DWB Consulting Services Ltd.

Environmental Management Plan

Caledonia Nordic Ski Club

Engineering | Environmental | Forestry

Prepared for: Caledonia Nordic Ski Club

Prepared by: DWB Consulting Services Ltd.
Prince George Division
1579-9th Ave, Prince George, BC V2L 2C1
250.562.5541 | www.dwbconsulting.ca

Date: 26.09.2025 | DWB file: 25594-076 PB | Revision: 1

Signature Page

DWB Consulting Services Ltd. is pleased to submit this report for your review. This report has been prepared using sound technical and professional judgement, based on our knowledge and experience, applicable regulatory framework, industry best management practices, and current understanding of site conditions, design, and site setting.

REPORT TITLE: Environmental Management Plan - Caledonia Nordic Ski Club

PREPARED FOR: Caledonia Nordic Ski Club

REVISION: 0

WRITTEN BY:

Jens Mudde, Environmental Technician
Julie Hogness, RPF
Jennifer Petersen, RPbio, Pag

REVIEWED BY:

Andrew Martin, RPbio, CPESC

REVISION HISTORY			
DATE	**VERSION**	**REVIEW TYPE**[1]	**REVIEWED BY** (NAME, COMPANY)
10.06.2025	Draft	Editorial	Bipan Maiya-Sadadev, DWB Consulting Services Ltd.
05.09.2025	Draft	Editorial	Jens Mudde, DWB Consulting Services Ltd.
12.09.2025	0	Professional	Andrew Martin, DWB Consulting Services Ltd.
15.09.2025	0	Editorial	Serena Stanisavljevic, DWB Consulting Services Ltd.
26.09.2025	1	Editorial	Jens Mudde, DWB Consulting Services Ltd.

[1] Editorial Review: Reviewed for formatting, grammar, spelling, etc.
Professional Review: Reviewed for content and professional signoff

Disclaimer

This report was prepared and rendered solely for use by the client. By using this report, the client accepts this disclaimer in full. No person or party may utilize or rely on this document for any other purpose without written consent and approval from DWB Consulting Services Ltd (DWB). The information and recommendations presented in this report were based on the diligent review of available environmental documents, including applicable permits, and available background environmental information using accepted professional practices and standards.

We do not represent, warrant, undertake or guarantee that:

- All site environmental-related information has been received.
- Regulations and standards of practices shall remain constant through the duration of the site and any associated works.
- The use of guidance in the report will lead to any particular outcome or result.

TABLE OF CONTENTS

1.0 INTRODUCTION 1
1.1 Site Location 1
1.2 EMP Objectives 1
2.0 EMERGENCY CONTACTS 4
3.0 REGULATORY FRAMEWORK, TENURE AND PERMITS 4
3.1 Forestry 4
3.2 Environmental 4
3.2.1 Provincial 4
3.2.2 Federal 5
4.0 ENVIRONMENTAL SETTING 6
4.1.1 Community Watersheds 6
4.1.2 Fisheries Sensitive Watersheds 6
4.1.3 Streams 6
4.2 Terrestrial 7
4.2.1 Vegetation 7
4.2.2 Timber Overview 7
4.2.3 Old Growth Overview 7
4.2.4 Established Visual Quality Objectives 8
4.2.5 Invasive Plants 8
4.2.6 Vegetation and Ecological Communities at Risk 9
4.2.7 Cranbrook Hill Greenway Society 9
4.3 Wildlife 9
4.3.1 Mammals 9
4.3.2 Amphibians and Reptiles 10
4.3.3 Nesting Birds 10
4.3.4 Species At Risk 10
4.3.4.1 Mammals 11
4.3.4.2 Birds 11
4.3.4.3 Amphibians 12
4.3.4.4 Reptiles 12
4.3.4.5 Invertebrates 12
4.3.5 Government Actions Regulations (GAR) 12
5.0 GENERAL ENVIRONMENTAL MANAGEMENT MEASURES 13
5.1 Start up and Environmental Briefing 13
5.2 Site Access 14
5.3 Staging 14
5.4 Clearing and Grubbing 14
5.5 Trail Construction 14
6.0 TIMBER MANAGEMENT PLAN (TMP) 15
6.1 Trail identification 15

6.2 Old Growth 15
6.3 Ecological Communities at risk 15
6.4 Forest Health 15
6.5 Timber Removal 15
6.5.1 Special Tree Protection Regulation 15
6.5.2 Established Visual Quality Polygons 15
6.5.3 Wildlife 16
7.0 RIPARIAN MANAGEMENT PLAN (RMP) 16
7.1 Riparian management area requirements 16
7.2 Stream Crossings 16
7.2.1 Fords 16
7.2.2 Temporary Crossing Structure 17
8.0 EROSION AND SEDIMENT CONTROL PLAN (ESCP) 17
8.1 Procedural Best Management Practices 17
8.1.1 Scheduling and Sequencing 17
8.1.2 Staging Area 17
8.2 Seeding 17
9.0 WASTE MANAGEMENT PLAN (WMP) 18
9.1 General 18
9.2 Waste Disposal Facilities 18
9.3 Recycling Plan 19
9.4 Construction Wastes 19
9.5 Soil Handling Plan 19
9.6 Food and Domestic Waste 19
9.7 Hazardous Waste Management 19
9.7.1 Contaminated Soil and Water 20
9.7.2 Chemicals 20
9.7.3 Treated Wood 20
10.0 SPILL PREVENTION AND RESPONSE PLAN (SPRP) 20
10.1 Spill Prevention Recommendations 20
10.1.1 Fuel and Hazardous Materials Storage 21
10.1.2 Servicing Equipment 21
10.1.3 Safety Data Sheets 22
10.1.4 Potential Spill Sources 22
10.2 Spill Response 22
10.2.1 General Practices 22
10.2.2 Clean Up Practices and Procedures 23
10.2.3 Spill Sampling and Monitoring 23
10.2.4 Spill Investigation/Spill Reporting Form 23
11.0 ENVIRONMENTAL REPORTING 23
11.1 Environmental Incident Reporting 23

11.1.1 INTERNAL REPORTING 24
11.1.2 EXTERNAL REPORTING 24
12.0 BURNING REQUIREMENTS 25
13.0 ASPHALT MANAGEMENT PLAN (ASP) 25
14.0 ARCHAEOLOGICAL MANAGEMENT PLAN (AMP) 26
15.0 INVASIVE PLANT MANAGEMENT PLAN (IPMP) 26
16.0 SITE WILDLIFE MANAGEMENT PLAN (SWMP) 27
16.1 WILDLIFE PROTECTION MEASURES 27
17.0 DISTRIBUTION OF THE EMP 27
18.0 REVISIONS TO THE EMP 27
19.0 REFERENCES 28

FIGURES

Figure 1 : Location of the Caledonia Nordic Ski Club in Prince George 5 ha 2
Figure 2 : Site map of Caledonia Nordic Ski Club with the current land agreements and future proposed licence expansion area 3

TABLES

Table 1: Emergency contacts 4
Table 2: TAP Old Growth Polygons within the Site 7
Table 3: Detailed list of the Potential invasive plant species at the Site and their Provincial Priority Status as per the BC Inter-Ministry Invasive Species Working group 2023 (Province of BC, 2025b) 8
Table 4: Mammalian species at risk potentially present at the Site (BCCDC, 2025) 11
Table 5: Bird species at risk potentially present at the Site (BCCDC, 2025) 12
Table 6: Invertebrate species at risk potentially present at the Site (BCCDC, 2025) 13
Table 7: Provincially reportable spills levels of some substances that commonly occur 26

APPENDICES

APPENDIX A CNSC STREAM MAP
APPENDIX B STREAM ASSESSMENT PHOTOS
APPENDIX D SPILL REPORT FORM

ACRONYMS LIST

Agricultural Land Reserve	ALR	Ministry of Forests	MOF
Archaeological Management Plan	AMP	Non-Classified Drainage	NCD
Asphalt Management Plan	ASP	Occupant Licence to Cut	OLTC
British Columbia Conservation Data Centre	BCCDC	Old Growth Management Areas	OGMA
Best Management Practices	BMPs	Partial Retention	PR
Bio geoclimatic	BEC	Qualified Professional	QP
Caledonia Nordic Ski Club	CNSC	Riparian Management Plan	RMP
Changes In and About a Stream	CIAS	Riparian Management Area	RMA
Committee on the Status of Endangered Wildlife in Canada	COSEWIC	Riparian Management Zone	RMZ
Coarse Woody Debris	CWD	Riparian Reserve Zone	RRZ
DWB Consulting Services Ltd.	DWB	*Species At Risk Act*	SARA
Environment and Climate Change Canada	ECCC	Sub Boreal Spruce	SBS
Environmental Management Plan	EMP	Safety Data Sheets	SDS
Erosion and Sediment Control	ESC	Site Wildlife Management Plan	SWMP
Environmental Stewardship Initiative	ESI	Spill Prevention and Response Plan	SPRP
Erosion and Sediment Control Plan	ESCP	Technical Advisory Panel	TAP
Established Visual Quality Objective	EVQO	Terrain Resource Information Management	TRIM
Fisheries and Oceans Canada	DFO	Timber Management Plan	TMP
Forestry Licence to Cut	FLTC	Ungulate Winter Range	UWR
Forest and Range Practices Act	FRPA	Visual Landscape Inventory	VLI
Forest Planning and Practices Regulation	FPPR	Visual Impact Assessment	VIA
Government Actions Regulations	GAR	Waste Management Plan	WMP
Invasive Plant Management Plan	IPMP	*Water Sustainability Act*	WSA
Industrial Forestry Services Ltd.	IFS	Water Sustainability Regulation	WSR
Licences of Occupation	LOO	Wildlife Habitat Area	WHA
Migratory Birds Convention Act	MBCA	Workplace Hazardous Materials Information System	WHMIS

1.0 INTRODUCTION

DWB Consulting Services Ltd. (DWB) was retained by Caledonia Nordic Ski Club (CNSC) to prepare an Environmental Management Plan (EMP) for the facility in Prince George, BC. The CNSC features several kilometers of maintained trails, ranging from beginner to advanced levels, that wind through forested terrain and support a variety of recreational activities, including Nordic skiing, snowshoeing, hiking, single-track mountain biking, disc golf, and more.

Throughout this document, any future merchantable tree cutting for maintenance or construction activities that will take place on the CNSC property or future properties (the "Site") are referred to as "Work". DWB has prepared this EMP to address environmental mitigation measures for Works associated with the Site in accordance with municipal, provincial and federal legislation, regulations, and Best Management Practices (BMPs). This plan was prepared based on available background information and input from the CNSC.

1.1 SITE LOCATION

The CNSC, situated on the unceded ancestral lands of the Lheidli T'enneh First Nation (LTFN), is located at 8141 Otway Road, within Prince George's municipal limits, at UTM 10U 508253.33 m E 5980233.81 m N (Figure 1). The CNSC and LTFN have signed a partnership agreement which includes hosting an annual LTFN Day at the facility.

The current land agreements and future licence expansion areas are shown in the Figure 2.

1.2 EMP OBJECTIVES

This EMP has been prepared to provide an environmental management document for the CNSC. This EMP includes:

- Contact lists for emergencies,
- Regulatory framework, permits and tenure overview,
- Environmental setting, including relevant timing windows,
- General environmental management measures,
- Timer Management Plan (TMP),
- Riparian Management Plan (RMP),
- Erosion and Sediment Control Plan (ESCP),
- Waste Management Plan (WMP),
- Spill Prevention and Response Plan (SPRP),
- Asphalt Management Plan (ASP)
- Archaeological Management Plan (AMP),
- Invasive Plant Management Plan (IPMP), and
- Site Wildlife Management Plan (SWMP).

This EMP and any accompanying documents will be updated to reflect any changes made and include additional information as it becomes available.

Figure 1 : Location of the Caledonia Nordic Ski Club in Prince George

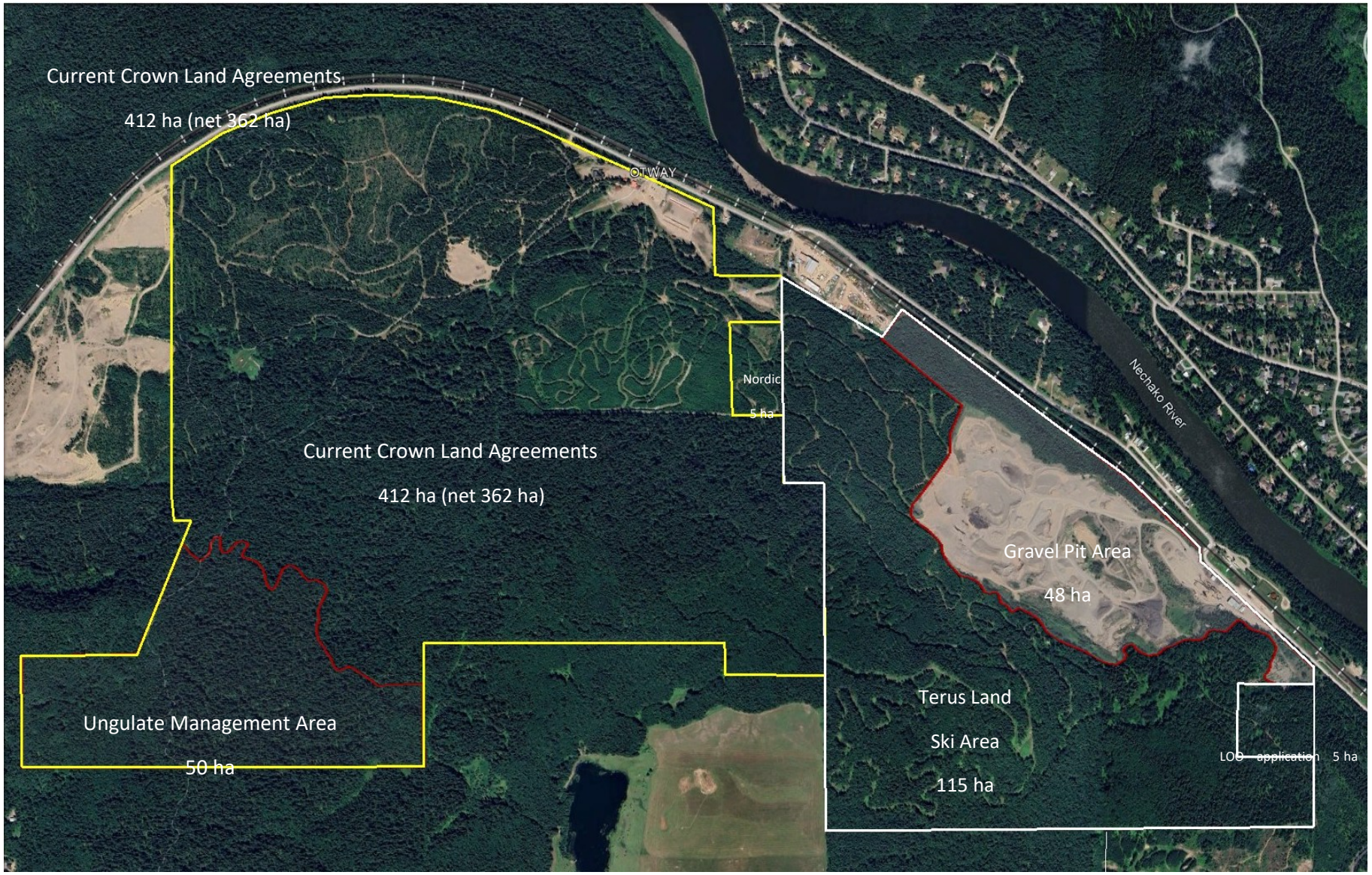


Figure 2 : Site map of Caledonia Nordic Ski Club with the current land agreements and future proposed licence expansion area

2.0 EMERGENCY CONTACTS

Table 1: Emergency contacts

CONTACT	CONTACT FOR	PHONE
Environment and Climate Change Canada (ECCC)	Environmental Emergencies	1-604-666-6100
Emergency Management BC	Reportable Spills	1-800-663-3456
Police and Fire Department	Fire, Emergency Response	911
Provincial Conservation Office (24 hr)	Wildlife Conflicts (e.g., Bears)	1-877-952-7277

3.0 REGULATORY FRAMEWORK, TENURE AND PERMITS

CNSC is responsible for complying with all federal, provincial, municipal and laws and regulations during any planned Works on Site. CNSC is responsible for the acquisition of any necessary permits and/or authorizations required for Works. Copies of all required approved permits and authorizations will be kept on the Site throughout Works.

3.1 FORESTRY

At the time of preparing this plan, the CNSC holds several tenures allowing them to occupy and manage the land currently utilized by the ski club. These tenures include an agreement under the *Land Act,* Lease #706501, a Licence of Occupation (LOO), Licence #705707, and a 3-year renewable Land Use Agreement with Terus Construction that has been replaceable for decades. CNSC intends to amend their existing LOO to include the proposed expansion area to the existing tenure (refer to Figure 2).

As per the requirements under CNSC's Lease and LOO, authorization under the *Forest Act* is required to fell timber. This authority may be obtained in whatever form is deemed acceptable by the local Ministry of Forests (MOF) office. This may include such authorizations as an Occupant Licence to Cut (OLTC), a Forestry Licence to Cut (FLTC) or a *Forest and Range Practices Act* (FRPA) Section 52 authorization.

3.2 ENVIRONMENTAL

3.2.1 Provincial

Wildlife Act

The British Columbia (BC) *Wildlife Act* governs the conservation of wildlife and their habitats within the province. Under this Act, no one can legally possess, collect, or harm wildlife without permission. The Act establishes licensing, permitting, and fee structures for activities such as trapping, angling, and hunting, and defines various wildlife-related offences (Province of BC, 2025d).

Under Section 34, the *Wildlife Act* prohibits the disturbance or destruction of any bird nest that is currently occupied by a bird or contains eggs. Additionally, it provides year-round protection for the nests of specific species, such as the Bald Eagle (*Haliaeetus leucocephalus*), Osprey (*Pandion haliaetus*), Peregrine Falcon

(*Falco peregrinus*), Gyrfalcon (*Falco rusticolus*), Burrowing Owl (*Athene cunicularia*), Pileated Woodpecker (*Dryocopus pileatus*) and herons, regardless of whether the nest is actively in use (Province of BC, 2025d).

Water Sustainability Act

The *Water Sustainability Act* (WSA) serves as the principal legislation overseeing surface and groundwater resources. Section 11 of the WSA governs activities involving alterations to streams and their channels, collectively referred to as "changes in and about a stream" (CIAS). CIAS encompasses any modification to the physical characteristics of a stream, including changes to landforms, vegetation, hydrological flow, or the broader riparian environment, as well as any in-stream construction or activity that could affect the stream channel or its function.

Under the WSA, the definition of a “stream” is broad and includes all naturally occurring water bodies, such as rivers, creeks, wetlands, ponds, and glaciers, regardless of whether they have been historically altered or support fish populations.

The Water Sustainability Regulation (WSR), enacted under the WSA, categorizes CIAS into two distinct types:

- Authorized Changes: Defined under Section 39(1) of the WSR, these activities do not require a formal Change Approval application process, but rather a notification to a habitat officer. Examples include: closed bottom culvert placement on non-fish streams, and clear span bridge installation.
- Other Changes: CIAS that fall outside the scope of Section 39(1) are subject to a formal Change Approval application process. Examples include: non-clear span bridge and riprap revetment installation.

For Authorized Changes governed by standards or regulations established under the FRPA, and conducted in accordance with valid permits or agreements under the FRPA, such activities are usually exempt from habitat officer notification under the WSA.

3.2.2 Federal

***Migratory Birds Convention Act* and Regulations**

The federal *Migratory Birds Convention Act* (MBCA) and its associated regulations provide legal protection for migratory bird species in Canada. These regulations prohibit the hunting, killing, capturing, possessing, or harassing of migratory birds unless authorized under a valid permit. Additionally, the legislation forbids the destruction or disturbance of active migratory bird nests, as well as the release or deposition of any harmful substance in areas habitually used by migratory birds (Government of Canada, 1994).

Nests belonging to 18 species, including Pileated Woodpecker (*Dryocopus pileatus*) and great blue heron (*Ardea Herodias*), are protected year-round under the MBCA regardless of occupancy, unless the nest has remained unoccupied for a predetermined period of time. Unoccupied nests protected year-round under the MBCA may only be removed after a notification has been submitted to the Registry for Abandoned Nests, and only if certain conditions or authorizations apply (Government of Canada, 1994).

Species at Risk Act

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) is responsible for conducting scientific assessments of the conservation status of wildlife species in Canada at the federal level. Species assessed by COSEWIC and classified as extirpated, endangered, threatened, or of special concern may receive formal legal protection if they are listed under Schedule 1 of the *Species at Risk Act* (SARA), as published in the Species at Risk Public Registry. Legal protections under SARA include prohibitions against the killing, harming, harassing, capturing, taking, or possessing of any individual of a species listed on Schedule 1, as well as the damage or destruction of the residence of such species. For instance, barn swallow (*Hirundo rustica*) nests are afforded additional protection as a residence under SARA, during which time removal may not occur regardless of nest occupancy. Barn swallow nests are defined as a residence under SARA from May 1st or the date when adults are first seen building or occupying the nest, whichever is earlier, to August 31st or the date when a bird is last seen at the nest, whichever is later (Government of Canada, 2019).

4.0 ENVIRONMENTAL SETTING

The information presented in the Environmental Setting section is based on data collected through a forest inventory, general stand assessment, and timber cruise conducted by Industrial Forestry Service Ltd. (IFS) in 2022 and 2023. It also incorporates findings from a DWB field assessment completed in May 2025, along with a desktop review of relevant provincial databases, including Habitat Wizard and iMapBC (Province of BC, 2025a; Province of BC, 2025b). The timber cruise followed the standards outlined in Section 2 of the *Province of British Columbia Timber Pricing Branch's Cruising Manual*. In addition to timber data, IFS collected information on coarse woody debris (CWD), landscape and wildlife features, fisher habitat, tree veterans, general stand conditions, and areas of concern.

4.1.1 Community Watersheds

At the time of preparing this plan, there were no established Community Watersheds overlapping with the Site (Province of BC, 2025a).

4.1.2 Fisheries Sensitive Watersheds

At the time of preparing this plan, there were no established or proposed Fisheries Sensitive Watersheds overlapping with the Site (Province of BC, 2025a).

4.1.3 Streams

According to PGMap, several Terrain Resource Information Management (TRIM) predicted stream features are present within the Site (City of Prince George, 2025b). Their individual locations within the CNSC are illustrated in the stream map provided in Appendix A. As shown on the stream map, these TRIM features don't have downstream connection for fish passage up from the Nechako River.

On May 13, 2025, a DWB-qualified fisheries specialist conducted assessments on four of these streams to evaluate their classification and potential fish habitat. The four streams were determined to be non-fish-bearing, due to the permanent barrier between the upstream lake and the lack of connection to the Nechako River downstream. Fish habitat assessments were carried out in accordance with the *Fish-Stream Crossing Guidebook* (Province of BC, 2012) and *Reconnaissance (1:20,000) Fish and Fish Habitat Inventory: Site Card Field Guide* (RISC, 2008), while stream classification followed the criteria outlined in the *Fish-Stream Identification Handbook* (Province of BC, 2025e). The four assessed streams are identified by

orange markers on the stream map in Appendix A. Photographs of each feature are provided in Appendix B.

4.2 TERRESTRIAL

4.2.1 Vegetation

The Site is located within the Sub Boreal Spruce (SBS) Stuart dry warm (dw3) Bio geoclimatic zone (BEC; Province of BC, 2025a). As per the *Field Guide for Site Identification and Interpretation for the Southwest Portion of the Prince George Forest Region - Land Management Handbook 24,* within the SBSdw3 BEC zone, the non-treed vegetation is characterized by an abundance of shrubs and herbaceous species such as prickly rose (*Rosa acicularis*), birch-leaved spirea (*Spiraea betulifolia*), twinflower (*Linnaea borealis*), and rough-leaved ricegrass (*Oryzopsis asperifolia*). Feather mosses, for example red-stemmed feathermoss (*Pleurozium schreberi*), are the dominant bryophytes within the SBSdw3 BEC zone (DeLong et al., 1993).

4.2.2 Timber Overview

An inventory assessment of the standing timber was completed by IFS in 2023. They determined that this Site is dominated by mature forest comprised of hybrid spruce (*Picea glauca x engelmannii),* sub-alpine fir (*Abies lasiocarpa*), Douglas-fir (*Pseudotsuga menziesii*), trembling aspen (*Populus tremuloides*), and paper birch (*Betula papyrifera);* these mature stands are on average 103 years old (IFS, 2023; Province of BC, 2025a). Additionally, there are pockets of younger immature and older immature stands scattered throughout the area, including where the existing trail network lies (IFS, 2023). This area has previously been impacted by several bark beetles, including mountain pine beetle, Douglas-fir bark beetle, and spruce bark beetle. Majority of the stems affected by the mountain pine beetle have already been removed, though spruce and Douglas-fir stems were found to be in varying stages of attack (i.e. green to grey). Much of the area cleared for mountain pine beetle infestation removal are replanted to lodgepole pine and western larch.

4.2.3 Old Growth Overview

One area within the Site has been identified as 'Priority Big-Treed Old Growth' during an assessment completed by an independent Technical Advisory Panel (TAP) in 2019 (Province of BC, 2024b). The TAP polygon identified within the Site is described in Table 2 below.

Table 2: TAP Old Growth Polygons within the Site.

Priority Big Treed Old Growth Polygon ID	Management Direction
85069	Confirm presence/absence of veteran stems that meet requirements under the Special Tree Regulation (see Section 6.5.1).

This polygon has been further identified as being a 'Remnant Old Ecosystem' at the BEC Variant Scale (Province of BC, 2025a). As per the results of the timber inventory completed by IFS, polygon 85069 is younger in age than initially indicated by the Vegetated Resource Inventory (VRI). Priority Big Treed Old Growth polygon 85069 has an average age of 123 years old and as such, does not meet the age criteria of an 'Old Forest' in the SBSdw3 (MOF, 2022a).

Under FRPA, Old Growth Management Areas (OGMAs) are designated areas established to conserve biodiversity by protecting stands of old-growth forest. There are no legally established OGMAs within the existing or proposed expansion areas of the Site (Province of BC, 2025a).

4.2.4 Established Visual Quality Objectives

There is a 29.9 ha overlap of VRI polygon 7232 (which has an Established Visual Quality Objective (EVQO) of Partial Retention (PR)) into the LOO area. This is the hillside starting behind the old biathlon range, and ending near the junction of the "Fir Thur Up the Creek" & "Hickory Wing" trails, that is visible from Nechako River looking upstream. Trails systems in this area are fully developed and are not immediately visible from land or water. "Development" in this case, consists of 6 m wide ski trails that wind through a mature forest - fully screened by tall trees.

4.2.5 Invasive Plants

Invasive plants and noxious weeds are typically non-native plants that may lead to environmental degradation through destruction of native plant and wildlife habitat. According to Habitat Wizard, 28 invasive plant species have been found within a 2 km radius of the Site (Table 3; Province of BC, 2025b). The "Report-a-Weed" App or the 1-866-44WEEDS phone number through the Northwest Invasive Plant Council of BC (NWIPC) are both useful tools for reporting invasive plant species (Sec. 15).

Table 3: Detailed list of the Potential invasive plant species at the Site and their Provincial Priority Status as per the BC Inter-Ministry Invasive Species Working group 2023 (Province of BC, 2025b)

Code	Scientific Name	Common Name	Provincial Priority Status*
BC	*Silene vulgaris*	Bladder campion	n/a
BT	*Cirsium vulgare*	Bull thistle	n/a
BW	*Echium vulgare*	Blueweed	Regional Containment/Control
CS	*Euphorbia cyparissias*	Cypress spurge	Management
CT	*Cirsium arvense*	Canada thistle	n/a
DK	*Centaurea diffusa*	Diffuse knapweed	Management
GF	*Setaria viridis*	Green foxtail / green bristlegrass	n/a
HA	*Berteroa incana*	Hoary alyssum	Regional Containment/Control
HS	*Hieracium* spp.	Hawkweed species	Provincial EDRR, Regional Containment/Control, Management,
IM	*Impatiens glandulifera*	Policeman's helmet / Himalayan balsam	Regional Containment/Control
KB	*Centaurea macrocephala*	Bighead knapweed	n/a
LL	*Lysimachia punctata*	Large yellow / spotted loosestrife	n/a
LS	*Euphorbia esula*	Leafy spurge	Regional Containment/Control
MB	*Ranunculus acris*	Meadow buttercup	n/a
MG	*Tragopogon pratensis*	Meadow goats-beard	n/a
MO	*Centaurea montana*	Mountain bluet	Management
OD	*Leucanthemum vulgare*	Oxeye daisy	n/a
SC	*Potentilla recta*	Sulphur cinquefoil	Management

SH	*Matricaria perforata*	Scentless chamomile	n/a
SJ	*Hypericum perforatum*	St. John's wort / Goatweed	n/a
SK	*Centaurea biebersteinii*	Spotted knapweed	n/a
SO	*Sonchus* spp.	Sowthistle species	n/a
TC	*Tanacetum vulgare*	Common tansy	Regional Containment/Control
WG	*Tragopogon dubius*	Western goat's-beard	n/a
YT	*Linaria vulgaris*	Yellow/common toadflax	n/a

***Provincial EDDR** = Species is high risk to BC and is new to the province. Prevent introduction and establishment

***Regional Containment/Control** = Species is high risk and well established, or medium risk with high potential to for spread. Prevent further expansion.

***Management =** Species is more widespread but may be of concern in specific situations. Reduce the invasive species impacts locally or regionally

4.2.6 Vegetation and Ecological Communities at Risk

A review of Habitat Wizard (Province of British Columba, 2025b), iMap BC (Province of BC, 2025a), and BC lodgepole pine Explorer (Province of BC, 2025c) was performed to potentially identify vascular plants, bryophytes, and at-risk ecological communities that may exist within the broader Site area. No provincially mapped vegetation or ecosystems in the vicinity of the Site were identified. The nearest provincially recognized at risk plant species is the crumpled tarpaper lichen (*Collema coniophilium*), found roughly 50 km northeast of the Site. As per the results of BC Ecosystems Explorer, there are several ecological communities considered to be of Special Concern that may occur within the SBSdw3. The ecological communities that are listed within BC's Blue list include: hybrid white spruce / hardhack - prickly rose (SBSdw3/06), lodgepole pine - black spruce / red-stemmed feathermoss (SBSdw3/05), and Douglas-fir - lodgepole pine / clad lichens (SBSdw3/02).

4.2.7 Cranbrook Hill Greenway Society

Caledonia Nordic Ski Club is a founding member of the Cranbrook Hill Greenway Society, and was heavily involved with the establishment and early development of the trail system. It is a non-profit organization based in Prince George that manages and stewards the Cranbrook Hill Greenway. Established in 1995, the Society oversees more than 25 kilometers of multi-use trails across roughly 324 hectares of natural landscape, offering year-round recreational opportunities such as hiking, biking, horseback riding, and cross-country skiing (Cranbrook Hill Greenway Society, 2024). It is understood that users entering the CNSC from the Greenway trails may also be contributors to the spread of invasive plants and are encouraged to employ mitigation efforts such as those found in Sec. 15 (primarily avoiding parking in infested areas).

The Greenway serves as a key green corridor in Prince George, linking important local destinations including the CNSC, Forests for the World, the University of Northern British Columbia, and the Parkridge Creek area (Cranbrook Hill Greenway Society, 2024). The current CNSC tenure overlaps with a portion of the Cranbrook Hill Greenway, and the parties have a memorandum of understanding for management of the overlapped area.

4.3 WILDLIFE

4.3.1 Mammals

Coniferous sub-boreal forest provides habitat for mammal species such as the wolverine (*Gulo gulo*), pine marten (*Martes americana*), red squirrel (*Tamiasciurus hudsonicus*), grey wolf (*Canis lupus*), grizzly bear (*Ursus arctos horribilis*), and black bear (*Ursus americanus*). Habitats surrounding lakes and rivers in the

Sub-Boreal Spruce BGC zone are used by moose (*Alces alces*), American beaver (*Castor canadensis*), common muskrat (*Ondatra zibethicus*), American mink (*Neovison vison*), and the North American river otter (*Lontra canadensis*).

CNSC has a local population of habituated mammalian wildlife within the city limits of Prince George. This is a forested urban environmental setting. Users of the facility have co-habitated this land with local wildlife for 40 years. As such it is a unique microcosm of the Sub-Boreal Spruce BGC zone wildlife. Commonly viewed wildlife onsite incudes moose, mule deer, black bear, coyote, fox, lynx, marten, snowshoe hare, squirrel, marmot, mice, shrew, bat, porcupine, weasel, and more rarely wolf and cougar. This does not reflect the broader species list for the Sub-Boreal Spruce BGC zone. Skiers, walkers, cyclists and other users are aware of and compatible with this localized wildlife and are encouraged to treat them respectfully.

4.3.2 Amphibians and Reptiles

Amphibian species potentially present at the Site include: western toad (*Anaxyrus boreas*), Columbia spotted frog (*Rana luteiventris*), wood frog (*Lithobates sylvaticus*), and long-toed salamander (*Ambystoma macrodactylum*). Both the common garter snake (*Thamnophis sirtalis*) and western terrestrial garter snake (*Thamnophis elegans vagrans*) are commonly found in riparian areas adjacent to streams and waterbodies, similar to the habitat within the Site (The Reptiles of British Columbia, 2021).

4.3.3 Nesting Birds

Forest habitats, both upland and riparian, play a vital role in supporting bird populations by providing nesting sites, foraging areas, and protection from predators. Upland forests, dominated by coniferous and mixed wood stands, offer important habitat for species such as the American goshawk (*Astur atricapillus*) and boreal chickadee (*Poecile hudsonicus*), which rely on mature canopy cover and deadwood for nesting and feeding. Riparian forests, support high biodiversity and are especially important for species like the American redstart (*Setophaga ruticilla)* and common yellowthroat (*Geothlypis trichas*), which depend on dense shrub and tree cover near water for breeding and insect-rich foraging. These habitats are essential for maintaining healthy bird communities in the region (Billerman et al., 2022).

During the May 13, 2025, field assessment, the DWB crew observed a pileated woodpecker, Hammond's flycatcher (*Empidonax hammondii*), broad-wing hawk (*Buteo platypterus*), western tanager (*Piranga ludoviciana*), and ruby-crowned kinglet (*Motacilla calendula*) at the CNSC.

4.3.4 Species At Risk

The British Columbia Conservation Data Centre (BCCDC) website (2025) was searched using the following distribution criteria for all blue (i.e., Special Concern) or red (i.e., Extirpated, Endangered, or Threatened) listed fish, plant, and wildlife species that may be present within the CNSC:

- Municipality: Prince George;
- BGC Zone: SBSdw3;
- Native/Endemic: native and exotic; and
- Habitat Types: anthropogenic, forest, riparian, stream/river and wetland.

Species that were provincially yellow-listed (i.e., Not at Risk), but ranked as Schedule 1 Endangered, Threatened, or of Special Concern under the SARA were included in the search. At risk species which known historical ranges and records were found to not overlap with the Site, based on further investigation, were removed form the subsequent tables by a QP.

4.3.4.1 Mammals

During the BCCDC (2025) search, a QP identified 5 blue-listed and one red-listed mammal species that may be present in the Site area (Table 4). None of these large mammals have been observed at Otway. Bats have been observed but not identified, nor were their roost locations identified.

Table 4: Mammalian species at risk potentially present at the Site (BCCDC, 2025)

Scientific Name	Common Name	BC List	SARA
Myotis lucifugus	Little brown myotis	Blue	1 - Endangered
Myotis septentrionalis	Northern myotis	Blue	1 – Endangered
Pekania pennanti	Fisher	Blue	No Status
Ursus arctos	Grizzly bear	Blue	1 – Special Concern
Rangifer tarandus	Woodland Caribou (Southern Mountain Population)	Red	1 – Threatened
Lasiurus cinereus	Hoary Bat	Blue	No status

The Site is located within federal Critical Habitat for unmapped range of the woodland caribou (*Rangifer tarandus*; Southern Mountain population) (Province of BC, 2025a). Critical Habitat is defined as the habitat necessary for survival and recovery of a listed species, as per the SARA, and may include habitats used for breeding, calving, and feeding. This population has been designated Endangered by the COSEWIC and Threatened under Schedule 1 of the SARA (BCCDC, 2025; Environment Canada, 2014). Under the SARA, critical habitat for the Southern Mountain population of woodland caribou is only legally protected when it is formally identified in a recovery strategy and located on federal land. While the federal government has the authority to issue ministerial orders to protect critical habitat on non-federal lands, no such orders have been issued for the Site to date (ECCC, 2023). As the CNSC is situated on non-federal lands, no specific management actions for woodland caribou were required at the time this plan was prepared. However, the CNSC is responsible for reviewing applicable SARA legislation prior to initiating any Works, in the event that future legal or regulatory changes necessitate management actions.

4.3.4.2 Birds

During the BCCDC (2025) search, a QP identified 4 yellow-listed, 12 blue-listed and 3 red-listed bird species that may be present in the Site area (Table 5). Seasonal nests are protected by the bird nesting window.

Table 5: Bird species at risk potentially present at the Site (BCCDC, 2025)

Scientific Name	Common Name	BC List	SARA
Aechmophorus occidentalis	Western Grebe	Red	1 – Special Concern
Astur atricapillus atricapillus	American Goshawk, *atricapillus* subspecies	Blue	No status
Asio flammeus	Short-eared Owl	Blue	1 – Special Concern
Botaurus lentiginosus	American Bittern	Blue	No status
Buteo swainsoni	Swainson's Hawk	Red	No status
Chordeiles minor	Common Nighthawk	Blue	1 – Special Concern
Coccothraustes vespertinus	Evening Grosbeak	Yellow	1 – Special Concern
Contopus cooperi	Olive-sided Flycatcher	Yellow	1 – Special Concern
Cypseloides niger	Black Swift	Blue	1 – Endangered
Euphagus carolinus	Rusty Blackbird	Blue	1 – Special Concern
Falco rusticolus	Gyrfalcon	Blue	No status

Hirundo rustica	Barn Swallow	Yellow	1 – Threatened
Riparia riparia	Bank Swallow	Yellow	1 – Threatened
Larus californicus	California Gull	Red	No status
Phalaropus lobatus	Red-necked Phalarope	Blue	1 – Special Concern
Pluvialis dominica	American Golden-Plover	Blue	No status
Podiceps nigricollis	Eared Grebe	Blue	No status
Troglodytes hiemalis	Winter Wren	Blue	No status
Ardea herodias	Great Blue Heron	Blue	1 – Special Concern

4.3.4.3 Amphibians

During the BCCDC (2025) search, a QP identified that western toad (*Anaxyrus boreas*), a BC yellow-listed species that is also designated as a species of Special Concern under Schedule 1 of the SARA, may be present in the Site area. Western toads were confirmed on Site during the May 2025 field visit by a DWB crew. Western toads are common on Site. They are ubiquitous across the landscape during summer and are protected by operating with care and performing most development works in the late fall through to early spring, outside the typical period of activity for amphibians (Sec. 4.3.5).

4.3.4.4 Reptiles

No at-risk reptiles were identified with the BCCDC search criteria.

4.3.4.5 Invertebrates

During the BCCDC (2025) search, a QP identified 5 blue-listed and one red-listed invertebrate species that may be present in the Site area (Table 6). These are summer species that are protected by observing the bird nesting window (Sec 4.3.5).

Table 6: Invertebrate species at risk potentially present at the Site (BCCDC, 2025)

Scientific Name	Common Name	BC List	SARA
Boloria epithore sigridae	Western Meadow Fritillary	Blue	No status
Galba parva	Pygmy Fossaria	Blue	No status
Oeneis jutta chermocki	Jutta Arctic	Blue	No status
Somatochlora forcipata	Forcipate Emerald	Blue	No status
Somatochlora kennedyi	Kennedy's Emerald	Blue	No status
Valvata tricarinata	Threeridge Valvata	Red	No status

4.3.5 Government Actions Regulations (GAR)

The Site is not directly located within any designated provincial Ungulate Winter Ranges (UWR) or Wildlife Habitat Areas (WHA), but an UWR for moose (U-7-022) lies 2 km south of the Site, while another UWR for mule deer (U-7-013) is situated 2 km to the northwest. Additionally, the Omineca Environmental Stewardship Initiative (ESI) has recognized moose habitat located 2 km south as a valued ecosystem component linked to Indigenous traditional practices (Province of BC, 2025a). The mule deer UWR is situated on south facing slopes. There are no south facing slopes at Otway.

Due to urban development and clearing in the Miworth/Catherine Drive area, the moose winter habitat areas are now frequently accessed along the southern boundary of the LOO. In discussion with the Lheidli

T'enneh first nation, CNSC has set aside 50 hectares (12.5% of the land base) as Ungulate Management Area to contribute to this travel corridor.

Timing Windows:

Bird Nesting Timing Window

Based on an assessment of the ECCC nesting calendars, the Site resides in the A4 regional nesting period area. Recognizing all habitat types (i.e., wetland, open, and forest) and the 0 percent, less than 5 percent periods where nesting occurs for some parts of the nesting zone, vegetation clearing should only be undertaken during the period of **August 20 to April 20** (ECCC, 2025). The best management strategy to maintain legal compliance and conserve bird populations is to schedule work activities outside of the peak breeding period for birds.

Amphibian Timing Window

An "amphibian timing window" has not been officially developed for the Omineca Region (Province of BC, 2024a). Through consultation with QPs specializing in amphibian ecology, the active period for amphibians in this region is approximately April 1 - October 1.

5.0 GENERAL ENVIRONMENTAL MANAGEMENT MEASURES

The following sections outline the BMPs that will be implemented during proposed works on Site. Other measures may be implemented to enable practical, small-scale operations such as trail maintenance, provided they comply with relevant regulations and applicable permits.

5.1 START UP AND ENVIRONMENTAL BRIEFING

Prior to any significant Works, a pre-work environmental meeting, with all individuals who will be involved in the Works, will be held on-site and as applicable prior to the commencement of each phase. These meetings will have the following components:

- A review of the BMPs to ensure that all parties involved understand the objectives of the project, and what environmental protection measures are to be used.
- During this review, any additional ideas for Work execution methods will be discussed. It is recognized that alternative methods for achieving the desired objectives, if available, may be incorporated if found effective in achieving the overall objectives of the plan.
- Copies of the relevant BMPs and approval documents (e.g., permits) will be kept on-site. It is important that all persons involved in the Works understand these regulatory requirements.
- A review of other Site environmental management issues including, fuel storage, equipment maintenance and spill response. Critical components of environmental protection from fuel/oil spills are understood appropriate spill response equipment, and knowledge of spill response protocols by on-site employees and contractors.

5.2 Site Access

During access, the following BMPs apply:

- Machines will be in good operating condition and clean (e.g., free from external grease, oil or fluid leaks, sediment buildup, and invasive species).
- Minimize disturbance while accessing Work areas.

5.3 Staging

During staging, the following BMPs apply:

- Position the staging areas 30 m away from watercourses and/or waterbodies.
- Refer to Section 10.0 for guidelines on fuel storage and re-fuelling procedures in the staging areas.

5.4 Clearing and Grubbing

During clearing and grubbing, the following BMPs apply:

- Where possible, clearing and grubbing will be scheduled outside the Bird Nest Timing Window (April 20 to August 20). If clearing and grubbing activities occur inside the Bird Nest Timing Window, active nest surveys will be conducted by a QP. If nests requiring protection are identified, the Work plan shall be modified to establish a no-work buffer area around the nest. No-work buffer sizes will be determined by a QP.
- Prior to clearing and grubbing, the Work areas will be surveyed by a QP for permanent wildlife features (e.g., year-round protected bird nests, bear dens, bat roosts, etc.), and at-risk species or ecological communities.
- Clearing and grubbing shall extend only to the designated Work site limits.
- Root systems of cleared vegetation shall not be removed, except where earthworks are proposed. In the event that vegetation is unnecessarily disturbed, the exposed soil will be seeded and if near a watercourse will be mulched with straw if necessary to reduce the potential for erosion and sedimentation (Section 8.2).
- Materials generated by clearing or grubbing, will not be burned on Site (Section 12.0)
- Any invasive plants found throughout clearing and grubbing will be managed in accordance to BMPs addressed in Section 15.0.

5.5 Trail Construction

During trail construction, the following will be adhered to:

- Design trails and access points to steer clear of sensitive natural areas like streams, wetlands, ponds, nesting zones, snake hibernacula, and key wildlife corridors or buffer zones.
- Routing trails through habitats that are home to species at risk or otherwise environmentally sensitive will be kept to a minimum and work shall only be done during the appropriate timing windows.

6.0 TIMBER MANAGEMENT PLAN (TMP)

6.1 TRAIL IDENTIFICATION

The location of proposed trails will be identified prior to trail building activities occurring to ensure potentially sensitive features are assessed, identified and managed accordingly. Various trail location procedures may be utilized.

6.2 OLD GROWTH

CNSC will identify any veteran stems prior to Work taking place to ensure compliance with the Special Tree Protection Regulation. See Section 6.5.1 for more information.

6.3 ECOLOGICAL COMMUNITIES AT RISK

As mentioned in Section 4.2.6, several ecotypes within the SBSdw3 are listed as ecological communities of "Special Concern" in BC. Prior to Work taking place, assessment of areas of proposed ground disturbance will have an ecosystem classification assessment completed by a QP, as per the *Field Guide for Site Identification and Interpretation for the Southwest Portion of the Prince George Forest Region - Land Management Handbook 24* (DeLong et al., 1993). Any ecological communities at risk that are identified within proposed Work Sites will be mitigated on a case-by-case basis, through discussion between CNSC and a QP.

6.4 FOREST HEALTH

Prior to the removal of any timber, proposed Work locations will be assessed for the presence of forest health agents. Should bark beetle be present on or near the proposed Work location, the wood waste from conifer species will be processed into firewood to be burnt on site to mitigate any potential spread.

6.5 TIMBER REMOVAL

Various timber felling techniques, such as machine or hand falling will be used. Trees will be pushed over by an excavator, such that the stump comes out of the ground and does not have to be dug up. The stumps and stems will be placed into openings in the adjacent stand, and limbs will be lopped in such a fashion as to encourage decomposition and minimize the fire hazard.

Caledonia Nordic Ski Club does not have timber harvesting rights so no logs from crown land will be sold. Dry and danger trees along ski trail may be felled for safety purposes. Portions of felled trees may be removed and utilized by the club as firewood.

6.5.1 Special Tree Protection Regulation

Prior to the removal of any timber, proposed Work locations will be assessed by a QP for the presence of trees that meet the definition of a 'specified tree' under the *Special Tree Protection Regulation* (Province of BC, 2025d*).* No 'specified trees', nor any 'supporting trees' that are within 56m surrounding a 'specified tree' may be cut, damaged, or destroyed.

6.5.2 Established Visual Quality Polygons

There are 29.9 hectares of VRI polygon 723 that overlap into the Licence area. This polygon is currently developed with trails that are not visible from the Nechako River or adjacent lands areas. Future felling

that may be done would be for trail maintenance or danger trees and does not warrant a visual impact assessment, as it would entail singular stem removal and should not create any large openings.

6.5.3 Wildlife

Prior to the significant removal of timber for trail building or clearing for significant facility developments, proposed Work locations will be assessed by a QP for wildlife features that require protections and/or specific management strategies as outlined in Sections 16.0. This will not apply to minor trail maintenance.

7.0 RIPARIAN MANAGEMENT PLAN (RMP)

Riparian features identified on crown land within proposed work locations will be assessed and managed as per the requirements under Part 4, Division 3 – Riparian Areas of the FPPR (Province of BC, 2025d), and/or the Watershed Sustainability Act.

7.1 RIPARIAN MANAGEMENT AREA REQUIREMENTS

Under the FPPR, crown land riparian management areas (RMA) include a riparian management zone (RMZ) and sometimes a riparian reserve zone (RRZ). An RRZ is a no-harvest strip, which starts directly adjacent to the feature boundary. Caledonia Nordic Ski Club has no timber harvesting rights so management zones generally don't apply. There are seasonal, non-fish-bearing (S6) streams onsite that do not require management zones or reserve zones for typical trail development activities. Photos in appendices. Furthermore, while useful as a guideline, FPPR does not apply on private land.

7.2 STREAM CROSSINGS

If a stream must be crossed more than once to facilitate Work activities, an appropriate temporary access structure will be installed. Any temporary structures will be removed when no longer required. If only a singular crossing (there and back) is needed, fording the stream will be completed. Snow fills are a seasonal crossing option that may be utilized depending on site conditions, timing, and environmental factors. Streams are small and classified as S6 (photos in Appendix B), and as such require no reserves. During trail construction they will generally be crossed with appropriately sized culverts. However, if stream discharge is high, or if there are sedimentation concerns, erosion concerns, or other, a free span bridge may be installed. For any in-stream work (including culverts, bridges and fords), a Notice of Authorized Change application will be submitted under Section 11 of the Water Sustainability Act.

7.2.1 Fords

Fords are generally not required for onsite trail building due to the small size of the watercourses. Permanent crossings are installed as work progresses. In some cases, permanent fords can used be in place of culverts or bridges. Two examples of this are;

- Where an S6 or NCD streambed is solid rock; or
- Where an S6 stream is flowing through gravel below ground. This is common where an alluvial fan exists at the bottom of a steep stream gradient.

These two examples would require an authorization under the Water Sustainability Act.

7.2.2 Temporary Crossing Structure

Temporary crossings are generally not anticipated. In most cases permanent stream crossings are installed as trail construction progresses. Where a temporary crossing for tracked equipment is needed for more than two times, large logs aligned with the flow can be temporarily placed on either or both sides of the stream. This can prevent soil in the machine tracks from washing into the stream and reduces erosion risk by protecting riparian integrity.

8.0 EROSION AND SEDIMENT CONTROL PLAN (ESCP)

The ESCP identifies environmentally acceptable construction practices for sediment and erosion control, at specific sites, to ensure that water quality parameters are maintained, at all times, throughout Works. Additional measures and/or modification to the following plan may be required, to reflect unforeseen conditions such as extreme weather, Work delays, etc.

This ESCP includes:

- Description of general measures for runoff and drainage management, and
- Description of mitigation measures for ensuring acceptable water quality, at points of discharge, into watercourses.

This ESCP is recognized as a living document and may be improved due to unforeseen circumstances that may arise during Site Works. All parties will be notified of any changes and approvals that are required.

8.1 Procedural Best Management Practices

8.1.1 Scheduling and Sequencing

Erosion and sediment control (ESC) measures will be incorporated into all planning phases of Works. To maximize the effectiveness of ESC methods, the Work planning phase shall consider the following:

- All ESC measures will be installed when needed at the earliest practicable time to increase efficiency and function of the plan. This would normally be prior to stream crossing activities on ski trails.
- Works near streams will be concentrated during periods of favourable weather and completed as soon as possible to reduce exposure of erodible soil and minimize erosion potential at the site.

8.1.2 Staging Area

Staging areas will be at least 30 m from any watercourse or waterbody and prepared in a manner that minimizes the possibility of sediment or spilled material migration to the water. There is generally sufficient room in the cleared trail corridor for any staging needs, so there in no additional clearing for that specific purpose.

8.2 Seeding

Disturbed areas will be seeded with a regionally appropriate, weed free, and QEP approved seed mix, such as Ministry of Forests (MOF) seed mix. Prior to seeding, any compacted ground will be loosened. Loosening of the ground will help increase the chance of establishing vegetation cover.

The *National Guide to Erosion and Sediment Control on Roadway Projects* guide (Fifield, 2004) includes BMPs for specific instructions on seeding. Seed will be applied using a hand-broadcasting unit to spread

the seed. All seeds will be applied in two intersecting directions and overlap adjoining ground by 300mm. All seeding will be applied at the manufacturer's suggested rates.

When necessary, straw mulch can be installed overtop of the applied seeds to promote seed growth and mitigate erosion. Straw is an excellent mulch material. Straw bales can be broken and scattered over the exposed soils to prevent the seed from dispersing prior to germination. Because of its length and bulk, it is highly effective in reducing the raindrop impact and moderating the microclimate of the soil surface. Straw mulch will be applied 1.5 inches deep on seeded sites and should cover at least 80% of the soil.

9.0 WASTE MANAGEMENT PLAN (WMP)

Waste materials will be managed so as to prevent adverse effects to aquatic and terrestrial environments, as well as human health and safety. All waste materials will be removed and disposed of in accordance with the *Regional District of Fraser-Fort George Solid Waste Management Plan*, BC Hazardous Waste Regulation, BC *Environmental Management Act*, and the *Transportation of Dangerous Goods Act*.

9.1 GENERAL

The following general BMPs for waste management shall be implemented:

- Good housekeeping practices will be conducted daily throughout the Site operations.
- Pickup general refuse daily. No domestic refuse, including food wastes, will be allowed to remain on Site overnight unless stored in bear-proof containers.
- Place general refuse into designated and appropriately labelled garbage bins located a minimum distance of 30 m from any watercourse or waterbody.
- Secure all garbage bins with tight fitting lids immediately after material has been discarded.
- Ensure an adequate number of appropriate waste containers is available and placed around the Site to prevent accumulation of waste.
- Recycling will be employed, where applicable, to reduce wastes on Site (Section 9.3)
- Burning of rubbish on Site is not permitted.
- Eliminate general refuse at the source (e.g., remove packaging or have manufacturer remove it at the time of purchase).

9.2 WASTE DISPOSAL FACILITIES

All waste disposal sites will comply with federal, provincial, and municipal by-laws and regulations. Location of disposal sites, along with a description of the waste materials that each disposal site is approved for.

The following are potential disposal sites for various hazardous and non-hazardous materials which may be found on the Site:

- Foothills Boulevard Regional Landfill is located in Prince George, and accepts the following wastes:
    - Household waste
    - Scrap metal
    - Appliances with refrigerant
    - Yard and garden waste
    - Used oil and antifreeze
    - Propane tanks

    - Demolition, land clearing and construction waste
    - Controlled waste with a permit (e.g., asbestos, creosote treated wood, etc.)
- Green For Life in Prince George, will accept waste chemicals and fuels for disposal and recycling; and
- The City of Prince George owns and operates five lagoons, which may accept any wastewater generated during Site Works. The CNSC is responsible for contacting and receiving permissions from the City of Prince George, to dispose of wastewater in their lagoons.

9.3 Recycling Plan

The CNSC shall have a recycling program in place with its waste management program. All wastes are to be separated prior to disposal. Materials that can be recycled are to be placed into the applicable recycling bins to assure wastes are sorted as required.

9.4 Construction Wastes

Non-hazardous wastes that may be encountered or generated on Site may include but are not limited to: metals, plastics, wood, and other materials and their containers. Regular clean up and disposal programs shall be adopted to avoid unnecessary accumulation of construction wastes on Site. Construction wastes will be disposed at an approved disposal facility that complies with applicable legislation and regulations (Section 9.2).

9.5 Soil Handling Plan

During Site Works, the following soil handling and disposal BMPs will be followed:

- If contaminated soil is identified during earthworks, it will be managed as per Section 9.7.1.
- On Site soil may re-used on-Site where possible, if it is confirmed non-contaminated.
- Stockpiled soil will not be placed within 30 m of any watercourse and/or waterbody.
- Minimize the volume of surplus soil removed from any excavations.
- Soils shall not be relocated off-site to:
    - Land classified under the Agricultural Land Reserve (ALR) or designated for agricultural purposes;
    - Land planned for present or future use for farming, gardening, orchards, livestock grazing, or cultivation; or
    - Residential zones, public parks, or federally managed lands.
- All soil loads will be securely covered during transport to the disposal site.

9.6 Food and Domestic Waste

All food waste and domestic garbage shall be stored in animal-proof receptacles that shall be labelled clearly and emptied regularly, including recyclable food and domestic wastes.

9.7 Hazardous Waste Management

Hazardous waste that may be present at the Site or generated during Works, may include, but are not limited to: contaminated soil or water, treated wood, waste fuels, and absorbent materials. Hazardous

materials, if identified or generated, are to be removed by the CNSC and transported off-site by a licensed hazardous waste hauler with the proper permits and waste manifests.

The BC Hazardous Waste Regulation under the *Environmental Management Act* describe specific handling procedures to be followed while working with hazardous wastes on Site. Additionally, WorkSafe BC provides Safe Work Practices for handling and disposal of particular materials.

Hazardous waste storage areas will be greater than 30 m from any waterbodies or watercourses, and have a fire extinguisher, spill kits suitable for the type and quantity of waste stored, and clearly posted spill response and reporting procedures.

9.7.1 Contaminated Soil and Water

Any excavated soils shall be assessed for potential contamination using indicators such as unusual appearance or odour, staining or sheens, buried debris or trash (e.g., drums, automotive parts, cleaning rags, tanks), or suspected waste (e.g., batteries, metals).

If contaminated, or potentially contaminated, soils or water (e.g., sheen, odor, or discoloration) are encountered, a QP will be contacted and it will be handled in accordance with the Contaminated Sites Regulation and Hazardous Waste Regulation.

9.7.2 Chemicals

Chemicals, identified or unidentified (e.g., containers with no labels), located at the Site will be treated as hazardous waste as the potential to harm human health or the environment from exposure over a short or long period of time cannot be confirmed or disconfirmed. Any unidentified chemicals will be disposed of in compliance with the BC Hazard Waste Regulation, per the *Environmental Management Act*.

9.7.3 Treated Wood

Treated wood is identified by the BC Hazard Waste Regulation as a hazardous waste product and is described as "wood products treated with wood preservatives or wood protection". All treated wood identified at the Site will be removed and disposed of at an appropriate facility.

During removal, containment, and off-site removal, the CNSC is responsible for:

- Ensuring that all treated wood materials are safely contained and removed from the Site by a licensed hazardous waste hauler with proper permits/manifests.

10.0 SPILL PREVENTION AND RESPONSE PLAN (SPRP)

Accidental spills of deleterious substances may occur during Site works. This section will be used to guide spill prevention and emergency response activities on Site. Information provided in this section is based on the MWLAP *Field Guide to Fuel Handling, Transportation and Storage* document (MWLAP, 2002).

Work crews must carry out spill response in accordance with the SPRP. Crews will be properly trained and equipped to handle potential environmental incidents related to their work.

10.1 Spill Prevention Recommendations

The following preventative actions will be taken:

- No fueling/servicing of equipment within 30 m of a watercourse or waterbody.

- All unused or idle equipment will be moved 30 m away from a watercourse or waterbody.
- When on worksites, install secondary drip containment (e.g., drip trays) underneath parked machines and stationary equipment with a capacity of 110%, with containment also for distribution connections and dispensing areas.
- Equipment will be clean, free of leaks and in good working order, and will be inspected daily by the equipment operator.
- Any machinery with leaks will be taken out of environmentally sensitive zones (e.g., riparian areas) and repaired.
- All equipment with storage capability will contain fully stocked spill kits, and spill kits will be restocked if supplies are used.

10.1.1 Fuel and Hazardous Materials Storage

All fuel storage will conform to the following standards:

- Hazardous or toxic products will not be stored within 30 m of any watercourse or waterbody.
- Spill control is required for small containers of flammable and combustible liquids that have the potential to spill. The degree of spill control will be based on the level of risk.
- All containers will be maintained in good condition - not damaged, rusting, or leaking. Containers will be sealed with proper fitting lids, caps, bungs, or valves to prevent spills and leaks.
- Secondary containment storage areas will be covered with a tarp to prevent rain accumulation.
- Fuel storage tanks over 230 L will be equipped with auto shutoff valves.
- Prior to water being removed from any secondary containment, such as a drip tray, diked containment area or build-in secondary containment, the following procedure will be followed:
    - Water is inspected for signs of contamination.
    - If hydrocarbon contamination is noted, absorbent spill pads will be used to soak up sheen until it can no longer be detected.
    - If solid grease or other contaminants are noted, they will be physically scraped up and disposed of in an appropriate location (for example, a contaminated material drum).
    - If water is verified as being free of contaminants, it may be poured or pumped to well-vegetated ground, at least 30 m from any watercourse or other sensitive area.
- All jerry cans and similar fuel storage will be kept in drip trays or in a truck bed.
- All fuel storage tanks will be locked and/or secured when not in use.
- The Fuel Storage Area/Tanks have been risk assessed and Fuel Management Standards Developed.
- Large fuel Tanks (e.g. 4,000L Diesel and 2,000L Gas) at the mobile equipment shop are certified double-walled tanks. A secondary containment berm is not required. Fuel Management guidelines and procedures will be maintained by CNSC.

10.1.2 Servicing Equipment

All on-site equipment servicing (maintenance, washing, or re-fuelling), where possible, will be carried out at a designated area. The following measures will be followed:

- The CNSC will ensure that any contractors (for example delivery vehicles, if required) are aware of spill response procedures and will take responsibility for all spills should they occur.

- No equipment servicing allowed within 30 m of any watercourse or waterbody.
- During hot weather, fuel tanks should not be filled more than 80 % to allow for expansion of the fuel, reducing the chance for spillage from the fill cap.
- During fueling, the nozzle must not be left unattended and drip trays will be used.
- Prior to working on Site, vehicles and machinery will be cleaned and serviced.
- Daily inspections, by the operator, will be undertaken of each vehicle and machine when in use, to check for potential leaks and worn hoses. Any deficiencies will be promptly addressed.
- All waste fuel or products generated such as filters will be secured in spill proof containers within secondary containment.

10.1.3 Safety Data Sheets

The CNSC will ensure that a copy of the Safety Data Sheets (SDS) for all chemical substances being used will be kept on Site in a clearly marked binder. These sheets identify: product information; hazardous ingredients; physical data; fire and explosion hazard; reactivity data; toxicological properties; preventative measures; first aid measures; and preparation information, as required by the Workers' Compensation Board of BC.

The SDS will be consulted in the event of a spill or leak to determine any potential human health and environmental risks associated with the product.

10.1.4 Potential Spill Sources

The following are the potential sources of spills that could occur during Work activities:

- Leaking or ruptured fuel tanks.
- Leaking equipment or ruptured hoses.
- Spills during refueling of vehicles and equipment.
- Motor vehicle accidents.

10.2 Spill Response

10.2.1 General Practices

The following general practices will be implemented in the event of a spill or leak:

- Do not touch or walk-through spilled material.
- Stop the flow safely and quickly (if possible).
- Shut off machinery, pumps, valves etc.
- Plug leaks (if possible).
- Remove or right containers. Turn leaking container so that gas escapes rather than liquid.
- Do not smoke or use cell phones in the spill area.
- Prevent spilled materials from flowing away from the initial spill site or from flowing into a watercourse, creek or any drainage ditches or catch basins.
- Eliminate all ignition sources.
- Conduct cleanup promptly.

10.2.2 Clean Up Practices and Procedures

In the event of a spill, the following spill response procedures will be implemented (note: procedures will vary depending on the product and the location of the spill):

- All spills will be reported to the CNSC.
- Immediate cleanup of a spill can often result in significant reduction of the extent of impacted materials (soils), reducing the environmental damage and consequently costs. All spills will be cleaned up as soon as practicable after discovery.
- Ensure appropriate personal protective equipment is worn during spill cleanup work.
- Steps will be implemented to prevent spills from flowing towards watercourses, wetlands, or drainage areas. For example, install absorbent socks between the spill area and any waterbodies, and cover storm and sewage drainages with plastic tarps.
- Consult product SDS for safety and environmental information specific to the spilled substance
- **SOIL:** For product spills and leaks on soil, liquid will be collected using absorbents and the soiled absorbent materials will then be transferred into a drum or other sealed container. Minor spills will be treated in place using a high nitrogen fertilizer mix. In case of major spills, the contaminated soil will be excavated and drummed or otherwise contained. Drums of waste will be labeled to identify their contents and be stored in a spill containment area prior to being hauled off-site for disposal by a certified hauler to an authorized dumpsite for contaminated materials.
- **WATER:** For product spills into a watercourse, an absorbent sock will be placed across the surface of the drainage to prevent the spilled product from flowing downstream. Absorbent materials will then be used to recover floating product. Spills into watercourses will be reported to Emergency Management BC (Section 11.1.2).
- Pictures will be taken of the clean-up activities for filing/reporting purposes.
- Ensure replacement of all used spill kits and associated materials on the job site as soon as possible.
- Work will resume based on instructions from a QP or CNSC representative, unless otherwise directed by external authorities, such as regulators.

10.2.3 Spill Sampling and Monitoring

Sampling and monitoring will be conducted on an as needed basis in the result of a spill. Monitoring will take place within the spill area to determine if harmful effects or contamination is occurring and requires remediation.

10.2.4 Spill Investigation/Spill Reporting Form

Refer to Section 11.1 Environmental Incident Reporting.

11.0 ENVIRONMENTAL REPORTING

11.1 Environmental Incident Reporting

All environmental incidents are required to be reported to the CNSC Representative. An environmental incident is defined as:

- Any leakage, spill, or release of hazardous liquid or gas;
- Actions that result in an exceedance or non-compliance circumstance with applicable environmental regulations and/or permits.

11.1.1 Internal Reporting

Internal Environmental Incident Reports are required for any event on Site that has, or could have, negatively impacted the environment, but does not meet the criteria for reporting as per federal and provincial regulations. These reports are mandatory for all environmental incidents, including spills, regardless of the spill volume.

Internal Environmental Incident Reports require the following details:

- A thorough description of the event (e.g., who, what, where, when, why, and how);
- Information on the parties involved (e.g., witnesses, regulatory agencies contacted);
- Actions taken to reduce environmental impact; and
- Whether follow-up actions are necessary, and if so, whether a schedule of mitigation measures has been prepared and responsibilities assigned.

Internal Environmental Incident Reports must be completed within 24 hours of the event. Copies of the reports will be sent to the CNSC Representative.

11.1.2 External Reporting

A spill is reportable to Emergency Management BC under the following conditions:

- The spill has entered a watercourse and/or waterbody.; or
- The amount of the substance exceeded the specified quantity for the listed substance.

Table 7 outlines the provincially reportable levels of some substances that commonly occur. The full list is included in Schedule (1) in the Spill Reporting Regulations of the *Environmental Management Act* (2017).

If the spill is a reportable emergency, under the *Environmental Management Act* (2017), an investigation report and spill report form must be completed and forwarded to the Emergency Management BC (1-800-663-3456) within 24 hours of the incident occurring. The company responsible for the spill must prepare the investigation and spill report. Copies of the reports will be sent to the applicable regulatory agency. Any example investigation report/spill report form is in Appendix C and includes:

- A general description of the incident.
- A drawing or map of the site showing the area of the spill.
- Pictures of the spill, damages (if any) and clean-up efforts.
- Source and cause of the incident.
- Description of the response effort.
- Quantity of the spill and percent recovered.
- Itemized cleanup costs.
- Recommendations for preventative and mitigation measures.

Table 7: Provincially reportable spills levels of some substances that commonly occur

SUBSTANCE	PROVINCIALLY REPORTABLE
Any hydrocarbon substance or liquid including: • Diesel Fuel • Gasoline • Grease • Hydraulic Oil • Lubricating Oil • Solvents • Flammable Liquids of Class 3 as defined in section 3.12 of the Federal Regulations • Waste Oil as defined in section 1 of the Special Waste Regulation	100 L
Explosives	Any
Flammable Gases, (other than natural gas as defined in Section 3.11 (a) of the Federal Regulations)	10 kg if accidental release or failure
Flammable Liquids of Class 3 as defined in Section 3.12 of the Federal Regulations	100 L
Antifreeze	25 L
Corrosive liquid acids and caustics – i.e., battery acid	5 kg or 5 litres
Environmental hazardous substances – i.e., PCBs	1 kg or 1 litre
Pesticides/Herbicides	1 kg or 1 litre
A substance not covered by the above listed items that can cause pollution (e.g., concrete)	200 kg
Any quantity of deleterious substance released to a watercourse or waterbody must be reported to Emergency Management BC immediately	**Any**

12.0 BURNING REQUIREMENTS

The BC MOFs has established comprehensive regulations for open burning; however, as per the City of Prince George's Clean Air Bylaw (2010), no burning of organic material may occur within city limits, with the exception of 'recreational fires'. As a result of this Bylaw, woody debris produced by trail building activities may not be burned on Site unless it has been made into seasoned firewood and is burned within a designated fire pit during an absence of any air quality advisories (City of Prince George, 2025a).

13.0 ASPHALT MANAGEMENT PLAN (ASP)

Any asphalt paving on Site shall be performed in accordance with the following BMPs:

- All paving work will occur during dry weather to eliminate the risk of contaminating run-off during asphalt surfacing.
- Store asphalt and emulsions on impervious surfaces away from watercourses and waterbodies, with proper secondary containment (Section 10.0).
- Prevent stormwater and runoff from contacting fresh asphalt during placement and compaction.
- Maintain paving equipment to prevent leaks and reduce air pollution.

- Implement dust control measures (e.g., water trucks or sweepers) to reduce airborne particulates from asphalt operations.
- Ensure workers are trained in asphalt-specific environmental protection measures and spill response.

14.0 ARCHAEOLOGICAL MANAGEMENT PLAN (AMP)

Archaeological sites are afforded protection by the BC *Heritage Conservation Act* (HCA) and cannot be damaged or modified without a Provincial heritage permit from the Archaeology Branch. Heritage resources incidentally found during Works are deemed as *chance finds*.

If any archaeological, heritage, historical, or cultural resources are discovered on the Site, the following Chance Find Procedure will be implemented:

- Immediately stop work in the affected area.
- Minimize activities which create ground disturbance in and adjacent to the affected area.
- Contact the Archaeology Branch of the BC MOF in accordance with the HCA.
- Do not resume work within 30 m of the discovery until authorization is received from the appropriate agency.
- It may be required to implement mitigation measures to protect sensitive sites, such as: erosion or drainage control, slope stabilization, or installation of fences or other protective barriers.
- A no-activity buffer zone may be established around the archaeological site. The width of the buffer will be determined in consultation with the Archaeology Branch.
- The group completing the Works is responsible for:
    - Preventing vandalism or unauthorized artifact collection by employees or subcontractors,
    - Ensuring compliance with all protective measures in and around designated archaeological sites.

15.0 INVASIVE PLANT MANAGEMENT PLAN (IPMP)

Invasive plants are known to occur within and near the Site. The *Field Guide to Noxious Weeds and Other Selected Invasive Plants of British Columbia* may be used as a visual reference for identification on Site (ISC, 2021). The “Report-a-Weed” App or the 1-866-44WEEDS phone number through the Northwest Invasive Plant Council of BC (NWIPC) are both useful tools for reporting invasive plant species and can assist with proper identification. Care will be taken to prevent the introduction and spread of both noxious and invasive plants.

General measures for invasive plant management include seeding of disturbed soils on a work site, and regular mowing prior to seed set.

Measures to ensure that invasive plant seeds are not spread or propagated throughout Work areas include:

- Designated cleaning area for equipment will be in front of the mobile equipment shop.
- All equipment will be washed clean of soil, seeds and plant parts prior to entering the Work Site.
- All equipment will be cleaned to remove excessive vegetation and soil before leaving site.
- Avoid parking, turning around, or staging equipment in known invasive plant infested areas.
- Minimize disturbance and retain desired vegetation where possible.
- If possible, locate staging and laydown areas away from known infested areas.

- Use only clean fill material, if necessary, from an “invasive plant free” source.
- Dispose of soil containing invasive plants in an approved location.
- Seed soil dump with approved grass mixtures that are free of weeds, locally adapted, non-invasive, and quick to establish.
- Reseeding disturbed or denuded areas with regionally appropriate seed mixes.
- Mowing infested areas after flowering and prior to seed development.

16.0 SITE WILDLIFE MANAGEMENT PLAN (SWMP)

The following general wildlife mitigation measures will be followed during Site Works:

- Habitat loss will be minimized by clearly delineating and confining vegetation clearing to only those areas essential for Work activities and the safe, reliable operation of the Site.
- Where possible, clearing and grubbing will be scheduled during the Bird Nest Timing Window (August 20 to April 20).
- All waste will be disposed of in secure animal proof containers.
- Workers are prohibited from feeding, hunting, harming, harassing, or capturing wildlife.

16.1 Wildlife Protection Measures

A QP will be engaged to conduct pre-disturbance wildlife sweeps, focusing on bird nests and mammal dens in and around areas ahead of clearing and grubbing activities. If necessary, the QP will recommend appropriate buffers based upon field observations, including work scope or species-specific breeding requirements.

17.0 DISTRIBUTION OF THE EMP

The Work team will receive their own copy of the EMP. A pre-work meeting is necessary to further discuss site-specific details. Additional copies of the finalized plan will be available on site. All team members will be aware of the plan and how it works. CNSC will ensure that a copy of this EMP is always on Site for reference.

18.0 REVISIONS TO THE EMP

It is recognized that this EMP is a living document and may be revised. Revisions to this EMP can be made provided that all relevant regulatory approvals/permits are followed; however, all changes must be recorded and result in an improvement to the plan.

19.0 REFERENCES

BC Ministry of Forests (MOF). 1995. *Riparian management area guidebook.* https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/silviculture/silvicultural-systems/silviculture-guidebooks/riparian-management-area-guidebook

BC Ministry of Water, Land and Air Protection (MWLAP). 2002. *A field guide to fuel handling, transportation and storage.* 3rd edition. Victoria, B.C.

BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development (MFLRNORD). 2016. *Best Management Practices for Amphibian and Reptile Salvages in British Columbia.* https://a100.gov.bc.ca/pub/eirs/lookupDocument.do?fromStatic=true&repository=BDP&documentId=12490

BC Forest Safety Council. 2020. *Trap Tree Resource Package.* https://www.bcforestsafe.org/wp-content/uploads/2021/03/res_TrapTreeResourcePackage.pdf

Billerman, S. M., Keeney, B. K., Rodewald, P. G., & Schulenberg, T. S. (Eds.). 2022. *Birds of the World.* Cornell Laboratory of Ornithology. https://birdsoftheworld.org/bow/home

BC Inter-Ministry Invasive Species Working Group. 2023. *Provincial Priority Invasive Species.* https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/invasive-species/publications/provincial_priority_is_list.pdf

BC Ministry of Water, Land and Resource Stewardship (BCMWLRS). 2025. *British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture – Guideline Summary.* Water Quality Guideline Series, WQG-20. Province of BC, Victoria BC.

BC Conservation Data Centre (BCCDC). 2025. *BC Species and Ecosystems Explorer*. B.C. Ministry of Environment. Victoria, B.C. https://a100.gov.bc.ca/pub/eswp/.

Chilli beck. 1992. *Land Development Guidelines for the Protection of Aquatic Habitat*. Department of Fisheries and Oceans. http://www.dfo-mpo.gc.ca/Library/165353.pdf

Cranbrook Hill Greenway Society. 2024. *About the Society.* https://cranbrookhillgreenway.bc.ca

City of Prince George. 2025a. *Bylaws.* City of Prince George. https://www.princegeorge.ca/city-services/bylaw-enforcement/bylaws#:~:text=Visit%20the%20Zoning%20Bylaw%20page%20to%20view%20the,to%20view%20information%20regarding%20the%20Official%20Community%20Plan.

City of Prince George. 2025b. *PGMap Interactive Mapping Tool.* https://pgmap.princegeorge.ca/Html5Viewer/index.html?viewer=PGMap

DeLong, C., Jull, M., and Tanner, D. 1993. *A Field Guide for Site Identification and Interpretation for the Southwest Portion of the Prince George Forest Region*. Land Management Handbook 24. BC Ministry of Forests, Research Branch, Victoria, B.C

Department of Fisheries and Oceans. 2020. *Interim code of practice: temporary stream crossings*. https://www.dfo-mpo.gc.ca/pnw-ppe/codes/temporary-crossings-traversees-temporaires-eng.html

Environment Canada. 2014. Recovery Strategy for the Woodland Caribou, Southern Mountain population (*Rangifer tarandus caribou*) in Canada. *Species at Risk Act* Recovery Strategy Series. Environment Canada, Ottawa. viii + 103 pp. https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/recovery-strategies/woodland-caribou-southern-mountain-2014-final.html

Environment and Climate Change Canada (ECCC). 2021. Recovery Strategy for the Bank Swallow (*Riparia riparia*) in Canada [Proposed]. *Species at Risk Act* Recovery Strategy Series. Environment and Climate Change Canada, Ottawa. ix + 122 pp. https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/recovery-strategies/bank-swallow-proposed-2021.html

Environment and Climate Change Canada (ECCC). 2023. *Species at Risk Act* Public Registry: Critical Habitat Reports – April 2023 to September 2023. Government of Canada. https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/critical-habitat-reports/april-2023-september-2023.html

Environment and Climate Change Canada (ECCC). 2025. Nesting Periods. Available at: https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html#toc1.

Fifield, J. S. 2004. *Designing for effective sediment and erosion control on construction sites. Forester Press. Transportation Association of Canada (TAC).* 2005. National Guide to Erosion and Sediment Control on Roadway Projects.

Government of Canada. 1985. *Fisheries Act*, https://laws-lois.justice.gc.ca/eng/acts/f-14/

Government of Canada. 1994. *Migratory Birds Convention Act*, https://laws-lois.justice.gc.ca/eng/acts/m-7.01/

Government of Canada. 2019. *Species at Risk Act* Public Registry. Residence Descriptions. Description of residence for Barn Swallow (*Hirundo rustica*) in Canada. https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/residence-descriptions/barn-swallow.html

Invasive Species Council of BC (ISC). 2021. *Field Guide to Noxious Weeds and other Selected Invasive Plants of British Columbia.* Eleventh edition. Inter-Ministry Invasive Species Working Group. https://bcinvasives.ca/wp-content/uploads/2021/02/Field_guide_to_Noxious_Weeds_11th_2021.pdf

Industrial Forest Service (IFS). 2023. *Forest Site Assessment of the Current Crown Land Agreements, Private Land Use Agreements, and Proposed LOO Application Areas at Caledonia Nordic Ski Club*.

Ministry of Forests, Lands, and Natural Resource Operations (MFLNRO). 2014. *A Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia*. A. Roberts Ecological Consulting. https://a100.gov.bc.ca/pub/eirs/viewDocumentDetail.do;jsessionid=96DE7FAFDD2231B0D2FCCA544D37B45A?fromStatic=true&repository=BDP&documentId=12121

Ministry of Forests (MOF). 2022a. *Field Verification of Priority Old Forest Deferral Areas: Technical Guidance.* https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/stewardship/old-growth-forests/deferral-maps/field-verification-deferral-guide.pdf

Ministry of Forests (MOF). 2022b. *Visual Impact Assessment Handbook.* https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/visual-resource-mgmt/visual_impact_assessment_handbook.pdf

Province of British Columbia (BC). 2012. *Fish-stream Crossing Guidebook*. https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/resource-roads/fish-stream_crossing_web.pdf

Province of British Columbia (BC). 2013. *Guidelines for Raptor Conservation during Urban and Rural Land Development in British Columbia.* By LGL Limited Environmental Research Associates and Biolinx Environmental Research Ltd. https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/best-management-practices/raptor_conservation_guidelines_2013.pdf

Province of British Columbia (BC). 2014. *Develop with Care 2014: Environmental Guidelines for Urban and Rural Land Development.* https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/laws-policies-standards-guidance/best-management-practices/develop-with-care

Province of British Columbia (BC). 2017. *Environmental Management Act* Spill Reporting Regulation [includes amendments up to B.C. Reg. 221/2017, December 5, 2017]. https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/187_2017

Province of British Columbia (BC). 2024a. *Omineca Reduced Risk Timing Windows for Fish and Wildlife*. https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-licensing-rights/working-around-water/regional-terms-conditions-timing-windows

Province of British Columbia (BC). 2024b. *Old growth information, analysis and technical advisory panel report.* https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/old-growth-forests/information-and-analysis

Province of British Columbia (BC). 2025a. *iMapBC.* https://maps.gov.bc.ca/ess/hm/imap4m/

Province of British Columbia (BC). 2025b. *Habitat Wizard.* https://maps.gov.bc.ca/ess/hm/habwiz/

Province of British Columbia (BC). 2025c. *BC Ecosystems Explorer.* https://a100.gov.bc.ca/pub/eswp/

Province of British Columbia (BC). 2025d. *BC Laws.* https://www.bclaws.gov.bc.ca/

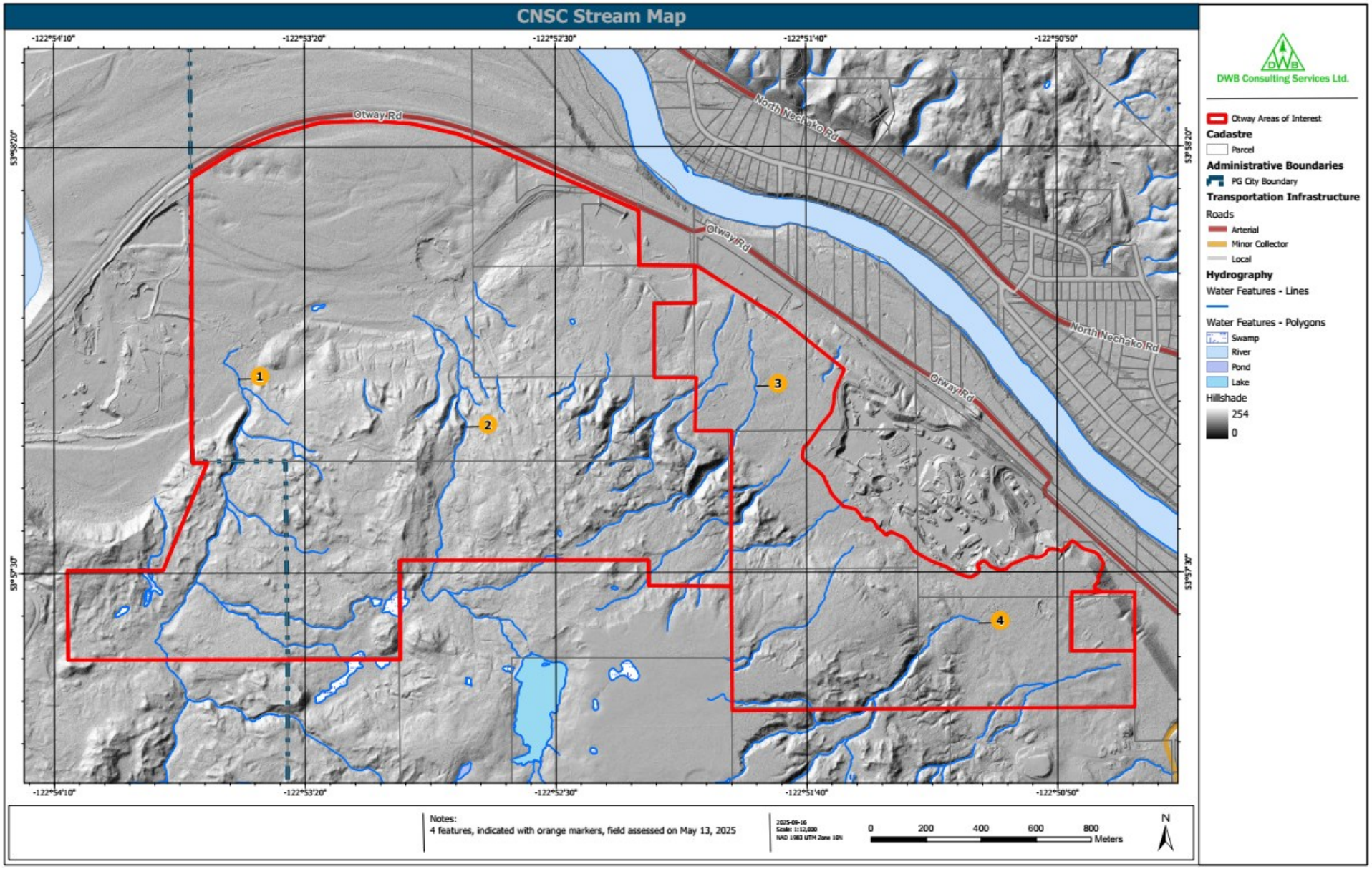
Province of British Columbia (BC). 2025e. *Fish-stream identification handbook.* https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/fish/fish-and-fish-habitat-data-information/data-standards-guidelines

Resources Inventory Standards Committee (RISC). 2008. *Inventory: Site Card Field Guide.* V. 2.0. By Ministry of Environment, Ecosystems Branch. https://www.for.gov.bc.ca/hts/risc/pubs/aquatic/sitecard/sitecard2.0.pdf

Stuart-Smith, A.K., W.L. Harrower, T. Mahon, E.L. McClaren, F.I. Doyle. 2012. *A Scientific Basis for Managing Northern Goshawk Breeding Areas in the Interior of British Columbia: Best Management Practices*. FORREX Forum for Research and Extension in Natural Resources and the BC Ministry of Forests and Range Forest Investment Account – Forest Science Program. https://a100.gov.bc.ca/pub/acat/documents/r41162/176-goshawk-final_1390407978942_0404990041.pdf

Appendix A

CNSC Stream Map


CNSC Stream Map
-122°54'10"
-122°53'20"
-122°52'30"
-122°51'40"
-122°50'50"
53°58'20"
53°57'30"
Otway Rd
North Nechako Rd
1
2
3
4
Notes:
4 features, indicated with orange markers, field assessed on May 13, 2025
2025-09-16
Scale: 1:12,000
NAD 1983 UTM Zone 10N
0
200
400
600
800
Meters
N
DWB Consulting Services Ltd.
Otway Areas of Interest
Cadastre
Parcel
Administrative Boundaries
PG City Boundary
Transportation Infrastructure
Roads
Arterial
Minor Collector
Local
Hydrography
Water Features - Lines
Water Features - Polygons
Swamp
River
Pond
Lake
Hillshade
254
0

Appendix B

Stream Assessment Photographs

Photo 1. Site 1 – stream channel overview.

Photo 2. Site 1 – streambed fine and gravel substrate.

Photo 3. Site 2 – stream channel overview.

Photo 4. Site 2 – streambed fine substrate.

Photo 5. Site 3 – non-visible channel in dry draw.

Photo 6. Site 4 – stream channel overview.

Appendix C
Spill Report Form

Spill Report Form

KEY CONTACTS:	
EMERGENCY MANAGEMENT BC (REPORTABLE EMERGENCY):	1-800-663-3456 (24 HOUR HOTLINE)
CANUTEC/TRANSPORT CANADA	TEL. (613) 996-6666
ENVIRONMENT CANADA	TEL. (604) 666-0370

REPORTABLE QUANTITIES	
Flammable Gas – i.e., propane	10 kg or 10 minutes
Non-flammable Gas – i.e., CO2	10 kg or 10 minutes
Flammable Liquids	100 litres
Corrosive liquid acids and caustics – i.e., battery acid	5 kg or 5 litres
Environmental hazardous substances – i.e., PCBs	1 kg or 1 litre
Oil and Waste	100 litres
Other substances – i.e., power wash water)	200 kg or 200 litres
Antifreeze	25 litres
Pesticides / Herbicides	1 kg or 1 litre

INCIDENT DETAILS	
Date of Spill:	**Material Spilled:**
Reporter's Name:	**UN # and Class:**
Department:	**Quantity Spilled:**
Phone Number:	**Location of Spill:**
Address:	
Description of Spill:	
Cause of Spill:	
Remediation Actions Taken:	
Agencies Attending Scene (eg. Fire Dept. etc.):	
Employees/Contractors Attending Scene:	
Additional Information:	