forms of communication to share the importance of significant cultural areas and features, and build awareness of and protection for these areas.



## ACTIVATE AND CONNECT

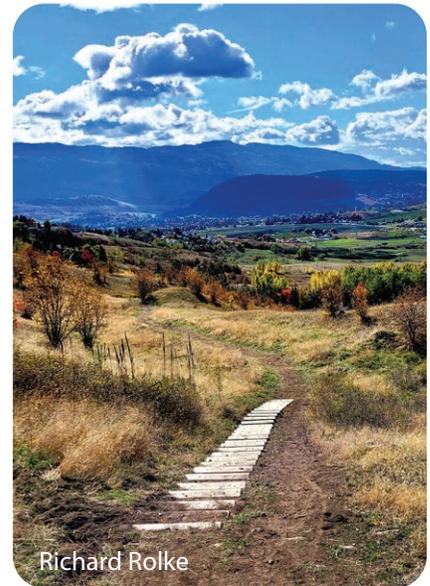
# Strategy 9.

Provide and promote passive recreation and volunteer opportunities that deepen people’s connection to nature.

Our capacity to support our system can be significantly expanded if we tap into the community’s interest and expertise in our natural areas and trails. Ensuring that this interest continues requires that we commit to building awareness and appreciation for our natural and cultural assets.

### Actions

- 9.1 Nurture volunteerism to build capacity for trail and natural space stewardship activities, such as marketing of trails, basic maintenance, conducting stewardship events, or project collaboration.
- 9.2 Work with existing stewardship and trails organizations to promote our trails and natural spaces, and to educate the public, including development of online trails data, interpretive signage that may include storytelling or events and activities that will attract people to natural areas and trails.
- 9.3 Review the Greater Vernon Trails and Natural Spaces grant program and consider a more proactive funding program to deliver on key strategies of the plan, such as habitat restoration or trail activation, through partner organizations.



## ACTIVATE AND CONNECT

# Strategy 10.

Measure and communicate progress toward goals within the plan to elected leaders and the public.

To remain goal-focused, we must regularly communicate our progress toward our goals and adapt and celebrate along the way. Regular and effective communication will ensure continued buy-in and build local support for trails and natural spaces.

### Actions

- 10.1 Regularly report to the Greater Vernon Advisory Committee on performance indicators that help measure progress on goals and review and re-adjust the plan as necessary.
- 10.2 Create a public-facing communications strategy that shares progress on the goals of the master plan in an easily digestible format.



# Appendices



BX RANCH TRAIL

## APPENDIX A: PARKLAND ACQUISITION MODELS

Metro Vancouver (2015) researched various models to determine how much parkland should be acquired. Their findings can be summarized into three approaches: quantitative, ecological gap-assessment and human based needs:

### A review of the quantitative standards model turned up the following conclusions:

- It is no longer considered best practice for Regional Parks agencies to rely solely on a quantitative standards model for determining how much parkland needs to be acquired.
- Quantitative measures, including Parkland Area / Population, may be useful tools in benchmarking current parkland provision against other similar agencies for information when developing and reviewing a Land Acquisition Strategy.
- Quantitative targets may be useful tools for communicating short-term goals and measuring progress if used with consideration that these standards only provide guidance on quantity, not quality of parkland.

The Metro-Vancouver study also looked at a gap assessment model, which considers the amount and type of lands required based on scientific targets such as how much land is required for the protection of biodiversity.

### A review of the gap assessment approach to acquisition targets turned up the following conclusions:

- Positioning our natural spaces within a larger collective effort of protecting natural may provide guidance on how much Regional Parkland should be protected in support of larger, natural area targets or goals for the region.
- Current scientific resources, such as the Sensitive Ecosystems Inventory or Conservation Data Centre information, can support identification of lands with high natural value and guidance on the amount of land needed to protect these values.

- Consider how natural areas could be protected through alternate means such as planning regulations, partnerships, or other levels of protection, when considering land for acquisition.
- Corridors, which are emphasized in a landscape ecology focus, have potential to increase the value and health of linked natural areas.
- A landscape ecology focus would require analysis of the overall geography of natural landscapes to seek opportunities to build upon these areas through development of a linked system.

- A regionally significant landscape types focus will require definition of the landscape types that have significance in the Regional Parks context. Identification of these landscape types may provide additional guidance on how much of each type is needed to support their health and longevity.
- Potential risks or effects of climate change on lands being considered for parkland acquisition warrant consideration in the analysis process.
- Consider opportunities for our natural spaces to play a role in the function and management of lands affected by climate change adaptation.
- Contemplate and plan for the implications, including costs, of managing lands likely to be affected by climate change.

**A review of human-based assessment models turned up the following conclusions<sup>8</sup>:**

- Expressed public desires may provide guidance on “how much natural space land is desired?” and on the types of experiences people wish to have in those natural areas.
- There is a connection between delivery of our service that meet the expressed desires of the public and willingness of public taxpayers in supporting increased or ongoing investment in acquisition.
- Recent and forecasted growth in the area has potential to affect the timeline for prioritizing parkland acquisition.

- The carrying capacity of our natural spaces is typically addressed on a site-by-site basis to understand where human activity can be accommodated without significant negative impacts to natural areas or loss of experience.
- Monitoring use of our natural spaces can provide insights into carrying capacity by observing volume of traffic and impacts on those natural spaces.

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<sup>8</sup> Metro Vancouver Parklands Regional Supply Research, 2015

## APPENDIX B: LAND ACQUISITION TOOLS

Local governments have a variety of options available for the acquisition and funding of parks and trails:

### **New residential subdivisions:**

Under the Local Government Act, new subdivisions must dedicate 5% of the subject land for park purposes or alternatively pay an amount that equals the market value of land required for park purposes. This is a preferred option as it can provide additional park assets at no cost to taxpayers. The RDNO is also authorized through bylaw to collect Development Cost Charges (DCCs) as land is approved for residential development. Local governments must be careful to avoid double-charging developers if both park dedications and DCCs are paid. One approach is to utilize DCCs only for lands that cannot be acquired through the 5% dedication/cash-in-lieu provisions<sup>9</sup>.

**Land donation:** park land may be donated through private donations or fundraising efforts.

### **Land purchase through**

**taxation:** land that cannot be acquired through the development process, may be purchased as titled property through the use of general tax revenue.

**Buy, sever, sell:** RDNO may purchase an entire property with the purposed of dedicating only a portion of the property for parkland. The section of property not required for park is severed through subdivision and re-sold.

**Borrowing:** RDNO may choose to fund park acquisition by borrowing. This would require elector assent (Alternative Approval Process or referendum).

**Grants:** grant funding may be available from senior levels of government for the purchase of land or park assets.

**Parcel tax:** The Capital Regional District (CRD) and Regional District of Central Okanagan (RDCO) acquire parkland through the collection of an annual amount per residential household (currently \$20 per household in CRD).

**Protect lands through covenant or bylaw:** these tools do not “acquire” lands but can help protect private lands for conservation purposes. A covenant may be placed on title, restricting activities on the land or a portion of the land. Steep slopes or riparian areas may also be protected through bylaw. For example, the Official Community Plan for Area C requires that lands designated as Environmentally Sensitive (Schedule C) may not be altered or developed unless a Development Permit is issued.

**Co-ownership / Partnership:** a partnership between RDNO and one or more organizations, all of which are listed on land title.

**Easement:** an easement provides rights to the use of land or a portion of it, for a designated purpose, such as access. An easement provides benefits to another adjacent or nearby parcel of land.

**Statutory Rights of Way:** a SRW may be utilized to provide access to a property or portion of a private property for a specific purpose, e.g. for a public trail. An SRW is placed on title and is binding on current and future owners of the property.

**Crown lease or grants:** Federal or Provincial land may be leased for park purposes.

**Transfer of land from other jurisdictions:** land may be transferred from other local governments to RDNO if it meets the criteria for parklands and trails as detailed in this master plan.

**Expropriation:** an acquisition tool of last resort, expropriation may be utilized to acquire private property at fair market value, for land that is deemed to have a greater public benefit.

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<sup>9</sup> *Parkland Acquisition Best Practices Guide. 2006. Province of BC. [https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/local-governments/finance/parkland\\_acquisition\\_best\\_practices\\_guide.pdf](https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/local-governments/finance/parkland_acquisition_best_practices_guide.pdf)*

## APPENDIX C: LAND ACQUISITION FRAMEWORK

Following are the criteria of the framework used to help guide land acquisition priorities in this plan. These criteria may also be used for new opportunities not already documented in the Master Plan. Criteria include, in order of priority:

**Improve connectivity:** acquire lands that achieve the goals of improving inter-jurisdictional connectivity for trails, or increase the size of existing natural area parks to reduce fragmentation of ecosystems.

**Affordability & Availability:** lands where the cost of the property is reasonable relative to the assessed value, or have potential for cost sharing or partial donation.

**Public Interest:** Public and stakeholders have expressed public interest in acquiring the site and/or it addresses identified gaps in equity to access of trails or natural spaces.

**Ecological conservation:** prioritize lands that contain threatened ecosystems, species at risk, important wildlife corridors or to protect ecosystem services (e.g. flood mitigation).

**Cultural significance:** protect parkland that contains features of historical or cultural significance, or sites with high scenic value.

**Passive outdoor recreation:** acquire land that helps connect people with nature and provides accessible outdoor passive recreation opportunities such as hiking. Development of parks with formal recreation (e.g. sports fields) will be left to other local government partners.

## APPENDIX D: NATURAL SPACE AND TRAIL MANAGEMENT MATRIX

Activities, infrastructure & Amenities		Management Zones		
		Conservation Primary	Conservation w/ Passive Recreation	Recreation Primary
Recreation Activities	Hiking	Non-Permitted Use	Compatible Use	Compatible Use
	Cycling	Non-Permitted Use	Compatible Use	Compatible Use
	Adaptive Cycles	Non-Permitted Use	Permitted Use	Permitted Use
	Downhill Mountain Biking	Non-Permitted Use	Non-Permitted Use	Permitted Use
	On-Leash Dog Walking	Non-Permitted Use	Compatible Use	Compatible Use
	Off-Leash Dog Walking	Non-Permitted Use	Non-Permitted Use	Non-Permitted Use
	Equestrian	Non-Permitted Use	Permitted Use	Compatible Use
	Bird/Wildlife Watching	Compatible Use	Compatible Use	Compatible Use
	Off-Road Vehicles	Non-Permitted Use	Non-Permitted Use	Non-Permitted Use
Trail Types	Major Multi-Use (3m Gravel)	Non-Permitted Use	Permitted Use	Compatible Use
	Minor Multi-Use (2-3m Natural)	Non-Permitted Use	Permitted Use	Compatible Use
	Nature Trail (1m Natural)	Non-Permitted Use	Compatible Use	Compatible Use
	Rail Trail (4m Gravel)	Non-Permitted Use	Non-Permitted Use	Compatible Use
Amenities & Infrastructure	Parking Area	Permitted Use	Compatible Use	Compatible Use
	Regulatory & Wayfinding Signage	Compatible Use	Compatible Use	Compatible Use
	Interpretive Signage	Compatible Use	Compatible Use	Compatible Use
	Waste/Recycling Receptacles	Permitted Use	Compatible Use	Compatible Use
	Toilet (Pit/Outhouse)	Permitted Use	Compatible Use	Compatible Use
	Toilet (Flush)	Permitted Use	Permitted Use	Compatible Use
	Observation Platform	Permitted Use	Compatible Use	Compatible Use
	Benches	Permitted Use	Compatible Use	Compatible Use
	Picnic Tables/Day Use Area	Permitted Use	Permitted Use	Compatible Use
	Day Use Shelter/Shade Structure	Permitted Use	Permitted Use	Compatible Use
	Bicycle Parking	Permitted Use	Compatible Use	Compatible Use
Non-Motorize Boat Launch	Non-Permitted Use	Permitted Use	Compatible Use	

 **Compatible Use:** Uses consistent with the management intent of a natural space under typical design & management practices

 **Permitted Use:** Uses that may be compatible under certain circumstances, with specialized designs and/or management practices

 **Non-Permitted Use:** Uses that are not compatible with the management intent

# APPENDIX E: IMPLEMENTATION PLAN

Funding strategy: