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French Creek Estuary Nature Preserve

Management Plan: 2024 - 2033



Photo Credit: Deborah Freeman

November 2024

REGIONAL DISTRICT OF NANAIMO

BC PARKS FOUNDATION

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ACKNOWLEDGMENTS

The Regional District of Nanaimo respectfully acknowledges that the lands that comprise the French Creek Estuary Nature Preserve and its surrounding area lie within the traditional territory of the Snuneymuxw, Snaw-Naw-As, Qualicum and K'ómoks First Nations whose presence and stewardship reach back to time immemorial.

The French Creek Estuary Nature Preserve Management Plan (2024-2033) reflects the collaborative efforts of the FCENP Management Plan Working Group, BC Parks Foundation, Regional District staff and the residents of the Regional District of Nanaimo.

We extend our gratitude to all individuals and organizations who contributed invaluable vision, knowledge, and input throughout the planning process.

Special thanks are due to the following volunteer members of the Working Group, BC Parks Foundation staff, and RDN staff for their guidance and contributions:

FCENP Management Plan Working Group

Denise Foster - Save Estuary Land Society
Lynne Brookes - Arrowsmith Naturalists
Barb Riordan - Mid Vancouver Island Habitat Enhancement Society and Friends of French Creek Conservation Society
Jenica Ng Cornish - Mount Arrowsmith Biosphere Region Research Institute

BC Parks Foundation Staff

Tse-Lynn Loh - Manager, Land Stewardship

Regional District of Nanaimo Staff

Elaine McCulloch - Senior Parks Planner
Kaitlin Fader - Natural Areas Operations Coordinator
Amy Gore - Superintendent, Parks Planning and Development
Rick Daykin - Manager, Parks Services
Tom Osborne - General Manager, Recreation and Parks

Your dedicated support and expertise have been instrumental in shaping this management plan and ensuring the long-term sustainability and conservation of the French Creek Estuary Nature Preserve.



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French Creek Estuary Nature Preserve
Management Plan

The signatories of the primary partners approve the 2024-2033 Management Plan for the French Creek Estuary Nature Preserve.

Signed by:
Andrew Day
F726C021C12D4C4...

Andy Day, CEO
BC Parks Foundation

1/28/2025
Date

Vanessa Craig, Board Chairperson
Regional District of Nanaimo

February 25, 2025
Date

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EXECUTIVE SUMMARY

In 2022, the BC Parks Foundation (BCPF) and the Regional District of Nanaimo (RDN) acquired 8.4 hectares of land from a developer, expanding the existing 0.84-hectare Columbia Drive Community Park to create the 9.22-hectare French Creek Estuary Nature Preserve (FCENP). This achievement was made possible through the dedicated efforts of the BC Parks Foundation, conservation and stewardship organizations, and community volunteers. Their commitment to raising awareness, spearheading grassroots initiatives, and fundraising played a crucial role in this significant acquisition.

The RDN manages the FCENP through the Electoral Area G Community Park Service under a 99-year renewable lease agreement with the BC Parks Foundation. Under the lease agreement, the RDN is responsible for managing the FCENP as a nature preserve where the protection of its ecological values takes precedence over recreation.

The French Creek Estuary Nature Preserve Management Plan will guide the protection, ecological enhancement, and community use of the FCENP. The plan provides a clear vision along with management goals, strategies, and actions focused on prioritizing ecosystem protection and enhancement while supporting opportunities for visitors to enjoy its natural values through low-impact recreation.

The management plan is presented in four parts:

Introduction – Sections 1 and 2 present the planning process, legislative and policy context and community engagement that informed the development of the plan.

Situating the FCENP – Section 3 describes the overall context, highlighting its conservation importance, site and acquisition history, property information, access and adjacent land use.

The FCENP Today – Sections 4 and 5 offer an overview of the natural, recreational and cultural values and identify the threats and challenges influencing its management.

Looking Towards the Future - Sections 6, 7, 8 and 9 present a comprehensive long-term vision and detailed management strategy for the FCENP, establishing goals, strategies and actions; outlining plans for ecological enhancement and physical improvements; designating areas for public access; defining permitted and non-permitted activities; and identifying priorities for Plan implementation.

Creating the Management Plan

The FCENP Management Plan was developed in five phases:

1. Project Start-up
2. Information Collection and Analysis
3. Management Plan Development
4. Public Review of Draft Management Plan
5. Plan Finalization and Approvals

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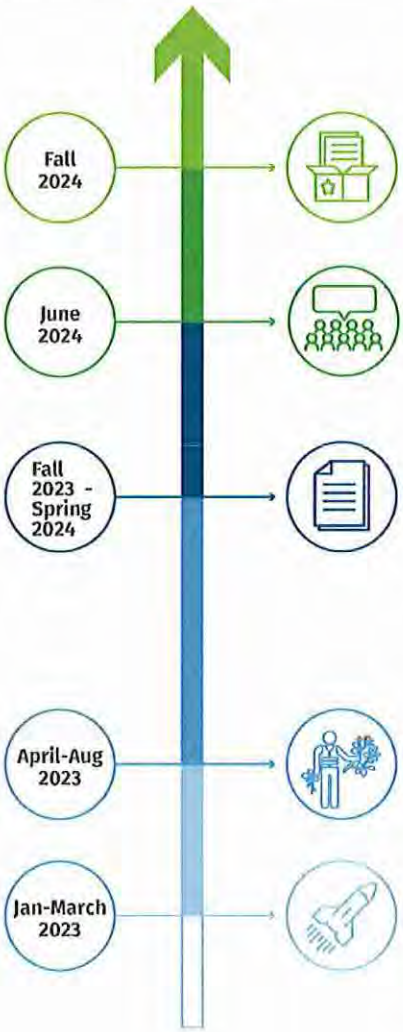
The Public Engagement Process

The development of the management plan began in January 2023. At the outset of the project, a Working Group consisting of RDN staff and members of conservation and stewardship groups was formed to advise and participate in the plan's development. The Working Group provided advice and input throughout all phases of Plan development.

Community engagement activities were held to receive feedback and confirm the proposed vision, goals, strategies, actions, concept plan and use guidelines for the management plan. Engagement methods included a project webpage, an in-person open house and an online comment form.

Figure 1: Planning Process and Timeline



PHASE 5
Present final draft plan for Board approval
- Deliverables: Final Draft Management Plan & Final Plan

PHASE 4
Public Review of Draft Plan
- Engagement: Get Involved RDN webpage, Open House
- Deliverables: What We Heard Engagement Summary report

PHASE 3
Draft Plan Development
- Tasks: Threats and Opportunities, Draft Vision, Goals, Strategies, Actions, Concept Plan, Use Guidelines
- Engagement: Involve Working Group in plan development; Inform public about project via GIRDN webpage, site signage, information flyer handout
- Deliverables: Draft Management Plan; Draft Background Report

PHASE 2
Information Collection and Analysis
- Tasks: Background Research, Engagement Plan
- Engagement: Involve Working Group
- Deliverables: "Restoring the FCENP" (Alder Env., 2023) & "FCENP Restoration Options" (NHC, 2024)

PHASE 1
Project Start Up
- Tasks: Develop Plan Outline; Background Research: Engagement Plan
- Engagement: Involve Working Group

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Engagement Outcomes – What We Heard

Engagement feedback was collected to better understand what the community thought of the draft vision, goals, strategies, actions, concept plan and use guidelines for the management plan. A summary of engagement feedback is provided in the What We Heard Engagement Report (Appendix A). Based on the input received through the open house and comment forms, the following key themes were identified:

- Keep the proposed vision, management goals, and strategies, as they reflect the desired future of the FCENP.
- Prioritize restoration and enhancement of natural habitats to increase biodiversity and consider integrating these efforts into broader watershed restoration and planning.
- Explore options for purchasing or protecting Lot A to prevent development and protect the ecological integrity of the area.
- Continue to work with community groups and volunteers to support ongoing protection and restoration efforts.
- Implement and maintain restrictions such as leash requirements for pets, pedestrian-only walking trails, and limited access to sensitive habitats.
- Emphasize conservation and long-term protection of the FCENP.
- Support the existing trail network and decommission unofficial trails to reduce human impact.
- Offer amenities and services suitable for a nature preserve.
- Develop educational opportunities, including signage and tours, to raise awareness and encourage stewardship of cultural and environmental resources.

Vision

The vision provides an overarching guide for decision-making and management of the FCENP. It describes a natural area that will be actively managed to enhance and protect biodiversity. It focuses on conserving and enhancing important natural ecosystems while providing low-impact opportunities for visitors to connect with nature.

> *The French Creek Estuary Nature Preserve is and will remain a natural area, actively managed to enhance and protect its diverse ecosystems, biodiversity and cultural values.*
>
> *The French Creek Estuary Nature Preserve offers opportunities for ecologically sensitive community enjoyment of nature.*

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Goals, Strategies and Actions

Three goals emerged to support the vision for the FCENP. Each goal is supported by strategies and actions to be accomplished over the next ten years as presented in the table below.

Goals, Strategies and Actions

GOAL 1: Protect, Conserve and Enhance Ecological Biodiversity	
1.1	**Strengthen the protection, recognition and conservation focus of the FCENP**
1.1.1	Incorporate the FCENP into an updated RDN Community Parks Classification System to recognize its ecological importance and emphasize its conservation focus
1.1.2	Pursue recognition of the FCENP within the Canadian Protected and Conserved Areas Database
1.2	**Conserve and enhance biodiversity through the retention of natural features, rehabilitation of degraded areas, removal of invasive species and habitat improvements**
1.2.1	Implement ecological enhancement strategies that improve the habitat quality of the FCENP
1.2.2	Develop a monitoring and reporting system to evaluate ecological enhancement and protection efforts
1.2.3	Seek out additional funding sources to facilitate the implementation of ecological enhancement and research projects, including grants, donations, fundraising and project partnerships
1.2.4	Support the conservation and ecological enhancement of lands within the French Creek watershed
GOAL 2: Encourage Community Enjoyment of Nature	
2.1	**Provide a system of safe, inclusive and well-maintained trails, viewing areas, and access points that provide low-impact opportunities to interact with nature**
2.1.1	Implement amenities and development improvements outlined in Section 7.0, "Concept Plan"
2.2	**Limit activities that harm the ecological integrity of the FCENP**
2.2.1	Maintain an official trail system and decommission unsanctioned trails and access points as described in section 7.0 "Concept Plan"
2.2.1	Prevent access to sensitive areas outside of the sanctioned trail network as described in section 7.0 "Concept Plan"
GOAL 3: Collaboration, Volunteerism and Knowledge	
3.1	Involve First Nations, conservation and stewardship groups, and educational and research institutions to participate in ongoing protection and ecological enhancement of the FCENP
3.1.1	Support Indigenous-led ecological enhancement projects by engaging directly with First Nations and First Nation-led stewardship organizations
3.1.2	Support community-led ecological enhancement initiatives
3.2	Foster the pursuit of knowledge through education, community science and research
3.2.1	Explore opportunities to incorporate cultural education and interpretation into park signage and programming in collaboration with First Nations
3.2.2	Create nature-based educational opportunities for youth and adults through interpretive signage and programming
3.2.3	Encourage and support independent research projects and community science activities to broaden scientific understanding of sensitive ecosystems and habitats

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Implementation and Financial Summary

The management plan outlines a 10-year framework for implementing the actions that support the vision, goals and strategies. The total capital cost to implement the action items over this period is $307,008, to be funded through the Electoral Area G parks capital budget and grants from other organizations. Annual operating costs include a general allowance of $17,000.

Implementation of Capital Projects

Action	*Deliverable*	*EA -G Capital Budget*	**Other Organization*	*Year to Implement*
1.2.1	Implement priority enhancement project: Pond Naturalization	$32,000	$20,543	2024/2025
2.1.1	Design and implement improvements to the main entrance, parking area and viewing area #1	$79,358	$18,107	2024/2025
2.1.1	Install trailhead baffles/ removable bollards for vehicle access (Trailheads #1 and #3)	$10,000		2024/2025
2.2.2	Install access controls and signage along Columbia Dr.	$5,000		2024/2025
2.1.1	Conduct an Archaeological Impact Assessment for infrastructure and enhancement planning	$20,000		2025
2.1.1	Install wayfinding, information, regulatory signage	$2,000		2025
2.2.2	Install access controls and signage to deter access to the pond	$5,000		2025
2.1.1	Construct viewing areas with benches at viewing areas #2 and #3	$35,000		2027
3.2.1	Incorporate cultural education into infrastructure, signage and programming	$50,000		2027
2.1.1	Improve the roadside trail on Columbia Dr. to connect Trail Heads #2 and #3	$30,000		2032
		268,358	**$38,650**	**TOTALS**

**Other Organization - MABRRI has secured HCTF grant funding for 2024/2025 ecological enhancement projects*

Conclusion

The FCENP Management Plan outlines a comprehensive strategy for protecting and enhancing the FCENP's ecosystems while offering opportunities for visitors to enjoy its natural values through low-impact recreation. The Plan, developed through collaborative efforts and extensive community input, provides a clear roadmap for achieving its objectives. The RDN is committed to implementing the recommended actions to ensure the FCENP's ecological health and community value. Moving forward, focused efforts on these priorities will support the long-term sustainability of the FCENP and benefit both the environment and the community.

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1.0 INTRODUCTION

1.1 Overview

The French Creek Estuary Nature Preserve (FCENP) lies within the traditional territory of the Snuneymuxw, Snaw-Naw-As, Qualicum and K'ómoks First Nations whose cultural connections to the land, water and Salish Sea date back to time immemorial and remain today. The FCENP is situated between the urbanized areas of Parksville and Qualicum Beach in the Regional District of Nanaimo's Electoral Area G. It is located on the north side of the French Creek Estuary, near the intersection of the West Island Highway and Columbia Drive.

In 2022, the BC Parks Foundation (BCPF) and the Regional District of Nanaimo (RDN) acquired 8.4 hectares of land from a developer. This property, along with the previously existing 0.84-hectare Columbia Drive Community Park, forms the 9.22-hectare FCENP. The RDN is responsible for managing the FCENP as a nature preserve where protection of its ecological values takes precedence over recreation.

Vancouver Island's southeast coast is one of the most biologically diverse and ecologically vulnerable regions in British Columbia. Protecting and restoring the natural habitat of the FCENP is essential for sustaining the unique biodiversity of the area and ensuring its long-term resilience. The FCENP also provides opportunities for people to connect with nature, engage in volunteer stewardship and contribute to research and scientific studies.

1.2 Purpose of the Management Plan

The management plan guides the protection, ecological enhancement activities and community use of the FCENP. It establishes a clear vision, management goals, strategies and actions that prioritize the protection and enhancement of ecosystems while offering opportunities for visitors to enjoy its natural values through low-impact recreation.

Key aspects of the management plan include:

- **Alignment with Conservation Goals:** The management strategies align with the original conservation objectives for which the French Creek Estuary lands were acquired, ensuring the continued fulfillment of its intended purpose.
- **Protection of Natural Habitats and Species:** It ensures the protection and enhancement of biodiversity by regulating public access and activities to minimize human impact on the environment.
- **Ecological Enhancement to Increase Biodiversity:** It includes ecological enhancement activities designed to improve habitat quality and increase biodiversity within the FCENP.
- **Scientific Research and Ecological Monitoring:** It supports ongoing scientific studies and monitoring efforts to provide critical data for informed management decisions and to track the health of ecosystems over time.
- **Low-impact Recreation Opportunities:** It provides opportunities for the community to experience nature while minimizing disturbance to sensitive ecosystems and ecological enhancement efforts.

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- **Public Awareness and Education:** It facilitates public awareness and education about the ecological significance of the FCENP through educational programs, interpretive signage and guided tours, aiming to help visitors understand and appreciate the area's natural and cultural values.
- **Collaboration with Local Organizations and First Nations:** It outlines opportunities to work with local conservation and stewardship organizations in the protection and ecological enhancement of the FCENP. Additionally, it encourages collaboration with the Snuneymuxw, Snaw-Naw-As, Qualicum and K'ómoks First Nations to build awareness of traditional land use and identify culturally significant areas.

The management plan is designed to be adaptive, evolving in response to emerging knowledge and changing conditions such as climate change. It will be reviewed and adjusted regularly to ensure its ongoing relevance and effectiveness.

1.3 Plan Organization

The management plan has nine chapters that provide an overview of the planning process and management framework that will guide the management and operations of the FCENP. The management plan is presented in four parts:

Introduction – Sections 1 and 2 present the planning process, legislative and policy context and community engagement that informed the development of the plan.

Situating the FCENP – Section 3 describes the overall context, highlighting its conservation importance, site and acquisition history, property information, access and adjacent land use.

The FCENP Today – Sections 4 and 5 offer an overview of the natural, recreational and cultural values of the FCENP and identify the threats and challenges influencing its management.

Looking Towards the Future - Sections 6, 7, 8 and 9 present a comprehensive long-term vision and detailed management strategy for the FCENP, establishing goals, strategies and actions; outlining plans for ecological enhancement and physical improvements; designating areas for public access; defining permitted and non-permitted activities; and identifying priorities for Plan implementation.

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1.4 Planning Process

The FCENP Management Plan was developed using a phased planning process that ran from January 2023 to August 2024. Figure 1 summarizes the five project phases and associated project timelines.

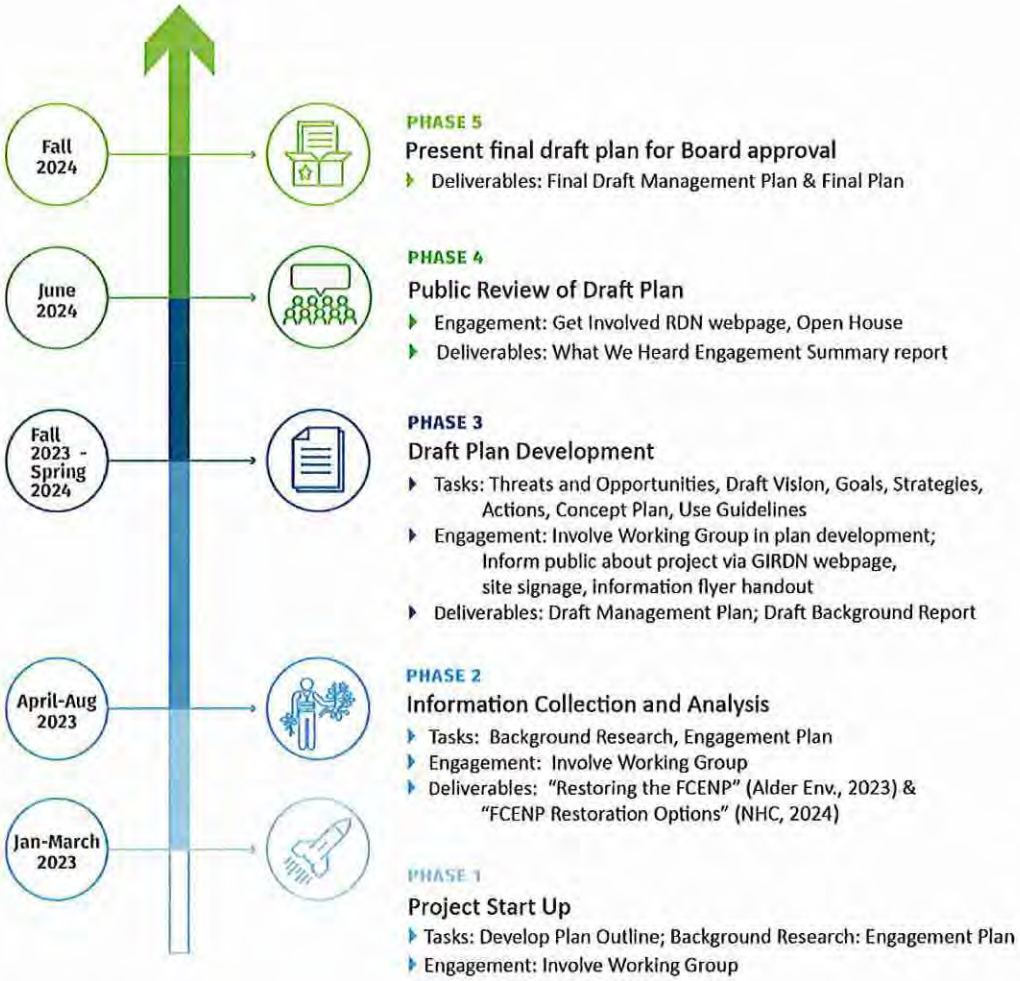

Figure 1: Planning Process and Timeline

Local conservation groups, non-governmental organizations and residents of Electoral Area G actively contributed their input throughout the planning process. Section two provides a more detailed description of the community's involvement, including the formation of a Working Group to assist in the development of the management plan and implementation activities.

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1.5 Legislative and Policy Context

The management of the FCENP and the contents of this plan follow the legislative requirements established in the Local Government Act, RDN Regional Growth Strategy Bylaw No. 1615, RDN Park Use Regulations Bylaw No. 1801, RDN Land Use and Subdivision Bylaw No. 500, RDN Electoral Area G Official Community Plan Bylaw No. 1541, French Creek Estuary Lands Lease and Management Agreement (2022); and is consistent with the priorities established in the following regional plans, strategies and policies:

- RDN Parks and Trails Strategy, 2022
- Community Parks and Trails Strategic Plan for Electoral Areas E, F, G and H, 2014
- French Creek Active Transportation Plan, 2022
- RDN Parks and Trails Guidelines, 2014
- Tree, Fire Risk and Invasive Species Management in RDN Parks and Trails, 2021
- RDN Public Engagement Policy, 2020

Relevant future park planning and operation documents include:

- Parks Biodiversity Strategy (anticipated in 2025)
- Parks Wildfire Risk Mitigation Strategy (anticipated in 2025)
- Community Park and Trail Classification update (anticipated in 2025)

The FCENP will be managed in accordance with relevant federal and provincial legislation and regulations including:

- Fisheries Act (Federal)
- Species at Risk Act (Federal)
- Navigable Waterways Protection Act (Federal)
- Wildlife Act (Provincial)
- Fish Protection Act (Provincial)
- Occupational Health and Safety Act (Provincial)
- British Columbia Building Code Provincial)
- Weed Control Act (Provincial)

Other significant influences on the development of the Management Plan include:

- RDN Lease and Management Agreement with BCPF
- Biophysical inventory and ecological enhancement studies
- Current and historical uses of the FCENP
- Input from the Management Plan Working Group
- Outcomes of the public engagement process

The **RDN Regional Growth Strategy, Bylaw No. 1615** provides a framework for sustainable growth and land use in the RDN. It focuses on protecting and enhancing the natural environment, conserving biodiversity and ecological services. The RGS emphasizes the importance of cooperation among jurisdictions, including First Nations and partnerships with volunteer groups to achieve its goals.

The **RDN Park Use Regulations, Bylaw No. 1801** outlines the rules and regulations for managing, controlling and using the FCENP and other regional and community parks.

The **Parks and Trails Strategy** outlines a 10-year vision and goals for regional and community parks, including collaboration with First Nations and strengthening partnerships with non-profit organizations to protect and restore natural parkland and conservation lands.

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2.0 COMMUNITY ENGAGEMENT

Community engagement is vital for developing a successful management plan and ensuring the long-term stewardship of the FCENP. This section outlines the engagement strategy which involved a Working Group of representatives from local conservation and stewardship organizations who provided direct input. Additional community feedback was gathered through an open house and an online comment form, ensuring that diverse perspectives were considered and integrated into the final plan.

2.1 Engagement Process

The Electoral Area G Parks and Open Space Advisory Committee (POSAC) provided oversight on the FCENP Management Planning process. The FCENP management plan was discussed at the following POSAC meetings:

- May 1, 2023 – Parks Quarterly Update Report – Q1 2023
- September 11, 2023 - Staff Report to EA G POSAC, Engagement Plan, presentation
- January 29, 2024 – Parks Quarterly Update Report – Q4 2023
- May 6, 2024 - Staff Report to EA G POSAC, Engagement Plan, presentation

2.1.1 Engagement with First Nations

The RDN reached out to representatives from the Snuneymuxw, Snaw-Naw-As, Qualicum and K'ómoks First Nations during the development of the management plan. Ongoing correspondence will facilitate collaboration in maintaining and protecting traditional landscapes while working to restore the area's ecological health.

2.1.2 Engagement with Interested Parties

Engagement with local conservation and stewardship groups involved establishing a FCENP Management Plan Working Group to provide advice and actively participate throughout the plan development process.

Led by RDN staff, this Working Group included representatives from the Save Estuary Land Society, Arrowsmith Naturalists, Mid Vancouver Island Habitat Enhancement Society, Friends of French Creek Conservation Society and Mount Arrowsmith Biosphere Region Research Institute.

The Working Group provided advice, input and review on the following:

- Engagement plan and materials: Reviewing and advising on strategies for community engagement
- Draft Table of Contents: Providing input on the structure and content of the management plan
- Information Collection and Analysis: Researching and reviewing data on plant community mapping, ecological health assessments, biodiversity and designations, property history and acquisition and current conditions and use that informed the background report document
- Strategic Visioning: Providing input into draft vision statements, goals, strategies and actions
- Community Science and Outreach: Securing funding, coordinating and conducting scientific research, educational outreach efforts, invasive plant removal efforts, ecological enhancement initiatives
- Reviewing Draft Plans: Reviewing preliminary and final drafts of the management plan
- Community Engagement: Sharing management plan information with the community and participating in public events

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As a result of this collaborative process, a comprehensive background report detailing the history, existing conditions, threats, challenges and opportunities was developed. Drafts of the vision, goals, strategies, actions, concept plan and use guidelines were then presented to the community for feedback.

2.1.3 Engagement with the Community

Community engagement activities were held to receive feedback and confirm the proposed vision, goals, strategies, actions, concept plan and use guidelines for the management plan. Engagement methods included a project webpage, an in-person open house and an online comment form as summarized in Table 1.

Table 1: Community Engagement Activities

Activities	Location	Participants
RDN Get Involved project webpage	Opened September 21, 2023 https://www.getinvolved.rdn.ca/fce-nature-preserve	371 "aware" 171 "informed" *
Open House	June 22, 2024 10:00 a.m. – 1.00 p.m. FCENP main parking lot	45 attendees
Comment Form	Available online on the project webpage, paper copies at the open house and emailed submissions	30 responses

**Participants who visited the main RDN Get Involved project page are considered "Aware"; and participants who also visited additional pages, documents and comment forms are considered "Informed"*

Information gathered through the community engagement process was compiled into a "What We Heard" summary report, available in Appendix A. The input gathered from the open house and comment forms revealed the following key themes:

- Keep the proposed vision, management goals, and strategies, as they reflect the desired future of the FCENP.
- Prioritize restoration and enhancement of natural habitats to increase biodiversity. Consider integrating these efforts into broader watershed restoration and planning.
- Explore options for purchasing or protecting Lot A to prevent development and protect the ecological integrity of the area.
- Continue to work with community groups and volunteers to support ongoing protection and restoration efforts.
- Implement and maintain restrictions such as leash requirements for pets, pedestrian-only walking trails, and limited access to sensitive habitats, including the pond.
- Emphasize conservation and long-term protection of the FCENP.
- Support the proposed trail network and decommission unofficial trails to reduce human impact as presented in the Concept Plan.
- Offer essential facilities and services appropriate for a nature preserve.
- Develop educational opportunities, including signage and tours, to raise awareness and encourage stewardship of cultural and environmental resources.

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2.2 Summary of Engagement Process

The FCENP Management Plan was informed by the FCENP Background Report prepared by the Working Group and through community engagement. The Background Report provides details on the FCENP's history, current conditions, threats, challenges, and opportunities. The Working Group played a key role in setting the strategic direction, including developing a draft vision, goals, strategies, and actions. Community feedback was then used to refine and enhance the plan, ensuring it incorporates diverse perspectives and addresses local needs. This approach has resulted in a comprehensive and effective management plan that aligns with both ecological enhancement goals and community interests.



Figure 2: Planning and Engagement Process used to develop the Management Plan

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3.0 PROPERTY INFORMATION AND CONTEXT

3.1 Location

The FCENP is situated within an urbanized area on eastern Vancouver Island, between the Town of Qualicum Beach and the City of Parksville, within the jurisdiction of RDN Electoral Area G.

The FCENP is bordered by residential neighborhoods to the north and west, Highway 19A to the south and French Creek, Morningstar Creek and the French Creek Estuary to the southeast.

Located on the north side of the French Creek Estuary, the FCENP is influenced by French Creek, Morningstar Creek and the Salish Sea. Public access is available from Columbia Drive and Admiral Tryon Boulevard.

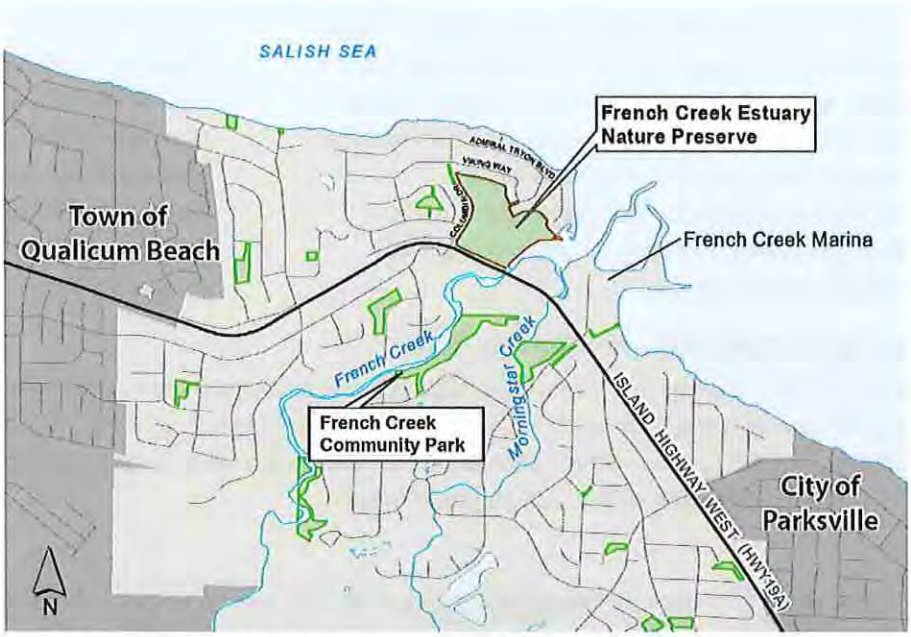

Figure 3: Location Map of the FCENP

A sub-Mediterranean climate, dramatic mountains, lush forests and an abundance of marine life have attracted people to Vancouver Island, making it one of the most heavily impacted regions in the province. Eastern Vancouver Island supports more biological diversity than anywhere else in BC yet is one of the nine most at-risk areas in Canada. Its shorelines have been altered by industry, development and recreation and its coastal Douglas-fir forests and wetlands have become endangered (Nature Conservancy of Canada, 2018).

The estuary is fed by both French Creek and Morningstar Creek and influenced by saltwater from the Salish Sea. The riparian and terrestrial ecosystems of the FCENP are naturally intertwined with the complex network of existing and historic water channels and wetlands. The Coastal Douglas-fir (CDF) ecosystem, which is one of BC's most at-risk ecosystems, covers more than half of the FCENP.

3.2 International and Provincial Significance

The FCENP is located within the overlapping provincial and international designations of the Mount Arrowsmith Biosphere Region, Important Bird and Biodiversity Area and the Parksville-Qualicum Beach Wildlife Management Area, illustrated in Figure 4. These designations highlight the area's importance for biodiversity conservation, sustainable development and wildlife management efforts.

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Mount Arrowsmith Biosphere Region (MABR)

The FCENP is part of the Mount Arrowsmith Biosphere Region, designated by United Nations Educational, Scientific and Cultural Organization (UNESCO). One of the objectives of UNESCO's 'Man and the Biosphere Program' is to reduce the loss of areas with high biodiversity value.[1] The Man and the Biosphere Program promotes the conservation of both biological and cultural diversity, collaborating with community partners to find innovative ways to balance human needs with nature conservation.

Parksville-Qualicum Beach Wildlife Management Area (PQBWMA)

The FCENP is part of the provincially designated Parksville-Qualicum Beach Wildlife Management Area (PQBWMA), under BC's Conservation Lands Program. These areas are designated under Section 4(2) of the Wildlife Act to protect significant fish and wildlife habitats[2]. The productive estuaries, beaches and foreshore waters of the PQBWMA support feeding and staging for waterfowl and provides rearing habitat for Pacific salmon, steelhead and cutthroat trout.

Important Bird and Biodiversity Area (IBA)

The FCENP is situated within an Important Bird and Biodiversity Area (IBA), designated for its international significance in conserving birds and biodiversity. This IBA serves as a key staging ground for Brant geese and over sixty waterfowl species.[3] The FCENP and its surrounding area is home to 135 native avian species[4], with 192 confirmed sightings of native and migratory birds[5].

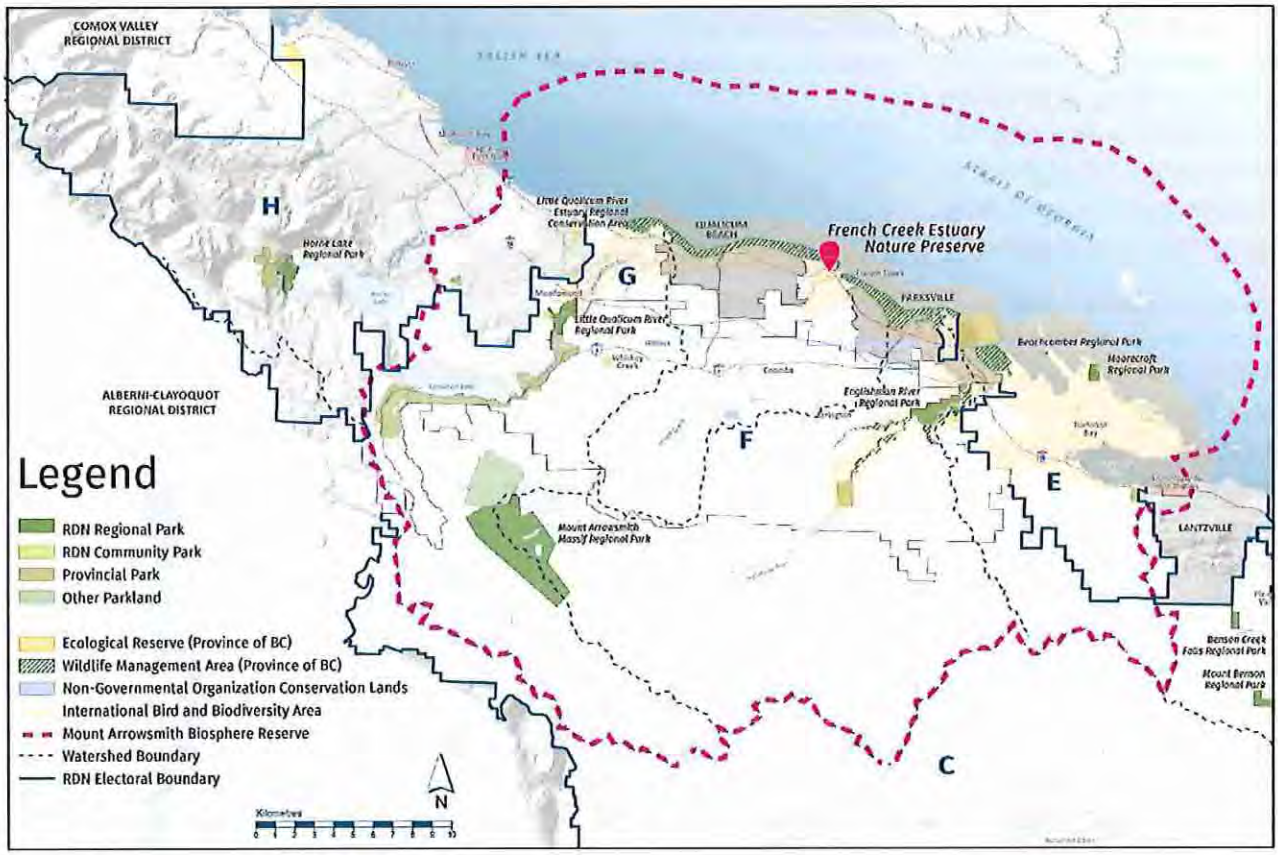

Figure 4: Context Map

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3.3 Site History

The FCENP is within the unceded territories of the Snuneymuxw, Snaw-Naw-As, Qualicum and K'ómoks First Nations where they have lived for time immemorial. Numerous important archaeological and culturally important sites are present in this area.

In the late 1800s, the Tryon family purchased and homesteaded the Columbia Beach area, including what is now the FCENP. Over time, much of the area was developed into single-family homes. However, a portion zoned for multi-family residential use remains undeveloped, with 9.22 hectares of this land now designated as the FCENP.

3.4 Acquisition, Ownership and Management

The FCENP combines parts of Columbia Drive Community Park with the French Creek Estuary Lands, forming a unified 23-acre (9.22-hectare) conservation area, as shown in Figure 5.

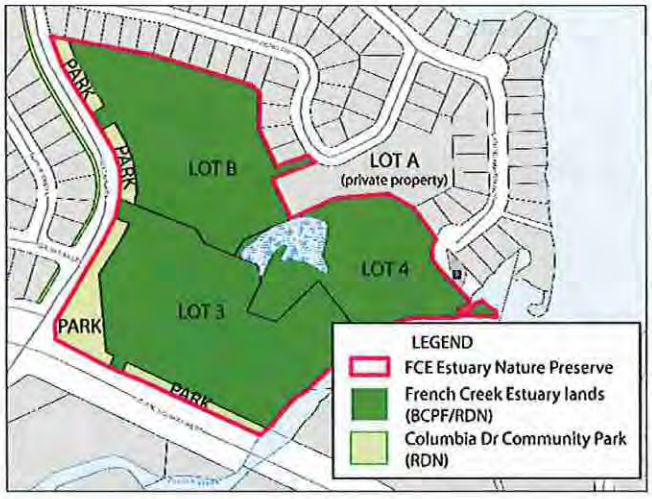

Figure 5: Properties Comprising the FCENP

3.4.1 Acquisition and Ownership

Columbia Drive Community Park was acquired by the RDN through subdivision dedication in 1995 and is comprised of six parcels situated along Columbia Drive and Highway 19A.

The 20.8-acre (8.4-hectare) French Creek Estuary Lands, acquired in April 2022, is jointly owned by the BC Parks Foundation (80%) and the RDN (20%). These lands consist of three fee-simple lots (Lots B, 3 and 4). The acquisition timeline for the French Creek Estuary lands is presented in Table 2.

The FCENP is managed under the RDN Electoral Area G Community Parks function.

3.4.2 Lease and Management Agreement

The BC Parks Foundation (BCPF) leases its majority share of the French Creek Estuary Lands to the RDN under a management agreement that prioritizes ecological, environmental, and aesthetic conservation. This management agreement prohibits activities that could harm the natural values of the land, however, trails and other uses compatible with ecologically sensitive areas are allowed. A key component of the agreement is collaboration with First Nations, ensuring Indigenous access to exercise Aboriginal rights when these activities align with conservation priorities.

This management plan has been approved by the BCPF, and any amendments and updates also require BCPF's prior approval.

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Table 2: Acquisition Timeline of the French Creek Estuary Lands

Acquisition Timeline of the French Creek Estuary Lands	
YEAR	**ACTION**
2004	Community concerns about development plans on the north side of the French Creek Estuary led to the formation of the Friends of French Creek Conservation Society (FFCCS) to work towards conserving the land.
2005 -2006	FFCCS received a grant for a real estate assessment, valuing the land at $3.84 million. The landowner, French Creek House (FCH), was contacted about land donation or purchase, but no agreement was reached.
2016 - 2017	Grants toward land purchase were sought collaboratively through the French Creek Residents Association (FCRA), FFCCS, Vancouver Island University (VIU) and Mount Arrowsmith Biosphere Regional Research Institute (MABRRI) without success.
2018 - 2020	The land was listed for sale and a development company purchased one hectare. Save Estuary Land Society (SELS) and FFCCS communicated the historical, community and ecological importance of the land to the public and various agencies, emphasizing its vulnerability to development. VIU and MABRRI, in collaboration with FFCCS, conducted a community survey to ascertain the community's support to preserve the estuary lands. FFCCS, FCRA and FCH entered into a Memorandum of Understanding (MOU) stipulating that FCH would contribute up to 62% of the land (5.85 hectares) as a park during development. SELS , FFCCS and FCH worked together to advocate for land conservation.
2021 - 2022	FFCCS and SELS successfully launched a fundraising campaign that garnered support from community members, clubs, groups and organizations across Vancouver Island and beyond. This collective effort attracted the attention of the BC Parks Foundation (BCPF) and raised over $300,000 towards the land purchase. For more information about the fundraising and donation process, please visit the BC Parks Foundation website.[6] BCPF took a lead role in securing large donation agreements and launched a crowdfunding campaign to raise funds and in-kind contributions for land acquisition. RDN agreed to provide $400,000 towards the land purchase and to take on long-term management responsibility for the FCENP. Through a successful fundraising campaign and a donation from the FCH, 8.4 hectares (20.8 acres) of land in the estuary were purchased by the BC Parks Foundation and the Regional District of Nanaimo as a nature preserve. At the time of writing this report, the 1-hectare (2.5-acre) undeveloped Lot A is owned by a development company and remains unprotected.
2023 - 2024	RDN collaborated with local conservation and stewardship groups to complete this management plan for the FCENP, supported by BCPF.

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3.5 Property Information

3.5.1 Legal Description and Encumbrances

Table 3 provides a summary of the legal property information for the FCENP properties, including legal descriptions, parcel identifiers (PIDs) and associated title encumbrances. A comprehensive list of all charges on title is provided in Appendix B. A map illustrating legal property information is provided in Figure 5.

Table 3: Summary of Legal Property Information for the FCENP properties

Legal Description	PID	Title encumbrances, including covenants, legal easements	
Columbia Drive Community Park			
PARK, DISTRICT LOT 28, NANOOSE DISTRICT, PLAN VIP62528	none	none	
French Creek Estuary Lands			
LOT 3 DISTRICT LOT 28 NANOOSE DISTRICT PLAN VIP62528	023-287-373	RENT CHARGE EJ127849	Epcor water service connection
		STATUTORY RIGHT OF WAY EJ136871	RDN trail along the bank of French Creek
		COVENANT EJ136869	No vegetation removal
LOT 4 DISTRICT LOT 28 NANOOSE DISTRICT PLAN VIP62528	023-287-381	RENT CHARGE EJ127849	Epcor water service connection
		STATUTORY RIGHT OF WAY EJ136871	RDN trail along the bank of French Creek
		STATUTORY RIGHT OF WAY EJ136873	MoTI storm sewer/drainage along east property line
		STATUTORY RIGHT OF WAY EVI43003	MoTI storm sewer/drainage from parking lot into French Creek
LOT B DISTRICT LOT 28 NANOOSE DISTRICT PLAN EPP84504	030-747-295	RENT CHARGE EJ127849	Epcor water service connection
		COVENANT EJ136867	Eagles Nest (tree no longer present)
		COVENANT EJ136869	No vegetation removal

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3.6 Access

The FCENP has three official access points, each with a distinct civic address to aid in navigation, management and emergency services. A map showing civic addresses is provided in Figure 6.

Civic Address	Description
597 Columbia Dr	Pedestrian access at the western trail entrance along Columbia Drive (no parking available)
585 Columbia Dr	Pedestrian and operational vehicle access along the old driveway at the western entrance along Columbia Drive (no parking available)
1795 Admiral Tryon Blvd	Public vehicular access from the end of Admiral Tryon Boulevard to a parking area within the undeveloped MoTI road right-of-way and part of the FCENP

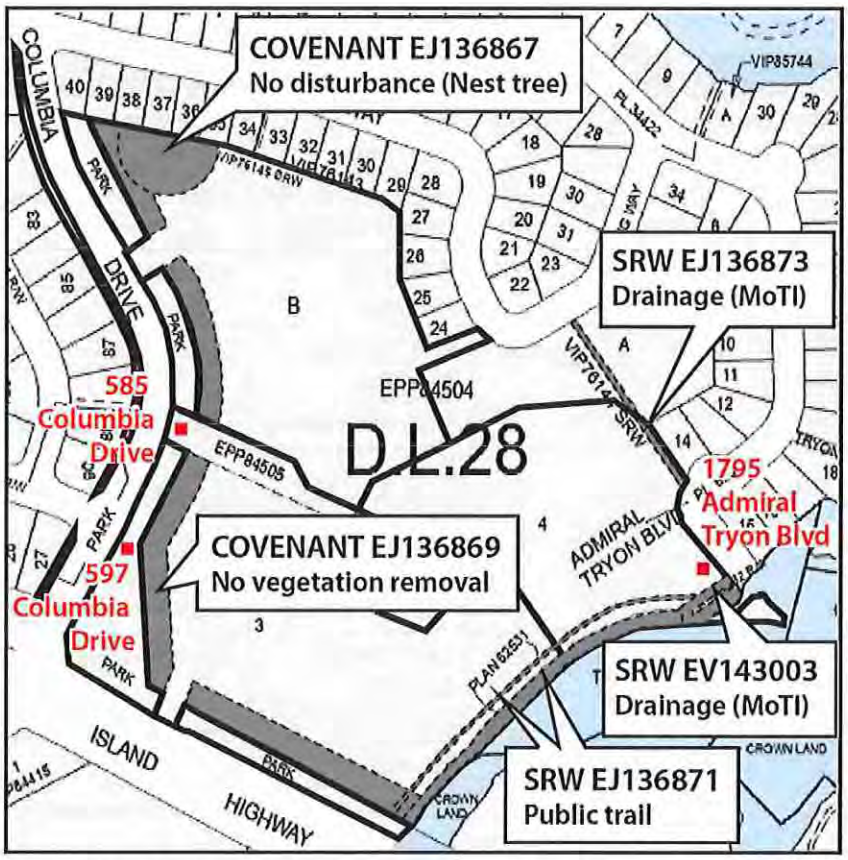

Figure 6: Map showing legal property information and civic addresses of the FCENP

The FCENP also has several informal trail access points, including one at the Highway 19A bridge, minor access points along Columbia Drive and a link from privately owned Lot A off Viking Way to the end of Admiral Tryon Boulevard via a Ministry of Transportation and Infrastructure (MoTI) drainage right-of-way.

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3.7 Land Use

Electoral Area G Official Community Plan Bylaw No. 1540, 2008 and Land Use and Subdivision Bylaw No. 500, designate French Creek Estuary Lands and adjacent Lot A as Multi-Residential with Residential 5 zoning, which allows multiple dwelling units. Columbia Drive Community Park is designated as Parkland/Greenspace/Natural Area and shares Residential 5 zoning with its surroundings.

To the west and north of the FCENP are small lot residential properties, with French Creek running along the eastern edge and the West Island Highway forming the southern boundary.

Between the Highway 19A bridge and the Barclay Crescent pedestrian bridge, approximately 300 meters upstream, the north side of French Creek is lined with residential properties. On the south side of French Creek are the French Creek Community Park and the French Creek Pollution Control Centre (FCPCC). A future public trail, created through the rezoning of the newly acquired FCPCC lands, will connect these properties to the highway. However, there is no direct connection between this trail and the FCENP due to the barrier created by Highway 19A.

Downstream of the Highway 19A bridge on the south side of French Creek is the French Creek Marina and Commercial Mixed-Use area, zoned Commercial 6 for businesses such as stores, hotels and restaurants.

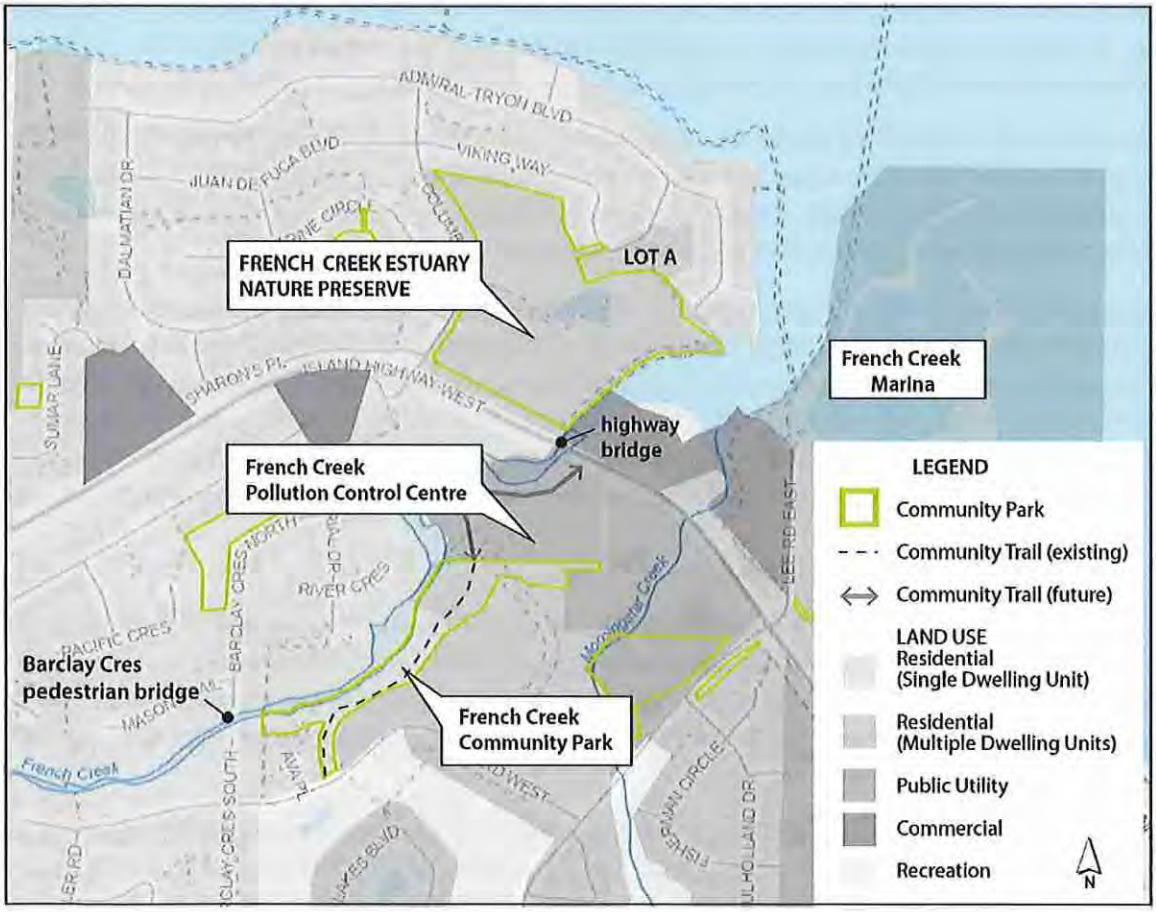

Figure 7: Land Use Map

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4.0 FRENCH CREEK ESTUARY NATURE PRESERVE TODAY

4.1 Natural Values

4.1.1 Climate and Weather

The FCENP experiences warm, dry summers and mild, wet winters. Between 1991 and 2020, the area had an average of 25 days per year with temperatures below freezing. The region receives approximately 1,100 millimeters of rainfall annually, with the majority falling between November and March. In November 2021, abundant rainfall combined with rain-on-snow events led to higher-than-normal flooding of French Creek and other waterways.

June, July and August typically see no more than three days of precipitation per month, making the region prone to drought during this period. The average number of consecutive dry days ranges from 23 to 25, often leading to drought conditions and extreme heat events, which frequently result in watering restrictions for the surrounding area. While there have been no major wildfire events within the FCENP, increased temperatures, extended dry periods, and low humidity have contributed to more extreme wildfire events in the region, such as the Nanaimo Lakes wildfire in 2018 and the Cameron Lake wildfire in 2023.

While somewhat sheltered by the Mount Arrowsmith and Insular Mountain ranges, the maritime location of the FCENP results in generally higher winds and greater susceptibility to storms. Winter storms typically reach the region in December. In October 2020, a major windstorm impacted the eastern mid-coast of Vancouver Island, highlighting the potential for storms to damage trees and erode shorelines.

Climate change is resulting in higher temperatures, more days without rain, altered weather patterns and increased stress on waterways such as the French Creek watershed (based on CMIP 6 SSP2)[7]. Under moderate emission scenarios, the maximum average daily temperature is projected to increase from approximately 14.5 degrees Celsius to 16 degrees Celsius by 2080. Sea level rise is projected to increase by up to 25 centimeters in 2080 (based on RCP 8.5 median percentile projections)[8]. These changes in sea level, temperature and weather patterns will influence the RDN's approach to adaptive conservation and ecological enhancement strategies.

4.1.2 Geology, Landforms and Soil

The landforms around French Creek include rolling hills, valleys and coastal features shaped by fluvial and marine processes. At the coastal interface with the Strait of Georgia, the landscape features sandy beaches, rocky outcrops and tidal flats.[9] The soils in the area vary from well-drained sandy and loamy soils near the coast to fertile alluvial soils along the creek's floodplain. This diversity supports a wide range of vegetation and enhances the ecological richness of the region.[10]

The FCENP is situated on heavily disturbed sites, where historical land use has introduced non-native fill, caused soil compaction and degraded organic components. The open areas of the FCENP have little to no organic layer, while the forested areas have only a thin duff layer and lightly humified organic material.

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4.1.3 Water

The French Creek watershed drains into the Strait of Georgia and covers an area of 69.7 km² with an average annual discharge of 2.25 m³/s.[11] The estuary begins near the Highway 19A bridge where French Creek's freshwater mixes with ocean saltwater creating a nutrient-rich environment. Morningstar Creek merges with French Creek 370 meters downstream from the bridge, further enriching the estuary.



Figure 8: Extents of the French Creek watershed

Peak streamflow occurs in winter due to heavy rainfall, while low streamflow is typical from May to August due to minimal summer precipitation and exacerbated by climate change and increased water usage. The watershed relies on winter snowpack and recharge from three aquifers during summer.[12]

Historical infrastructure changes, such as the Highway 19A bridge, the French Creek marina, and a dike built between 1968 and 1972 along the southern edge of the FCENP, have significantly altered the hydrology of the French Creek estuary. These modifications restricted and blocked water flow into the main channel, as shown in the air photo comparison in Figure 9. The remaining historical channels in the FCENP are now fragmented by driveways and residential development, creating wetlands that rely on local rainfall, groundwater and stormwater from nearby areas, providing essential habitats for native species.

In the 1990s, a large pond was excavated in the interior of the FCENP in preparation for a proposed residential development that ultimately did not occur.[13] Since then, the pond has naturalized, providing habitat for a variety of wildlife and contributing to the area's ecological values.



Figure 9: Air photo comparison showing the impact of development on historical channels over time

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4.1.4 Ecosystems and Habitats

The FCENP hosts a variety of ecosystems within its aquatic and terrestrial habitats, each characterized by unique ecological niches that support a wide range of flora and fauna. The diverse range of plants, trees, soil types, fungi, wildlife trees and decaying wood create important habitats, contributing to the biodiversity of the FCENP.

The FCENP also serves as a crucial wildlife corridor, connecting the French Creek watershed to the Salish Sea, ensuring species movement and ecosystem continuity.

Ecosystem: the complex of living organisms, their physical environment and all their interrelationships in a particular unit of space.

Habitat: the natural home or environment of a plant, animal, or other organism. It provides the organisms that live there with food, water, shelter and space to survive. Habitats consist of both biotic and abiotic factors.

Aquatic Ecosystems

The FCENP and its surrounding areas feature pond, freshwater marsh, saltwater marsh; river/stream (French Creek and Morningstar Creek), tidal flat and marine (Salish Sea) ecosystems.[14]

Pond: An artificially dug pond is located in the center of the FCENP, serving as a refuge for wildlife during droughts and offering important ecological opportunities to enhance biodiversity. The pond and its riparian area support numerous bird and other wildlife species including Canadian beaver, Great Blue herons and an abundance of Yellow-listed Pacific tree frogs.

Freshwater Marsh: The historic channels winding through the forests of the FCENP include both permanent and ephemeral wetlands. These wetlands feature sedge, skunk cabbage and salmonberry and provide habitat for various amphibians, including the abundant, Yellow-listed Pacific tree frog. Other amphibians expected to inhabit these wetlands and surrounding wet forest areas are the Northwestern salamander, Rough-skinned newts, Blue-listed Northern red-legged frog and Yellow-listed Western toad.

River/Stream: French Creek is located along the southern edge of the FCENP and is influenced by the tidal effects of the Salish Sea. The dike and its associated rip rap protection have degraded the riparian and aquatic habitats along most of this area through habitat loss and altered water flow. Morningstar Creek enters the estuary from the south and supports Coho salmon, Cutthroat trout, and Stickleback. French Creek supports Chinook, Chum, Coho and Pink salmon, as well as Cutthroat, Rainbow and Steelhead trout.[15]

Tidal Marsh: At the southeasternmost point of the FCENP, French Creek and Morningstar Creek converge into a tidal marsh dominated by grasses, rushes and silverweed.

Tidal Flats: The marsh transitions into a bare tidal flat composed of mud, sand, cobble and shells and an accumulation of marine plants washed in with the tides. The French Creek marina separates the estuary from 'East Beach' to the south, where Pacific sand lance spawn and seaweed wrack with herring eggs provide food for marine birds. Humans, sea lions, Pacific seals, river otters, bald eagles and many other species potentially impact the survival of juvenile and migrating salmon.

Marine: The tidal flats open into the Salish Sea, an inland sea that spans from Campbell River in the north to Olympia, Washington in the south and to the cities of Vancouver and Seattle. The Salish Sea is one of the world's largest and biologically rich inland seas and where an annual Pacific herring spawn attracts and supports diverse

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marine life. A table summarizing the aquatic ecosystems within and adjacent to the FCENP and their most common flora and fauna can be found in Appendix C.

Terrestrial Ecosystems

The FCENP has four Major Plant Communities: Douglas-fir Forest (Df), Sitka spruce Forest (Sf), the highly disturbed Mixed Shrub (Ms) area, and Pond illustrated in Figure 10.[16]

Douglas-fir Forest (Df): This plant community spans the northern and western parts of the FCENP, encompassing most of the wetlands and historic channels. It is part of the Coastal Douglas-fir (CDF) ecosystem, a critically imperiled [17] habitat in British Columbia known for its biodiversity, including species and ecosystems at risk as well as overwintering bird populations. Within the Df forested area, a recently cleared former house now features a grassy field with compacted soil.

Sitka spruce Mixed Forest (Sf): This plant community is primarily located in the southern corner of the FCENP and a small area north of the pond. Sitka spruce, which can tolerate saltwater and ocean spray, is rare in CDF zones and was likely established during pre-dike flood conditions.[18]

Mixed Shrub (Ms): This area is located adjacent to the parking lot and south of the pond and may be the location of former buildings and associated farm fields. These disturbed areas have a mix of invasive and native early successional species, forming a diverse matrix of grassy meadows, Himalayan blackberry, Nootka rose thickets and scattered trees and shrubs.[19] A table summarizing the terrestrial ecosystems within the FCENP, and their most common flora and fauna are presented in Appendix C.

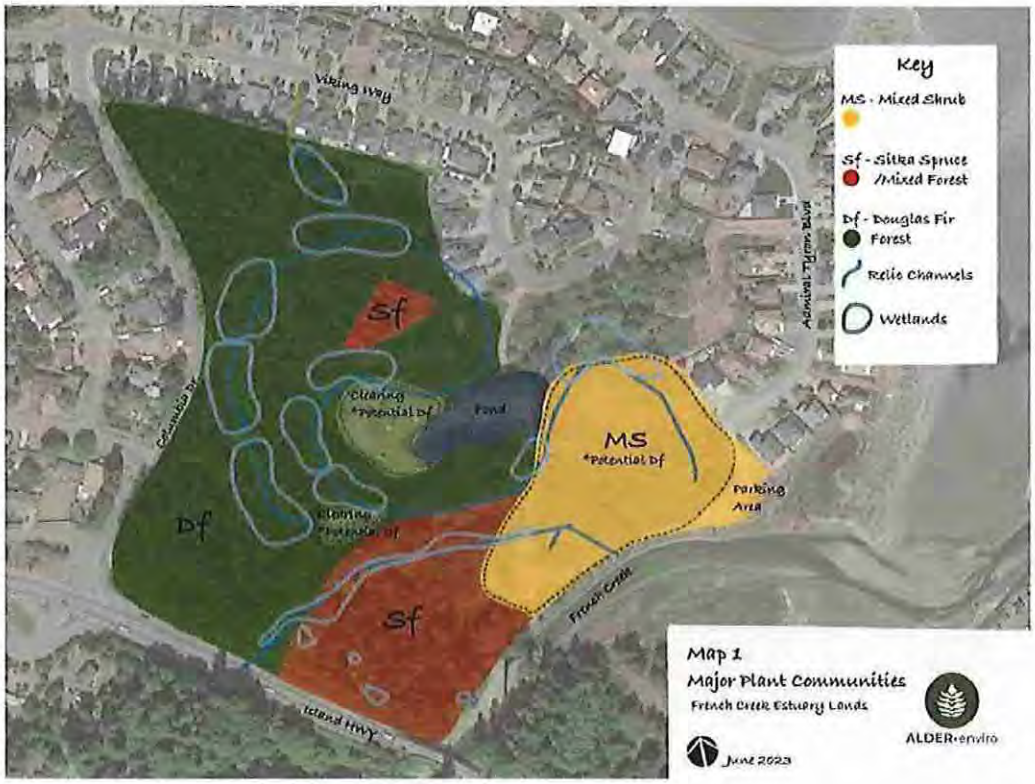

Figure 10: Map of the Major Plant Community Types in the FCENP

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4.1.5 Ecosystem Classification, Sensitive Ecosystems and Species at Risk

Ecological Framework of Canada (EFC)

The FCENP falls within the Eastern Vancouver Island ecoregion of the Pacific Maritime ecozone as identified in the Ecological Framework of Canada. Eastern Vancouver Island is designated as an 'EcoCrisis' region and is among the most at-risk areas in southern Canada, while supporting more biological diversity than anywhere else in B.C.[20]. This ecoregion is vital for both national and global biodiversity, providing critical opportunities for the conservation and enhancement of habitats for endangered species, migratory birds and marine wildlife. Its natural ecosystems are facing significant challenges from development, industrial use and the introduction of invasive species.

Biogeoclimatic Ecosystem Classification (BEC)

The FCENP is located within the Coastal Douglas-fir (CDF) Biogeoclimatic Zone which is one of the rarest and most threatened in the province[21]. Globally endangered Coastal Douglas-fir forest ranks as a top five BC zone for supporting the highest number of species and ecosystems at risk[22].

The FCENP is in the Coastal Douglas-fir Moist Maritime (CDFmm) subzone. This forest type is ranked as critically imperiled as part of the Douglas-fir/dull Oregon-grape ecological community and is on the provincial Red List in British Columbia[23]. It is characterized by Douglas-fir, grand fir and Western red cedar, with salal, dull Oregon grape, sword fern and oceanspray in the understory.

Major risks to the CDF zone include urban and industrial development, resource extraction activities, invasive species and disease, and the effects of climate change[24]. The CDF has seen significant alteration with 49% of the CDF land base having been permanently converted by human activities[25].

Mapped Ecosystem Types – SEI of Southeast Vancouver Island and the Gulf Islands:

- Wetland
- Woodland
- Riparian
- Older Forest (>100yrs)
- Terrestrial Herbaceous
- Sparsely Vegetated
- Coastal Bluff



Photo 1: Pond, looking south



Photo 2: Pond, looking north

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Sensitive Ecosystem Inventory (SEI)

The Sensitive Ecosystems Inventory of Southeast Vancouver Island and the Gulf Islands (SEI) systematically identified and mapped specific rare and fragile ecosystems. Sensitive Ecosystems have significant biodiversity values and provide critical habitat features necessary for the survival of threatened and endangered plant and animal species. The sensitive ecosystems found within the FCENP are listed in Table 4.

Table 4: Sensitive Ecosystems identified within the FCENP[26]

Sensitive Ecosystem Type		Description	Location within FCENP
Wetland	marsh (WN: ms)	Both freshwater and tidal marshes are present	Freshwater marshes are located within the historical channels. A small portion of Tidal Marsh is located adjacent to French Creek in the Southeast corner of the FCENP.
Riparian	mature coniferous deciduous forest (RI:6)	Consists of mixed forest dominated by Douglas-fir, Sitka spruce, Western red-cedar, Grand fir and Big leaf maple.	Next to French Creek in the Southwest corner of the FCENP and immediately downstream of the bridge. The remaining areas along the creek bank area and adjacent to the pond are considered degraded Riparian areas.
Older Forest	conifer dominated (OF: co)	Average tree age of 100 years or older	Forested areas in the western extent of the FCENP. Covers approx. 62% of the FCENP

Species at Risk

The prevailing factor responsible for endangering species today, as defined by the Committee on the Status of Endangered Wildlife in Canada (COSWIC), is habitat degradation or loss. There are twenty-two Species at Risk observed at or near the FCENP. This includes the Red-listed plant, Northwest cinquefoil and fifteen Blue-listed species including the Great blue heron, Purple martin, Dun Skipper (a rare butterfly), Northern red-legged frog, the Wandering salamander, and many coastal bird species. The fact that such a small area supports a large number of species at risk highlights its high conservation value.

Appendix D lists the species observed in the French Creek Estuary and immediate surrounding area that are classified as species at risk.

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4.2 Recreational Values

This section describes the types of recreation activities that occur at the FCENP and the amenities that currently exist on the site.

4.2.1 Recreation Activities

The primary recreational feature of the FCENP is its trail system. This network of well-worn and lesser-used trails developed organically through years of informal use by the local community. Trail quality varies, with some sections showing exposed roots, widening and rutting from poor drainage. Before the RDN took over management, no trail maintenance was carried out.

Currently, the FCENP is used for nature appreciation and informal outdoor recreational activities. In the period leading up to the completion of the management plan, visitor experience programming included some guided educational tours.

Low-impact recreation activities currently enjoyed at the FCENP are compatible with its sensitive environmental features. However, instances of competing or conflicting visitor uses such as bike riding and off-leash dog walking have been observed at the FCENP by RDN staff and reported by members of the public. Such activities damage sensitive ecological areas and harm wildlife and native plants. As visitation levels increase, these conflicts could more significantly impact the ecological values of the FCENP and diminish the quality of the visitor experience.

Compatible Recreation Activities

- Walking & running
- On-leash dog walking
- Interpretive tours
- Bird watching
- Wildlife viewing
- Photography
- Nature appreciation
- Writing
- Sketching and Painting

Non-Compatible Recreation Activities

- Riding bicycles
- Off-leash dog walking
- Unsanctioned trail and ground alteration (e.g., building bike jumps)

Visitor Use Conflicts

- Soil compaction and vegetation damage from off-trail activities
- Increased wildfire risk
- Disturbance to wildlife
- Human-wildlife encounters
- Harassment and feeding of wildlife
- Conflicts with adjacent landowners
- Trail rutting and damage
- Conflicts with off-leash dogs
- Unauthorized vegetation removal, damage, or planting
- Littering and dumping of garden waste
- Removal of woody debris

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4.2.2 Amenities and Infrastructure

The FCENP is mainly forested, with historical development primarily focused in the southeast, along French Creek and within the property's interior. In the southeast, there is an informal parking lot and an unregistered dike that extends upstream from the parking lot along French Creek to about 100 meters downstream of the Highway 19A bridge. A driveway from Columbia Drive leads to an open field in the interior of the FCENP where a house once stood. Immediately east of this field is a pond that was excavated as part of a former development plan.

The following list outlines the amenities and infrastructure present within the FCENP at the time of acquiring the French Creek Estuary Lands:

- house and associated outbuildings - mid- interior (removed)
- clearing at the former house site - mid- interior
- driveway and associated culverts off Viking Way
- excavated pond
- constructed berm behind houses on Viking Way
- utility poles
- utility wires (removed)
- BMX jumps - southwest (removed)
- BMX jumps, unsanctioned - southeast
- two decommissioned wells
- dug well (decommissioned)
- informal gravel parking lot off Admiral Tyron Blvd*
- unregistered dike along French Creek
- Culvert receiving stormwater runoff under Columbia Drive
- informal trail network*

Shortly after the FCE lands were acquired in 2022, the previous owners removed the house and decommissioned the water supply line.

In 2023-2024, the RDN removed the bike jump area in the western corner of the FCENP and restored the site. Community stewardship volunteers planted 385 plants in the area. Additionally, the dug well was filled in, and the utility lines were removed.

* The driveway off Admiral Tryon Blvd., part of the informal parking area, and a section of the trail network that runs parallel to Highway 19A, are situated within the MoTI road right-of-way.

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4.3 Cultural Values

The FCENP has a rich cultural history, that spans from its pre-contact significance to the Snuneymuxw, Snaw-Naw-As, Qualicum and K'ómoks First Nations, through its use as a homestead and farm in the late 1800s, and later as a residential property. Today, the RDN, the BC Parks Foundation, local conservation and stewardship groups and community residents are committed to preserving First Nations traditional landscapes and practices while working to restore the area's ecological health.

4.3.1 First Nations Traditional Landscapes

The FCENP is within the unceded territories of the Snuneymuxw, Snaw-Naw-As, Qualicum and K'ómoks First Nations where they have lived for millennia. French Creek is an important waterway within an ancient cultural landscape. Numerous important archaeological and culturally important sites are present in this region. This critical waterway was a key resource for freshwater and estuary resources in the past as it is today and will be in the future.

4.3.2 Early Settlers and Historic Land Use

Descendants of Admiral Tryon left England in the 1890s and came to Vancouver Island to make their home. Upon arrival in French Creek, the family acquired approximately 140 acres of land which included the 23 acres now known as the FCENP. Here the family homesteaded, farmed cattle and raised three generations. Historical photos circa 1911 provide evidence of logging, house construction, and cattle (Photo 3).



Photo 3: View of the French Creek estuary, circa 1911

Prior to 1980, the land was sold twice, and portions were developed as single-family homes except for 44.8 acres which includes the 23 acres of the FCENP. A development application submitted in 1981 resulted in a rezoning from Rural 1 to RS 5 zoning for a proposed development concept for 84 apartment building units and 116 townhouses.[27]

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5.0 THREATS, CHALLENGES AND OPPORTUNITIES

The French Creek Estuary Nature Preserve (FCENP) has undergone significant physical transformations over time, influenced by a combination of human activities and natural processes. Even as efforts are made to protect and restore the natural habitat of the FCENP, ongoing threats such as habitat destruction and climate change will persist. This section summarizes the predominant threats and challenges to the FCENP, setting the stage for the adaptive management strategies and actions presented in Section Six.

5.1 Human Disturbance

The cultural values, along with the terrestrial and aquatic habitats of the FCENP and surrounding area, have been damaged and fragmented due to a history of logging, agriculture and urban development both upstream and adjacent to the estuary.

Physical land alterations within the FCENP and surrounding areas have disrupted normal ecosystem functions, resulting in reduced food sources, shelter, breeding areas, habitable wetlands and forested regions for wildlife, as well as compromised soil quality for native plants and animals.

5.1.2 Aquatic Habitat Degradation

Today, the French Creek estuary is confined within a narrow corridor between a riprap dike located along the edge of the FCENP and a marina seawall. These human-made structures and earthworks have significantly altered natural water levels and sediment flow patterns within French Creek and the estuary, leading to the degradation and loss of vital riparian vegetation, tide plains and fluvio-marine habitats that are essential for the health of the ecosystem.[28] These impacts have contributed to the decline in the once-thriving populations of salmon, sea-run cutthroat trout and steelhead in French Creek.[29]

Historical stream channels, disconnected from the mainstem of French Creek by the dike, weave through the FCENP, creating a network of wetlands that support amphibians and reptiles, and provide essential food and water for wildlife. The integrity of this wetland system has been further compromised by altered drainage patterns resulting from nearby highway and residential developments and their associated drainage structures. A large pond, originally excavated as a water feature for a planned land development[30], now offers an opportunity to enhance aquatic habitat and mitigate the impacts of human activity on the surrounding ecosystem.

Aquatic Habitat Degradation

Challenge	Mitigation Opportunities
Improving instream, riparian and wetland habitats to enhance wildlife survival while preserving existing habitat	• Improve instream and riparian habitat of French Creek • Prevent harmful impacts resulting from human access • Support riparian habitat enhancement upstream

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5.1.2 Terrestrial Habitat Degradation

The legacy of historic farming, extensive land clearing, residential development and large-scale construction, such as the dike and the development of the parking lot at the end of Admiral Tryon Blvd., has left a mark on the landscape. These changes, combined with past recreational activities such as building bike jumps and informal trail networks, have caused soil degradation, the spread of invasive plants and the loss of native vegetation that once provided essential wildlife habitat.

While past activities have significantly degraded soil quality and led to habitat loss, ongoing human activities continue to threaten the FCENP's ecology and present challenges for habitat enhancement and conservation efforts. Ongoing human threats include:

- Erosion of trails and damage to plants from motorized and wheeled vehicles
- Compaction and deterioration of soils due to trampling and unsanctioned trail use
- Interference with wildlife by humans and their pets
- Contamination and introduction of invasive plants due to illegal dumping of residential waste
- Removal of wildlife trees

Terrestrial Habitat Degradation

Challenge	Mitigation Opportunities
Enhancing the ecological integrity of terrestrial habitats	• Implement trail use restrictions • Reduce trail network and limit access • Implement habitat enhancement measures • Provide education about the harms of dumping invasive plants

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5.1.3 Invasive Species

The expansion of infrastructure and increased human activity in the FCENP has led to the introduction of aggressive communities of invasive plants. These invasive plants are highly adaptable, prolific and difficult to get rid of. Due to their weedy characteristics and absence of natural predators, they quickly out-compete native plants, take over established habitats and damage soil quality, preventing the growth of other plant species.

Invasive animals have also been introduced to the FCENP and surrounding areas. Similar to invasive plants, these animals reproduce quickly and have few natural predators to control their populations. This unchecked growth harms native plants and animal habitats, depletes food sources and contributes to a decline in overall biodiversity.

Common invasive plant species observed in the FCENP include:

- Himalayan blackberry *(Rubus armeniacus)*
- Daphne laurel *(Daphne laurelola)*
- Scotch Broom *(Cytisus scoparious)*
- English Ivy *(Hedera helix)*
- Lamium/ Yellow Archangel *(Lamiastrum galeodbolon)*

Invasive animal species observed in the FCENP include:

- Eastern cottontail rabbit *(Sylvilagus floridanus)*
- American bullfrog *(Lithobates catesbeianus)*
- Red-eared slider *(Trachemys scripta)*
- Eastern grey squirrel (*Sciurus carolinensis)*

Invasive Species

Challenge	Mitigation Opportunities
Identification, prevention, removal and ongoing management of invasive species	• Implement invasive species monitoring, response and removal programs • Regularly assess invasive species populations and respond to changes • Engage the community to increase awareness and collaboration • Support education, research and innovation

5.1.4 Human Disturbance Management Strategies

To improve the overall ecological integrity of the area, management strategies will prioritize ecological enhancement of the terrestrial and aquatic habitats of the FCENP while minimizing the adverse effects of human activities.[31] Rather than attempting to recreate pre-dike conditions, enhancement strategies will focus on improving existing habitat quality, managing and eradicating invasive species, and increasing native plant species biodiversity.[32]

It is essential that ecological enhancement and infrastructure improvements do not negatively impact the important cultural values of the FCENP. The RDN, along with its partners and volunteers will work to strengthen relationships through open communication, invitations to participate in working groups, sharing study results, conducting archaeological inquires and active listening. This approach will ensure that the protection and

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conservation of the FCENP includes not only the lands and waters but also its cultural significance to the First Nations whose traditional territory includes the FCENP.

5.2 Natural Disturbance

Natural disturbance events, such as flooding, forest fires, and high winds, are vital to ecosystem dynamics. They drive significant changes in natural areas by reshaping landscapes, promoting biodiversity, and influencing ecological processes.

Wildlife trees are standing dead or dying trees that provide critical habitat for a variety of wildlife. They offer nest cavities, platforms, nurseries, dens, roosts, hunting perches, foraging sites and display stations. In BC, over 80 native species use Wildlife Trees, with some, such as the Piliated woodpecker[33], being highly dependent on this specialized habitat for their survival.

Nurse logs are fallen trees that play a vital role in forest ecosystems by contributing to biodiversity as they decompose over centuries. These nutrient-rich logs provide critical growing sites for the regeneration of young plants and trees. Burrowing insects, amphibians, reptiles, birds, and small mammals rely on nurse logs for homes, shelter, and food. They serve as a natural mechanism for forest renewal and rebirth[34].

The RDN developed a Community Wildfire Resiliency Plan for Electoral Area G in 2021 which assigned a low to moderate threat rating to areas surrounding the FCENP. A threat rating evaluates the potential impacts and risk of a wildfire within a particular area. To date, there are no recorded wildfire events documented to have occurred within the property boundary, however there is evidence of small, nuisance and cooking ignitions. While many areas of the FCENP are well vegetated, there are few limitations to an effective wildfire response. Local fire departments have indicated that the FCENP is well positioned within a residential area with many active fire hydrants and sufficient access for response vehicles.

Wildfire management and mitigation of potential ignitions is increasing in importance as we experience climate change. RDN Parks is developing a Parks Wildfire Risk Management Strategy in 2025/2026 that will address the increasing need to manage for wildfire, while ensuring that ecological, recreational and protection values are being met.

Natural Disturbance

Challenge	Mitigation Opportunities
Managing natural disturbance events	• Enhance resilience to natural disturbances through habitat enhancement • Prioritize protection of existing native biodiversity and habitats • Prioritize modifying hazard trees over removal to preserve wildlife habitat by cutting tree stems as long as possible where safe to do so, and allowing to decay naturally on-site

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5.2.1 Natural Disturbance Management Strategies

Management strategies and actions, including ecological enhancement activities and infrastructure improvements, should incorporate and accommodate natural disturbance processes such as flooding and windstorms, with a primary focus on protecting the FCENP and the surrounding neighborhoods.

5.3 Pressures from Climate Change

Increasing temperatures, longer summer seasons, prolonged drought and changes in seasonal weather patterns are documented effects of climate change affecting the East Coastal Vancouver Island Region. Fluctuations in climate may lead to changes in vegetation and native fauna, soil productivity, susceptibility to drought, forest pathogens and natural hazards such as wildfire. As the climate continues to change, viable management and enhancement strategies will also evolve.

Well-documented examples of climate change impacts on the French Creek watershed and estuary lands include:

Drought in the region

Recent discharge data show that French Creek water flow between May and August is 50% to 85% lower than creek flow measured during the same months three decades ago.

These differences in discharge appear to be associated with increased water withdrawals from the creek during the dry season for irrigation purposes and changes in climate conditions (WSP, 2023).

- Long-term damage to tree canopy health leading to increased sub-canopy temperatures
- Increased drought conditions and pressure on available water due to agriculture and human consumption requirements
- Increased potential for intense winter rainfall and elevated creek flows, leading to increased erosion and sedimentation
- Increased potential for temporary flooding during storms and high winter stream flows due to sea level rise
- Increased salinity and poorer water quality due to reduced summer precipitation and snow melt
- Extended dry season, leading to increased aquatic habitat temperatures, risk of wildfire and reduced natural revegetation
- Increasing mortality of drought- and heat-intolerant plants, giving way to more tolerant invasive species (some invasive plant species such as Scotch broom increase fire hazard)
- Loss of terrestrial and aquatic wildlife habitat due to encroachment of invasive species, low summer creek flows and reduced food availability

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Pressures from Climate Change

Challenge	Mitigation Opportunities
Maintaining tree canopy health to mitigate effects of increased temperatures, decreased precipitation and more frequent and stronger wind events	• Monitor tree health, protect mature trees and plant replacement trees when losses occur to mitigate degradation of the canopy • Incorporate strategic planting and enhancement using drought and heat-tolerant species, recognizing that climate change may cause ecosystems to evolve over time
Mitigating the impacts of temperature changes and decreased creek flows on aquatic ecosystems	• Create a dense canopy shading the channels and pond • Support instream restoration efforts within the French Creek watershed • Increase accumulation and conservation of groundwater in the entire watershed
Increasing groundwater and surface water storage capacity to offset drought impacts on vegetation	• Enhance and maintain a dense tree canopy shading the channels and pond • Restore and connect aquatic and wetland habitats • Improve soil ability to retain water and support plants • Increase native vegetation throughout the FCENP to shade soil and retain water • Support increased accumulation and conservation of groundwater in the entire watershed
Enhancing and maintaining the bank integrity of French Creek to reduce erosion potential during storm events	• Strengthen vulnerable sections of creek banks to reduce erosion risks using natural enhancement methods • Support the improvement of rainwater management strategies in the watershed to prevent flow surges from properties during heavy rain events

5.3.1 Climate Change Management Strategies

The FCENP is susceptible to climate change impacts on aquatic and terrestrial ecosystems. Management strategies require consideration of potential climate change effects to enhance resilience against anticipated changes.

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6.0 VISION, GOALS, STRATEGIES AND ACTIONS

6.1 Vision Statement

The vision provides an overarching guide for decision-making and management of the French Creek Estuary Nature Preserve (FCENP). It describes a natural area that will be actively managed to enhance and protect biodiversity. It focuses on conserving and enhancing important natural ecosystems while providing low-impact opportunities for visitors to connect with nature.

> *The French Creek Estuary Nature Preserve is and will remain a natural area, actively managed to enhance and protect its diverse ecosystems, biodiversity and cultural values.*
>
> *The French Creek Estuary Nature Preserve offers opportunities for ecologically sensitive community enjoyment of nature.*

6.2 Guiding Principles

In addition to upholding the obligations of the management agreement between the RDN and the BC Parks Foundation (BCPF), the following principles will guide the management of the FCENP:

It is a long-term plan. The FCENP is a living space. It will require ongoing planning to meet the needs of the natural environment. Ecological enhancement of the FCENP will occur over time and in many phases and will take a long-term commitment to ensure its preservation for future generations.

Adaptation will be required. The successful long-term management of the FCENP requires flexibility and adaptation to adjust to climate change along with other changes. Scientific inquiry, monitoring and new research will help inform management actions and refine the objectives for ecological enhancement opportunities.

It is a collaborative effort. Effective management of the FCENP will depend on collaboration with First Nations, partners and ongoing involvement from conservation and stewardship organizations. Working closely with all interested parties, emphasis will be placed on prioritizing the protection of both natural and cultural values while supporting low-impact recreation, education and research opportunities.

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6.3 Goals, Strategies and Actions

6.3.1 GOAL 1: Protect, Conserve and Enhance Ecological Biodiversity

Protect, conserve and enhance the ecological biodiversity of the FCENP through collaborative efforts, prioritizing ecological enhancement and careful management to safeguard rare and sensitive areas, species composition and ecosystem interdependencies.

The RDN, in collaboration with the BCPF and conservation and stewardship groups, is committed to protecting and enhancing the biodiversity, ecosystem functions and unique natural values of the FCENP. As the FCENP is part of the French Creek watershed, upstream activities can impact its ecological health. Careful management is required to avoid harmful impacts to ecologically rare and sensitive areas, species composition and their web of interconnections.

Strategy 1.1 Strengthen the protection, recognition and conservation focus of the FCENP

Conserved areas play a crucial role in safeguarding biodiversity for both present and future generations by reducing human development stresses and providing opportunities for people to connect with nature. Strengthening governmental recognition across all levels helps ensure the long-term preservation of the FCENP amidst shifts in government structure, policy and priorities.

Actions	
1.1.1	Incorporate the FCENP into an updated RDN Community Parks Classification System to recognize its ecological importance and emphasize its conservation focus
1.1.2	Pursue recognition of the entirety of the FCENP within the Canadian Protected and Conserved Areas Database

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Strategy 1.2 Conserve and enhance biodiversity through the retention of natural features, rehabilitation of degraded areas, removal of invasive species and habitat improvements

Efforts to conserve and rehabilitate the unique ecosystems of the FCENP will involve a series of habitat enhancement projects aimed at improving habitat quality, managing and eradicating invasive species and increasing plant species biodiversity, without attempting to recreate pre-dike conditions. A comprehensive ecological enhancement plan will be developed to manage these efforts, prioritizing actions based on ecological impact and feasibility. The plan will specify tasks, timelines, resource needs, and methods for monitoring and evaluation, and will be regularly updated with insights from ongoing research and stakeholder feedback to ensure continued effectiveness and relevance.

Adjacent properties managed by the RDN may also benefit from planned ecological enhancement activities such as invasive plant management, streamside monitoring, erosion control and protection of sensitive habitats to help conserve and restore biodiversity across the watershed.

Actions	
1.2.1	Implement ecological enhancement strategies that improve the habitat quality of the FCENP
1.2.2	Develop a monitoring and reporting system to evaluate the success of ecological enhancement and protection efforts
1.2.3	Seek out additional funding sources to facilitate the implementation of ecological enhancement and research projects, including grants, donations, fundraising and project partnerships
1.2.4	Support the conservation and ecological enhancement of lands within the French Creek watershed

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6.3.2 GOAL 2: Encourage Community Enjoyment of Nature

Provide opportunities for the community to experience nature while minimizing disturbance to sensitive ecosystems and enhancement efforts.

Estuaries are crucial for biodiversity, providing habitat for approximately 80 percent of wildlife species along the BC Coast. The FCENP offers exceptional opportunities for wildlife observation, allowing visitors to experience the dynamic and productive ecosystem firsthand. Balancing the preservation of sensitive and rare ecosystems with opportunities for low-impact recreation is a key priority for the FCENP.

Strategy 2.1 Provide a system of safe, inclusive and well-maintained trails, viewing areas and access points that provide low-impact opportunities to interact with nature

The FCENP offers opportunities for wildlife viewing and quiet appreciation of the natural environment, while also providing trail connections for the community. Its trail system and amenities are designed to reduce conflicts with wildlife and support the recovery of natural habitats. Through measures such as restricted access to sensitive ecosystems and guiding visitors and their pets away from key habitat enhancement areas, a balance between public enjoyment of nature and the preservation of its delicate ecosystems can be achieved.

Actions	
2.1.1	Implement amenities and development improvements outlined in Section 7.0, "Concept Plan" Such amenities include viewing areas, improvements to the parking area and clearly defined access points and trails

Strategy 2.2 Limit activities that may harm the ecological integrity of the FCENP

Human activity has significantly impacted the ecosystems in the FCENP, leading to habitat degradation and a decline in biodiversity. To mitigate these effects, public access within the FCENP is restricted to the designated trail system. Measures include deactivating unsanctioned trails and access points, reducing illegal dumping of garden waste, limiting trail use to pedestrians only and enforcing leash requirements for pets.

Actions	
2.2.1	Maintain an official, designated trail system and decommission unsanctioned trails and access points as described in Section 7.0 "Concept Plan" of the management plan
2.2.2	Prevent access to sensitive areas outside of the designated trail network as described in section 7.0 "Concept Plan" Actions include the installation of regulatory and informational signage to enforce pet leash requirements and prohibit motorized vehicle and bicycle access, as well as the installation of access control features to minimize illegal dumping and public access to enhancement areas

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6.3.3 GOAL 3: Collaboration, Volunteerism and Knowledge

Involve First Nations, conservation and stewardship groups, volunteers and residents to plan and implement ecological enhancement strategies, conduct scientific research and promote a deeper understanding of the importance of conserving the FCENP through educational initiatives.

The acquisition of the FCENP was made possible by the dedicated efforts of the BC Parks Foundation, conservation and stewardship organizations and community volunteers who raised awareness, spearheaded grassroots initiatives and fundraised. The management of the FCENP will remain rooted in these principles of collaboration and community involvement. Ongoing collaboration with First Nations, conservation and stewardship groups, educational and research institutions and volunteers will enrich cultural and scientific education, offer research opportunities and empower community-led ecological enhancement efforts.

Strategy 3.1 Involve First Nations, conservation and stewardship groups and educational and research institutions to participate in ongoing protection and ecological enhancement of the FCENP

The RDN is appreciative of opportunities to collaborate with First Nations, conservation and stewardship groups and post-secondary and research institutions dedicated to supporting ecological enhancement projects. Drawing upon the diverse strengths, knowledge and resources of these organizations will increase the effectiveness of these initiatives. Acknowledging the contributions of these groups fosters pride, maintains ongoing support and strengthens community conservation efforts.

Actions	
3.1.1	Support Indigenous-led ecological enhancement projects by engaging directly with First Nations and First Nations-led stewardship organizations
3.1.2	Support community-led ecological enhancement initiatives Regular meetings with conservation and stewardship groups will support collaboration, promote clear communication and align goals

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Strategy 3.2 Foster the pursuit of knowledge through education, community science and research

Educational visits, tours and outdoor classroom activities will be encouraged to provide learning opportunities and underscore the importance of access restrictions in designated areas. Raising awareness of cultural and environmental protection efforts will encourage positive behaviours towards natural environments. Through informed engagement, a deeper appreciation and sense of stewardship for these invaluable resources can be cultivated, benefiting both present and future generations.

Actions	
3.2.1	Explore opportunities to incorporate cultural education and interpretation into signage and programming in collaboration with First Nations
3.2.2	Create nature-based educational opportunities for youth and adults through interpretive signage and programming
3.2.3	Encourage and support independent research projects and community science activities to broaden scientific understanding of sensitive ecosystems and habitats These initiatives may include independent research through academic institutions, non-government organizations (MABRRI), intergovernmental monitoring projects and community-led data collection

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7.0 CONCEPT PLAN

The concept plan, presented in Figure 11, prioritizes the protection of sensitive areas while offering visitors opportunities to enjoy the natural values of the FCENP through low-impact recreation.

The concept plan provides details on ecological enhancement objectives, physical improvements and long-term operational maintenance strategies. It is organized into the following sections:

- Ecological Enhancement and Monitoring
- Amenities and Improvements
- Operational Activities

Safeguarding the important cultural and natural values of the FCENP is essential when undertaking enhancement, infrastructure improvements and operational activities.

Protecting Cultural Resources

The RDN is committed to protecting the cultural resources in the region, therefore all activities including new built infrastructure and ecological enhancement activities will consider potential impacts to archaeological features. Steps to ensure protection of cultural resources include Archaeological Overview Assessments, Impact Assessments, Alteration Permits and open and collaborative communication with First Nations.

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Figure 11: French Creek Estuary Nature Preserve Concept Plan

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7.1 Ecological Enhancement and Monitoring

The FCENP property was originally part of the French Creek estuary floodplain. However, the installation of an unregistered dike and riprap along French Creek, along with changes to the landscape and hydrology due to farming and housing development, have made restoring pre-dike conditions impractical. Therefore, the primary ecological enhancement goals for the FCENP are to improve hydrological function, improve aquatic and terrestrial habitat quality, manage and eradicate invasive species and increase native species biodiversity.

Two background studies were conducted to assess the current hydrological and ecological conditions of the FCENP, providing a foundation for the ecological enhancement strategies outlined in the management plan.

- Ecological Enhancement Opportunities in the French Creek Estuary Nature Preserve, 2023, Alder Environmental Consultants (*FCENP Ecological Enhancement Opportunities Report*)[35]

  Identified and mapped plant communities, key opportunities for ecological enhancement and significant ecological features; assessed the ecological health of the FCENP; and proposed strategies to optimize ecosystem and habitat functions, ultimately supporting the rebuilding species of biodiversity.

- French Creek Estuary Habitat Enhancement: Evaluating Dike Removal and Alternative Options within the FCENP, 2024, Northwest Hydraulic Consultants (*French Creek Estuary Restoration Dike Study*)[36]

  Evaluated options for enhancing riparian habitat along the dike to enhance fish habitat within French Creek.

Potential ecological enhancement objectives and tasks are outlined in Table 5 below. These recommendations, along with future studies and monitoring, will inform the development of a living, comprehensive ecological enhancement action plan and support project proposals from conservation and stewardship groups.

Table 5: Key Objectives for Ecological Enhancement in the FCENP [37]

Terrestrial Ecosystem Enhancement Areas		
Plant Community Type	**Delineating Features**	**Enhancement Objectives/Tasks**
Mixed Shrub	Highly disturbed areas dominated by Himalayan Blackberry, Nootka rose, Pacific crabapple and invasive perennials/annuals and grasses	• Manage invasive species. • Till and amend soil in areas to be re-planted • Protect sensitive areas from impacts of parking lot • Plant suitable native plants to support biodiversity and suppression of invasive plants • Protect and water plants until established
Douglas-fir Forest	Mixed forested dominated by Douglas fir, bigleaf maple, Western Red Cedar and Grand fir	• Manage invasive species • Plant suitable native plant species to suppress invasive plants • Protect and water plants until established
Sitka Spruce Forest	Mixed forest Douglas-fir / Sitka Spruce. Variable understory	• Manage invasive species • Improve heavily disturbed and altered areas • Plant suitable native plants to support biodiversity and suppression of invasive plants • Protect and water plants until established

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Aquatic Ecosystem Enhancement Areas		
Ecosystem Type	**Characteristics**	**Enhancement Objectives/Tasks**
Pond	Naturalized artificial pond riparian zones include red alder, red osier dogwood and Pacific willow. Pond includes cattails, rushes, duckweed and yellow flag iris.	• Manage invasive species • Naturalize slope of pond edge • Deter invasive amphibians • Plant native plants suitable for riparian zones (Pacific willow, red osier dogwood, Western red cedar) and in-pond species • Protect and water plants until established
Wetland / Freshwater Riparian	Historic stream channels within the FCENP have developed into wetlands. Wetlands include skunk cabbage, salmonberry, beaked sedge and other semi-aquatic plants	• Manage invasive species • Plant suitable native plants to support biodiversity and suppression of invasive plants • Consider installing drainage features to improve water flow and amphibian connectivity • Protect and water plants until established
Estuary / Marine	Confluence of French Creek and marine environment. Predominantly characterized by invasive plants along rip-rap berms and erosion control infrastructure.	• Consider habitat enhancement improvements to the riprap dike/berm • Install large woody debris to create aquatic and riparian habitat • Remove invasive plant species along dike • Plant suitable native plants • Introduce or amend soils to improve planting media

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7.1.1 Invasive Plant Management

Invasive plants are found throughout the FCENP, and their removal will be an important and ongoing effort. Table 6 identifies priority invasive plants to remove, techniques for removal and follow-up actions needed to ensure thorough management of these species. Techniques listed in the table are derived from best practices and integrated best management principles.[38] Techniques used to manage invasive plants may change as new information on best management practices becomes available. Locations for invasive plant removal will be prioritized based on ongoing enhancement projects, proximity to sensitive areas and invasive species priority. Project proposals put forward by conservation and stewardship groups that include invasive plant removal objectives will be reviewed by RDN Parks staff to confirm the suitability of management techniques and to evaluate any site limitations.

Table 6: Removal of Priority Invasive Plant Species in the FCENP[39]

Removal of Invasive Plant Species			
Species	**Reproduction**	**Removal Technique**	**Follow-up**
Himalayan Blackberry (*Rubus armeniacus*)	Seed (berries), propagation	Mechanical removal or hand cut, root crowns removed by digging	Cover area with cardboard layered with 5-10 cm mulch, plant native species densely
English Ivy (*Hedera helix*)	Seed, propagation, rhizomatous roots.	Cut vines at base of trees to prevent more growth, dig out and remove all possible plant parts	Monitor for re-growth promptly digging out new sprouts
English Holly (*Ilex aquifolium*)	Seed (berries), rhizomatous roots, lateral growth	Pull small plants out whole including roots, larger plants should be cut as low as possible. Prioritize female plants (with berries)	Cover large stumps with landscaping cloth or black plastic. Remove new sprouts promptly
Daphne/Spurge Laurel (*Daphne laureola*)	Seed (berries), lateral growth	Pull plants out whole, including roots, larger plants should be cut as low as possible.	Monitor for re-growth promptly digging out new sprouts.
St. John's Wort (*Hypericum calycinum/perforatum*)	Seed, aggressive rhizomatous roots	Mechanical removal or digging infected plants and soil out deeply (minimum 30cm)	Monitor for re-growth and in adjacent areas. Promptly dig out new sprouts
Scotch Broom (*Cytisus scoparius*)	Seed, occasional lateral growth	Pull small plants out whole, cut large plants low as possible	Monitor for re-growth and pull new shoots. Plant native species densely to increase shade cover.
Lamium (*Lamiastrum galeodbolon*) Periwinkle (*Vinca sp.*) Bindweed (*Convolvulus sp.*)	Seed, propagation, rhizomatous roots	Pull out plant parts meticulously, including all roots and stems	Cover area with cardboard layered with 5-10 cm mulch, plant native species densely
Giant Hogweed (*Heracleum mantegazzianum*) *Found in French Creek	Seed	*highly toxic, will cause burns to skin* Remove all plant parts, collect any dropped seed	Report new sightings through BC Invasives. Monitor area and promptly dig out new sprouts.

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7.1.2 Native Species Planting

Enhancement of disturbed or unnatural sites most often includes planting native plant species that once existed in the disturbed location. Specific details on planting recommendations are provided in the FCENP Ecological Enhancement Opportunities Report. Ecological enhancement projects will include planting plans that incorporate the following considerations:

- Site-appropriate species selection
- Using drought and climate change-tolerant plant species
- Using organic materials to amend soil as required
- Using mulch or leaf litter to protect plants and retain soil moisture
- Planting in cooler fall months to avoid drought, reduce mortality and the amount of establishment watering needed
- Monitoring and protecting sites from deer browse and other pests
- Monitoring and implementing a watering program as required during periods of drought

Planting plans for each site or enhancement project will be reviewed by RDN Parks staff to ensure suitability for the site and to mitigate any conflicts with sensitive sites or maintenance objectives.

7.1.3 Engineered or Mechanical Enhancement Activities

Physical barriers, such as the dike installed along French Creek, have degraded riparian habitat by preventing the growth of riparian vegetation, inhibiting natural ecological processes and creating sterile water channels undesirable to fish, insects and amphibians. Earthworks and engineering activities will require careful planning to ensure they enhance habitat while retaining and protecting hydrological and structural functions.

A restoration project, completed in late 2023, involved flattening and naturalizing an informal bike jump track. Machinery was used to level the features, while volunteers removed invasive plants, amended the soils and planted native species.

Future physical enhancement improvements, recommended in the *FCENP Ecological Enhancement Opportunities Report* and the *French Creek Estuary Restoration Dike Study* will be pursued as part of the ecological enhancement planning process.

Potential actions include:

- Permanent placement of large woody debris along the rip-rap dike
- Installation of culverts to improve water flow and amphibian habitat
- Naturalization of the topography of the pond by creating shallower shorelines
- Flattening and removal of residual bike jumps
- Preparation for shoreline planting and specialized planting of riprap

The Habitat Restoration Centre of Expertise (COE) is a new addition to DFO, consisting of scientists, engineers, technicians, and analysts. COE teams collaborate with partners, including stewardship groups, to oversee projects from conception to completion, aiming to maximize benefits for salmon while reducing time and costs.

The COE should be consulted to ensure proposed enhancement actions along the rip-rap dike and instream will maximize benefits, or to receive recommendations for project modifications.

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7.1.4 Monitoring

Invasive species removal and planting projects require long-term monitoring to evaluate whether enhancement efforts have achieved positive results. Monitoring and reporting systems will be developed that evaluate the success of enhancement and protection measures. Monitoring reports will be maintained by stewardship groups with support from RDN staff and submitted to RDN Parks staff for compilation as part of an annual review of activities. These reports will enable improvements to future projects and management strategies. Summary reports will be provided to partners and stewardship groups.

7.2 Amenities and Improvements

The design concept for the FCENP prioritizes the protection and preservation of its ecological integrity while offering welcoming and enjoyable opportunities for visitors to engage in wildlife viewing and quiet appreciation of the natural environment.

The planned amenities and improvements for the FCENP adhere to the RDN Parks and Trails Guidelines, 2014, and include access points, access control measures, a formal trail network, viewing areas and signage. These enhancements help reduce visitor impacts, minimize conflicts with wildlife and support the recovery of natural habitats. Wherever feasible, universal design principles will be incorporated into the planning and construction of these amenities.

7.2.1 Access Points

The FCENP has three public access points. A main vehicular entrance located at the end of Admiral Tryon Blvd. and two secondary access points along Columbia Drive.

Limiting access to the FCENP helps prevent people and dogs from entering restricted areas and is essential for balancing conservation priorities with public access. Ongoing efforts to decommission informal access points are necessary to support this approach.

Main Entrance

The informal parking area located at the southeastern entrance to the FCENP will be improved to meet expectations of a Medium-Low Use, Type 2-3 Staging Area. Upgrades to this area may include:

Parking

- Formalized parking for a minimum of five vehicles
- Gravel surfacing
- Minimum of one accessible parking space
- Entrance sign
- *An agreement with the Ministry of Transportation and Infrastructure will be required*

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Trailhead (TH #1)

- Signage: Includes civic address, directional signage and maps, rules and regulations, as well as information on trail users and hazards
- Designated informal gathering area
- Information Kiosk: A kiosk will provide information about the FCENP, including acknowledgment of the community contributions and support that made its acquisition possible
- Benches: Benches may be funded through the RDN Parks Amenity Contribution Program
- Access Control: Removable or lockable bollards to allow emergency and operational vehicles access to the Type 2 trail
- *Garbage receptacles, washroom facilities and picnic tables are not required*

Secondary Access Points

Two secondary access points off Columbia Dr. will be upgraded to meet the standards of a Type 3 Staging Area. Upgrades to this area include:

Parking

- *Parking will not be provided*

Trailhead (TH #2 and #3)

- Signage: Includes civic address, directional signage and maps, rules and regulations as well as information on trail users and hazards
- Access Control: Removable or lockable bollards to allow emergency and operational vehicles access to the Type 2 trail
- *Garbage receptacles are not required*

7.2.2 Access Control

To prevent visitors from entering sensitive habitat areas, a combination of engineered concrete barriers, bollards, boulders, fencing and signage may be used in various spots throughout the FCENP. Unauthorized activities such as dumping garden waste, creating shortcut trails and using areas for bike jumps have been repeatedly observed in various parts of the FCENP. Access control measures may include:

- Placement of boulders, fencing, or signage along Columbia Drive to discourage illegal dumping
- Placement of fencing around recently established enhancement sites or sensitive areas

7.2.3 Trails

A well-planned and maintained trail network serves to mitigate harmful impacts from humans and pets, guiding visitors away from habitat enhancement areas and aiding the recovery of natural habitats within the FCENP. Strategic use of boardwalks and minimizing the number of trails helps prevent habitat fragmentation, soil degradation, introduction of invasive plants and damage to vegetation. Careful management of the trail network, including the ongoing decommissioning of informal trails, ensures a balance between conservation priorities and public access, contributing to the long-term sustainability of the FCENP.

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The trail network directs public access away from sensitive ecosystems, preserves community trail connections and provides accessible access to viewing areas overlooking the pond, estuary and French Creek. Benches will be provided at strategic locations to accommodate mobility aids and strollers when needed.

Formalization of Trails

The FCENP trail network requires the formalization of the following trail sections:

- The existing informal trail bordering the western edge of the FCENP is located within the Highway 19A road corridor, providing a key internal trail connection between Trailheads #1 and #2. To formalize this trail, an agreement with the Ministry of Transportation and Infrastructure is required.
- The existing informal trail bordering the western edge of the FCENP is located within the Columbia Drive road corridor, providing an off-road trail connection between Trailheads 2 and 3. To formalize this section of trail an agreement with the Ministry of Transportation and Infrastructure is required.
- The existing informal trail bordering the eastern boundary of the FCENP extends onto private property (Lot A) and serves as a vital community trail link between Viking Way and Admiral Tryon Blvd. As this trail is not part of the formal trail network, it will be closed to public use by installing trail closure and boundary signage. However, if the opportunity arises to secure public access through lot A, efforts will be made to restore this trail connection.

Trail Types and Surfacing

Trails within the FCENP will be designated and maintained as either Type 2 or Type 3 trails, in accordance with the most recent RDN Parks and Trails Guidelines.

Type 2 trails are moderately developed, typically 1 to 1.5 meters wide, providing low-impact, low-effort recreational options. In the FCENP, these trails are designed to accommodate operational and emergency vehicles, mobility aids and strollers, featuring well-compacted gravel surfaces for smooth, even travel. These trails require a total cleared width of about 3.5 meters and a height of approximately 4.0 meters to ensure adequate access for emergency vehicles. Operational vehicle turnaround/emergency vehicle staging areas will be provided. These trails require a moderate level of maintenance.

Type 3 trails are narrower, more rugged, natural surface trails, suited for those seeking hiking opportunities. These trails are typically 0.5 to 1.0 meters wide and require a cleared width of about 0.5 meters on each side of the trail and a height of approximately 2.5 meters. Although these types of trails are less accessible, minor improvements, such as adding trail surfacing material or installing boardwalks, may be made where feasible to address barriers like trip hazards or pinch points, with minimal impact on trees and surrounding vegetation. These trails require a minimal level of maintenance.

Decommissioning Unsanctioned Trails

Any trails not identified as part of the official FCENP trail network will be decommissioned. This also includes future trails or access points built without RDN authorization. High-traffic unsanctioned access points and trails will be blocked with access control features (e.g., boulders, concrete barriers, split rail fencing).

Decommissioning for both high and low-traffic trails may include placement of woody debris; cultivating or tilling hardpan and mineral soil; planting native species; mulching; and informative signage.

All decommissioned trails will be left to naturalize and will not be maintained.

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7.2.4 Viewing Areas

Viewing areas will be provided at key locations and have benches and interpretive signage where appropriate. The benches may be funded through the RDN Parks Amenity Contribution Program. These viewing areas offer safe, designated areas for viewing unique natural features and observing wildlife. They will be designed to protect ecological integrity and blend with the natural beauty of the environment. Trail access to the viewing areas will accommodate operational vehicles.

- Viewing Area 1 is located at the main entrance, offering views of the French Creek Estuary and the ocean.
- Viewing Area 2 is located downstream of the highway bridge, providing views over French Creek.
- Viewing Area 3 is located in the western pond area, offering views of the pond and ongoing ecological enhancement efforts, as well as opportunities to observe wildlife.

7.2.5 Signage

Installation of signage throughout the FCENP will welcome visitors, specify regulations, guide users along the trail network and to viewing areas, direct foot traffic away from sensitive habitats and ecological enhancement sites and provide interpretive information. All signage will be developed using RDN sign standards.

Entrance

Entrance signage is provided at all three access points to the FCENP. A medium-sized community park entrance sign will be placed at the main entrance situated at the end of Admiral Tryon Blvd. Smaller entrance signs will be mounted on 6"x 6" posts at the two secondary access points.

Wayfinding

Wayfinding signage ensures safe navigation and encourages responsible trail usage. Directional signs at trail intersections, along with trail maps at secondary access points and the main entrance kiosk, guide visitors along designated paths, minimizing disruption to sensitive habitats.

Regulatory

Regulatory signage informs visitors of permitted and prohibited activities within the FCENP. Compliance with these regulations is mandated and enforceable by the RDN Parks Use Regulation Bylaw 1801. The regulatory signage to be installed at the FCENP will include, but is not limited to, the following:

- Pets must be on-leash at all times
- Pedestrian use only (no bikes)
- No motorized vehicles (mobility aids are exempt)
- No dumping of garbage or garden waste
- Restricted access to sensitive/enhancement areas
- No camping
- No fires
- No Smoking

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Interpretive/Educational Signage

Interpretive signage offers visitors opportunities to learn about the cultural and natural history of the area, highlighting sensitive ecosystems, ecological enhancement efforts and unique features in the FCENP. Educational signage will promote Leave No Trace Principles.[40]

All interpretive and educational signage installed in the FCENP will be positioned to avoid unnecessary trampling of plants and disruption of soil and will be situated to avoid conflict with other trail users.

Leave No Trace Principles encourage visitors to:

- Know before you go
- Stick to the trails
- Trash your trash and pick up poop
- Leave it as you find it
- No fires
- Keep wildlife wild
- Share our trails and manage your pet

7.3 Operational Activities

Operational activities in the FCENP are essential for enhancing visitor experiences, public safety and conserving the environment. These activities include maintaining trails, signage, parking lot, supporting infrastructure development, managing invasive species, ecological enhancement, and monitoring ecological health.

To ensure the safety of all visitors at FCENP, maintenance standards outlined in the RDN Parks and Trails Guidelines will be followed.

7.3.1 Hazard Tree Management

Death and degradation of mature trees is an expected part of normal ecosystems; however, these trees can pose a significant risk to visitor safety. Hazard tree management is conducted in accordance with the Tree, Fire Risk and Invasive Species Management in RDN Parks and Trails Policy or the most current applicable policy.

Potential hazard trees near trails and amenities will be assessed by certified professionals and, if possible, modified rather than removed to preserve wildlife habitat, with removed tree parts left on-site to decay naturally.

7.3.2 Access for Existing Rights-of-way

Rights of way for Hwy 19A and BC Hydro lines require activities such as brushing, mowing, or pruning of trees to maintain and protect utilities from damage. Access for maintenance of infrastructure not owned by the RDN and activities occurring within road rights-of-way may be required. RDN Parks staff will be responsible for monitoring right-of-way activities and coordinating permitted access to the FCENP for maintenance of rights of way.

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7.3.3 Emergency Response

Human life and safety are the highest priority for emergency response. RDN Parks has collaborated with the City of Parksville Fire Rescue Department and RDN Emergency Services to evaluate emergency response access.

RDN Parks will work with local first responders to ensure that operational maintenance and future developments do not hinder emergency response capabilities. Type 2 trails within the property will be maintained to provide clear access by response vehicles. Parksville Fire Department has noted that most emergency calls in this area involve personal injuries or nuisance or cooking fires, which typically do not require aid from large apparatuses.

The FCENP is within the French Creek Fire Protection Boundary, with Parksville Fire Rescue as the primary responder and Qualicum Beach Fire Rescue providing support through a mutual aid agreement. Both departments also have additional mutual aid agreements with other fire services, including BC Wildfire's Mid Island Fire Zone in Errington.

Water sources for fire suppression are abundant in the area, with hydrants connected to the City of Parksville water system located near all boundaries of the FCENP.

RDN Parks will continue to maintain a direct relationship with response agencies and RDN Emergency Services to ensure proactive measures are taken to protect human life and safety, along with the key values within the FCENP.

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8.0 USE GUIDELINES

In addition to ecological enhancement and monitoring activities, the French Creek Estuary Nature Preserve (FCENP) offers opportunities for low-impact recreation, education and research. To address user conflicts and impacts while protecting biodiversity and ecological values, visitors will be informed of permitted activities. Authorization for ecological enhancement and monitoring projects, research activities and large group visits will be managed through the park use permitting process to effectively control their impacts. The Parks Use Permit application can be found on the RDN Parks website.

8.1 Ecological Enhancement and Monitoring

The RDN will work with conservation and stewardship groups to create an action plan for ecological enhancement projects and facilitate community-led initiatives. All community-led enhancement projects within the FCENP require a Parks Use Permit as per RDN Parks Use Bylaw No. 1801. Priority will be given to projects with secured funding. The issuance of all Parks Use Permits is the responsibility of the RDN Manager of Parks Services.

8.2 Recreation, Education and Group Visits

Ecological enhancement efforts alone will not be enough to protect ecosystems and wildlife in the FCENP. However, when combined with well-planned protection measures that minimize negative impacts from visitors, habitats can flourish and remain healthy. This section outlines the types of activities permitted within the designated trail network.

8.2.1 Recreational Use

Walking, wildlife viewing, birdwatching and other low-impact recreation activities will be allowed on designated trails in the FCENP, as these activities generally cause minimal disturbance to sensitive wildlife. Regulatory signage will inform visitors that high-impact activities, such as biking and motorized vehicle use, are prohibited due to their high potential to disturb wildlife and the natural environment.

8.2.2 Self-guided Learning

Visitor education plays a crucial role in protecting the unique assets of the FCENP. Self-guided learning opportunities, such as interpretive signage and observing natural wildlife and plants, allow visitors to gain knowledge while exploring. Providing educational information enhances the protection of the FCENP's unique assets.

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8.2.3 Permitted Access for Programmed Recreation and Education Events

Programmed and organized events require a Parks Use Permit in accordance with RDN Parks Use Bylaw No. 1801. RDN Parks staff will review event objectives, assess potential risks, and set clear expectations regarding acceptable behavior in the FCENP. While reasonable requests will be considered, staff may suggest alternative Regional or Community Parks better suited for the planned activities. These permits help prevent scheduling conflicts with other park users, ecological enhancement events, or maintenance activities. The RDN Manager of Parks Services is responsible for issuing all Parks Use Permits.

Interpretive guided visits may be offered by stewardship and conservation organizations such as Mid Vancouver Island Habitat Enhancement Society, Friends of French Creek Conservation Society, Save Estuary Land Society and Arrowsmith Naturalists, as well as by the Mount Arrowsmith Biosphere Region Research Institute. These conservation and stewardship groups possess extensive knowledge, qualifications and a strong commitment to protecting the FCENP, making them well-equipped to safely guide visitors interested in learning about the area.

8.3 Research and Scientific Inquiry

The diverse environment of the FCENP offers a valuable opportunity to learn about ecology, estuarine habitats, the impacts of land use on sensitive ecosystems, and many other related themes. Several ecological studies and projects have been conducted within the FCENP and surrounding areas, both before and shortly after its acquisition, generating valuable ecological data. To support ecological enhancement objectives and promote education, scientific inquiry, and adaptive land management, research and monitoring projects will be encouraged throughout the FCENP.

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8.3.1 Completed and Ongoing Studies

The table below summarizes independent research and monitoring projects conducted within the FCENP. These projects, led by experts and supported by volunteers, aim to enhance understanding of the ecosystem, guide its management and ecological enhancement, and contribute to scientific and educational knowledge. While some studies have been completed, others are ongoing.

Table 7: Completed and Ongoing Research at the FCENP

Completed and Ongoing Research			
Study Name	**Author/Organization**	**Year**	**Purpose/ Implications**
Entomological Baseline Survey	Dr. Scott Gilmour (Vancouver Island University)	2023	To establish baseline insect diversity and abundance
Avian Aerial Insectivore Baseline Survey	Alysia Boudreau and Heidi van Vliet (Vancouver Island University)	2023 / Ongoing	Survey of blue-listed aerial insectivore species
Bird Use of the French Creek Estuary and Related Conservation Planning Recommendations	Christopher M. Stephens Consulting (for Mount Arrowsmith Biosphere Region Research Institute)	2018	Identification of bird species in the FCE and recommendations for improving estuarine bird habitat
Plants and Fungi Observed in French Creek Estuary Forest	Terry Taylor, Larry Williams, Karen Romanyk (Arrowsmith Naturalists)	2019, 2021, Ongoing	Plant and fungi species presence survey
Permanent Forest Plot Establishment and Baseline Survey	Ecological Research and Education Project	2023/ Ongoing	Baseline study and establishment of long-term forest plots.
Bald Eagle and Great Blue Heron Nest Tree Identification and Observation Project	Save Estuary Land Society	2023	Identification of Bald Eagle and Great Blue Heron nest trees from Deep Bay to Nanoose Bay
Environmental Assessment of the Current and Potential Connectivity of Aquatic Features in the Nature Preserve	LGL Ltd. Environmental Consultants, Save Estuary Land Society	2024	Assess the hydrological connectivity of wetlands to identify enhancement objectives to support amphibians and other species

8.3.2 Permitted Access for Research

In accordance with RDN Parks Use Bylaw No. 1801, all planned activities must be approved through RDN Parks Use Permits including any research activities. Applications for research and monitoring will be considered based on suitability and alignment with the FCENP Management Plan.

Permits and agreements allow RDN Parks staff to keep track of activities, ensure the safety of researchers and visitors to the park, and avoid limitations and conflicts such as:

- Restricted access to sensitive areas
- Scheduling conflicts with ecological enhancement or maintenance activities
- Limits to installation of infrastructure/equipment required for monitoring

To further facilitate collaboration and information sharing, results from all scientific inquiries will be provided to the RDN and shared with the public.

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9.0 IMPLEMENTATION

This section presents a 10-year framework for implementing the actions identified in the management plan.

9.1 Capital Cost Estimates

The total 10-year capital cost to implement the action items identified in the management plan is $307,008, to be funded through the Electoral Area G parks capital budget and grants from other organizations.

Capital costs for each action item are detailed in Table 8, along with the associated timeframe for implementation.

Table 8: Implementation Plan Overview

	Strategy / Action	*Timeframe**	*Capital Budget***	*Other Org****	*Deliverable*
GOAL 1:	**Protect, Conserve and Enhance Ecological Biodiversity**				
1.1	**Strengthen the protection, recognition and conservation focus of the FCENP**				
1.1.1	Incorporate the FCENP into an updated RDN Community Parks Classification System	Immediate 2024			Classify FCENP as a "Conservation Area" in the updated Community Parks classification
1.1.2	Pursue recognition of the FCENP within the Canadian Protected and Conserved Areas Database	Immediate 2024			French Creek Estuary lands (Completed); Columbia Drive CP (To investigate)
1.2	**Conserve and enhance biodiversity through the retention of natural features, rehabilitation of degraded areas, removal of invasive species and habitat improvements**				
1.2.1	Implement ecological enhancement strategies within the FCENP	Ongoing			Develop an ecological enhancement plan
		Immediate 2024	$32,000	$20,543	Implement priority enhancement project: Pond Naturalization
1.2.2	Develop a monitoring and reporting system to evaluate the success of enhancement and protection efforts	Ongoing			Approved enhancement projects will include long-term monitoring and reporting
1.2.3	Seek out additional funding sources for enhancement and research projects	Ongoing			Secure funding for enhancement: grants, fundraising, in-kind/ volunteer support
1.2.4	Support the conservation and enhancement of lands within the French Creek watershed	Ongoing			Continue to support and strengthen relationships with conservation and stewardship groups; collaborate within RDN to achieve shared goals

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	Strategy / Action	*Timeframe**	*Capital Budget***	*Other Org****	*Deliverable*
GOAL 2: Encourage Community Enjoyment of Nature					
2.1	**Provide a system of safe, inclusive and well-maintained trails, viewing areas and access points that provide low-impact opportunities to interact with nature**				
2.1.1	Implement amenities and development improvements per Section 7.0, "Concept Plan"	Immediate 2024/2025	$79,358	$18,107	Design and implement improvements to the main entrance (TH #1), parking area and Viewing Area #1
		Immediate 2024/2025	$10,000		Install trailhead baffles/ removable bollards for vehicle access (TH #1 and #3)
		Short Term 2025	$20,000		Conduct an AIA [1] for infrastructure and ecological enhancement planning
		Short Term 2025	$2,000		Install wayfinding, information and regulatory signage
		Medium Term 2027	$35,000		Construct viewing areas with benches at VA #2 and #3
		Long Term 2032	$30,000		Improve the roadside trail on Columbia Dr. to connect TH #2 and TH #3
2.2	**Limit activities that harm the ecological integrity of the FCENP**				
2.2.1	Maintain an official trail system and decommission unsanctioned trails and access points per Section 7.0 "Concept Plan"	Ongoing starting 2025			Decommission unsanctioned trails and access points
2.2.2	Prevent access to sensitive areas outside of the sanctioned trail network per Section 7.0 "Concept Plan"	Short Term 2025	$5,000		Install access controls and signage along Columbia Dr. to prevent dumping and new access points
		Short Term 2025	$5,000		Install access controls and signage to deter access to the pond

[1] *AIA – Archaeological Impact Assessment*

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	Strategy / Action	*Timeframe**	*Capital Budget***	*Other Org****	*Deliverable*
GOAL 3: Collaboration, Volunteerism and Knowledge					
3.1	**Involve First Nations, conservation and stewardship groups and educational and research institutions to participate in ongoing protection and ecological enhancement of the FCENP**				
3.1.1	Support Indigenous-led enhancement projects by engaging directly with First Nations and First Nation-led stewardship organizations	Ongoing			Include opportunities to fund Indigenous-led ecological enhancement projects
3.1.2	Support community-led ecological enhancement initiatives	Ongoing			Hold regular meetings with conservation and stewardship groups
		Ongoing			Use multi-year Park Use Permits for community-led ecological enhancement projects
3.2	**Foster the pursuit of knowledge through education, community science and research**				
3.2.1	Explore opportunities to incorporate cultural education and interpretation into park signage and programming in collaboration with First Nations	Short Term 2027	$50,000		Incorporate cultural education into park infrastructure, signage and programming, including Indigenous art, place names and educational tours
3.2.2	Create nature-based educational opportunities for youth and adults through interpretive signage and programming	Ongoing			Incorporate ecological education into programming at the FCENP
3.2.3	Encourage and support research projects and community science activities to broaden scientific understanding of sensitive ecosystems and habitats	Ongoing			Provide Parks Use Permits for research and community science activities

*Immediate (2024); Short Term (2025-2027)
Medium Term (2028-2030); Long Term (2031-2033)
Ongoing (2024-2033)

** EA -G Community Parks Capital Budget

***Other Organization - grant funding for 2024/2025 ecological enhancement projects (MABRRI)

Capital Budget**	Other Org***	
EA -G Comm Parks	Grants	
$268,358	**$38,650**	**TOTALS**

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9.2 Operating Cost Estimates

Operating costs will be $17,000 annually to maintain the FCENP and new amenities, as identified in Table 9.

Table 9: Annual Operation Budget

Deliverable	2024	2025
General allowance to maintain the FCENP and new amenities	$5,000	$17,000

9.3 Summary

The RDN will pursue the management action items identified in this plan to achieve the vision, goals and strategies of the French Creek Estuary Nature Preserve. Future management initiatives may lead to further action items that will be identified in work plans and future revisions of this management plan.

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