Aiza Gomez, Paralegal, phone # 236-4781805

VICTORIA LAND TITLE OFFICE NOV 16 2022 11:28:29.001

CB338844-CB338846

1. Application

Status: Registered

ьс Land

Document Fees: \$0.00

LISA MCBAIN LEGAL SERVICES BRANCH ON BEHALF OF MINISTRY OF ENVIRONMENT PO BOX 9289 STN PROV GOVT

**VICTORIA BC** 250-387-0412

2. Description of Land

PID/Plan Number Legal Description

General Instrument - Part 1

THAT PART OF THE NORTH 1/2 OF SECTION 14, HIGHLAND DISTRICT, LYING TO THE WEST OF 003-346-668

MILLSTREAM ROAD, EXCEPT PLANS 44528 AND EPP81263

**LOT B SECTION 14 HIGHLAND DISTRICT PLAN EPP81263** 030-506-000

3. Nature of Interest

<u>Type</u>	Number	Additional Information
COVENANT		Part 2 - Terms except articles 9 and 11
STATUTORY RIGHT OF WAY		Part 2 - Terms, Article 9
RENT CHARGE		Part 2 - Terms, Article 11

4. Terms

Part 2 of this instrument consists of:

(b) Express Charge Terms Annexed as Part 2

5. Transferor(s)

**GREATER VICTORIA GREENBELT SOCIETY, NO.S0014941** 

6. Transferee(s)

HIS MAJESTY THE KING IN RIGHT OF THE PROVINCE OF **BRITISH COLUMBIA** 

PARLIAMENT BUILDINGS

VICTORIA BC V8V 1X4

AS REPRESENTED BY THE MINISTRY OF ENVIRONMENT AND

**CLIMATE CHANGE STRATEGY** 

7. Additional or Modified Terms

vey General Instrument – Part 1

### 8. Execution(s)

Status: Registered

This instrument creates, assigns, modifies, enlarges or governs the priority of the interest(s) described in Item 3 and the Transferor(s) and every other signatory agree to be bound by this instrument, and acknowledge(s) receipt of a true copy of the filed standard charge terms, if any.

Witnessing Officer Signature

Execution Date

Transferor / Transferee / Party Signature(s)

GREATER VICTORIA GREENBELT
SOCIETY
By their Authorized Signatory

2022-11-07

ROBERT J. MILLAR
LAWYER
4th Floor - 1007 Fort Street

VICTORIA BC V8V 3K5

ROBERT GORDON MCMINN

TEL: (250) 385-57-87

### Officer Certification

Your signature constitutes a representation that you are a solicitor, notary public or other person authorized by the *Evidence Act*, R.S.B.C. 1996, c.124, to take affidavits for use in British Columbia and certifies the matters set out in Part5 of the *Land Title Act* as they pertain to the execution of this instrument.

Witnessing Officer Signature

YYYY-MM-DD

2022-11-15

Transferor/Transferee/Party Signature(s)

HIS MAJESTY THE KING IN RIGHT OF THE PROVINCE OF BRITISH
COLUMBIA
as represented by the Ministry of Environment and Climate Change and Strategy, TRANSFEREE
By their Authorized Signatory

JIM STANDEN - ADM BC PARKS, RECREATION SITES AND TRAILS

### Officer Certification

Your signature constitutes a representation that you are a solicitor, notary public or other person authorized by the *Evidence Act*, R.S.B.C. 1996, c.124, to take affidavits for use in British Columbia and certifies the matters set out in Part5 of the *Land Title Act* as they pertain to the execution of this instrument.

### **Electronic Signature**

Your electronic signature is a representation that you are a designate authorized to certify this document under section 168.4 of the *Land Title Act*, RSBC 1996 c.250, that you certify this document under section 168.41(4) of the act, and that an execution copy, or a true copy of that execution copy, is in your possession.

Lisa Dorothy McBain FU3QEA

Digitally signed by Lisa Dorothy McBain FU3QEA Date: 2022-11-16 10:56:23 -08:00

### **TERMS OF INSTRUMENT - PART 2**

## Section 219 Conservation Covenant, and Section 218 Statutory Right of Way

### IS BETWEEN:

GREATER VICTORIA GREENBELT SOCIETY, INC.NO. S0014941 1772 MILLSTREAM RD VICTORIA BC V9B 6E4

(the "Owner")

AND:

HIS MAJESTY THE KING IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA as represented by the Ministry of Environment and Climate Change Strategy Victoria, British Columbia, V8V 1X4

(the "Province")

### WHEREAS:

- A. The Owner is the registered owner in fee simple of the Lands.
- B. The Lands contain significant natural area values and amenities including flora, fauna and natural features of great importance to the Owner, the Province and the public.
- C. The Owner and the Province entered into a grant agreement by way of letter signed by both parties on March 29, 2019, in which the Owner agreed with the Province to register a restrictive covenant over the Lands such that the Land is held for conservation purposes.
- D. The Owner wishes and has agreed to grant to the Province a covenant pursuant to section 219 of the *Land Title Act*, to restrict the use of the Lands as described in this Agreement, and a statutory right of way pursuant to section 218 of the *Land Title Act*.
- E. A statutory right of way pursuant to section 218 of the *Land Title Act* is necessary for the operation and maintenance of the undertakings of the Province.

In consideration of the payment of \$1.00 now paid by the Province to the Owner, the receipt and sufficiency of which is acknowledged by the Owner, and in consideration of the promises exchanged below, the parties covenant and agree as follows, in accordance with sections 218 and 219 of the *Land Title Act*:

### 1. DEFINITIONS

1.1 In this Agreement, in addition to the words defined above:

- (a) "Amenities" means those natural, scientific, environmental and cultural values relating to the Lands as described in the Report;
- (b) "Business Day" means a day on which the Land Title Office in Victoria BC is open;
- (c) "Designated Human Activity Areas" means the areas shown on the map and plans in Schedule A and described in the Report;
- (d) "Improvements" means any buildings, pathways, landscaping, facilities, structures, signage, drainage, utilities, access roads and parking areas;
- (e) "Lands" means the parcels of land legally described as follows:
  - PID: 003-346-668 That Part of the North ½ of Section 14, Highlands District, Lying to the West of Millstream Road, Except Plans 44528 And EPP81263, and
  - PID: 030-506-000 Lot B, Section 14, Highland District, Plan EPP81263;
- (f) "Natural State" means the state of the Land and Amenities as described in the Report;
- (g) "Notice of Breach" means a notice of breach given under section 10.1;
- (h) "Notice of Enforcement" means a notice of enforcement given under section 11.6;
- (i) "Rent Charge Amount" means the amount set out in section 11.3, the payment of which is secured by the Rent Charge;
- (j) "Rent Charge" means a rent charge granted by the Owner under section 11.1; and
- (k) "Report" means the baseline report that describes the Lands and Amenities in the form of text, maps, tables, and other records and is attached as Schedule B.

### 2. REPRESENTATIONS AND WARRANTIES

- 2.1 The Owner represents and warrants to the Province that the facts set out in recitals A and D are true as of the date of this Agreement.
- 2.2 Each party represents and warrants to each other party that the facts set out in recitals B, C and E are true as of the date of this Agreement.

#### 3. INTENT OF AGREEMENT

3.1 The parties agree that the intent of this Agreement is:

- (a) to protect, conserve, maintain, enhance and, if applicable from time to time, restore the Natural State of the Lands and the Amenities,
- (b) to facilitate the exercise of traditional Indigenous land uses, culture and education, and
- (c) to prevent any occupation or use of the Lands that will impair or interfere with the Natural State of the Lands or the Amenities.
- 3.2 The parties each acknowledge that Natural State includes evolution through natural succession over time of the flora and fauna on the Lands and, unless otherwise expressly stated, this Agreement is intended to take into account the natural succession of the flora and fauna over time, without human intervention other than as expressly permitted by this Agreement.

#### 4. RESTRICTIONS ON THE USE OF THE LANDS

- 4.1 The Owner must keep and maintain the Lands outside of the Designated Human Activity Area in their Natural State.
- 4.2 The Owner must not, except with the prior written approval of the Province, in its sole discretion:
  - (a) use or permit the use of the Lands for an activity or use which:
    - i. causes or allows silts, leachates, fills or other deleterious substances to be released into any watercourse on the Lands;
    - ii. causes the erosion of the Lands to occur;
    - iii. causes or facilitates the loss of soil on the Lands;
    - iv. alters or interferes with the hydrology of the Lands, including by the diversion of natural drainage or flow of water in, on or through the Lands other than maintenance, operation, repair or replacement of the existing dams and alteration to improve passage of fish through the Lands;
    - v. causes or allows fill, rubbish, ashes, garbage, waste or other material foreign to the Lands to be deposited in, on or under the Lands;
    - vi. causes or allows pesticides, including but not limited to herbicides, insecticides or fungicides, to be applied to or introduced onto the Lands; or
    - vii. causes or allows any component of the Lands, including soil, gravel or rock, to be explored for, removed from or deposited in or on the Lands;

- (b) lay out or construct any new roads on the Lands;
- (c) lease or license the Lands or any part thereof unless the lease or license is expressly made subject to the provisions of this Agreement and expressly entitles the Owner to terminate the lease or license if the tenant or licensee breaches any of the provisions of this Agreement;
- (d) subdivide the Lands or any part of them in any manner; or
- (e) carry out any commercial forest harvesting.
- 4.3 The parties acknowledge that the restrictions on the use of the Land under this Agreement are subject to the obligations arising under any covenant registered on the Land in priority to this Agreement.

### 5. BASELINE DOCUMENTATION REPORT

- 5.1 The parties agree that the Lands, the location of current land uses and the current Amenities are described in the Report.
- 5.2 The parties agree that the Report is intended to serve as an objective information baseline and the parties each agree that the Report provides an accurate description of the Lands and the Amenities as of the date of this Agreement.
- 5.3 References to the Report in this Agreement are intended to take into account the natural succession of flora and fauna over time, without human intervention other than as expressly permitted by this Agreement.

### 6. DISPUTE RESOLUTION

- 6.1 If an alleged breach of this Agreement occurs, or if there is disagreement as to the meaning of this Agreement, the Province or the Owner may give notice to the other party requiring a meeting of the parties within 15 Business Days of receipt of the notice.
- 6.2 Upon receipt of a notice under section 6.1, all parties must immediately cease any activity giving rise to an alleged breach of this Agreement, and any activity giving rise to a disagreement as to the meaning of this Agreement.
- 6.3 The parties must attempt to resolve the matter, acting reasonably and in good faith, within 20 Business Days of receipt of the notice under section 6.1.
- Where a matter in dispute is related to an Indigenous cultural use, the parties agree to consult the Indigenous community whose cultural use is at the source of the dispute, and consider adjusting the dispute resolution process to incorporate traditional knowledge and protocols, including providing additional time to do so.
- If the parties are not able to resolve the matter within the time set out in section 6.3 (or 6.5 6.4 where applicable, the parties may, by agreement, appoint a mutually acceptable person to mediate the matter, and the parties must act reasonably and in good faith

- and cooperate with the mediator and with each other in an attempt to resolve the matter within 30 days after the mediator is appointed.
- This Article does not affect the right of the Province to pursue any other legal or equitable remedy in relation to a breach or a threatened breach of this Agreement, including without limitation under Article 10, and the Province may pursue other remedies concurrently with any dispute resolution under this Article.

### 7. OWNER'S RESERVED RIGHTS

- 7.1 Subject to Article 4 the Owner reserves its rights as owner of the Lands, including the right to use, occupy and maintain the Lands in a way that is not expressly restricted or prohibited by this Agreement, so long as the use is consistent with the intent of this Agreement.
- 7.2 Without limiting the generality of section 7.1 the following rights to use the Lands are, subject to Article 4, expressly reserved to the Owner:
  - (a) to allow access to invitees, and restricted and monitored access to the public;
  - (b) to allow general public access on specific days as designated from time to time by the Owner;
  - (c) to remove and control non-native species of flora and fauna;
  - (d) to use native flora as required for Indigenous-led cultural and educational programs;
  - (e) to use the property for cultural and nature focused events, including workshops and Indigenous spiritual and ceremonial activities;
  - (f) to conduct ecological and nature-focused educational tours;
  - (g) to carry out environmental research;
  - (h) to maintain, restore or replace Improvements that are identified in the Report so long as the location remains the same and the size is the same or smaller;
  - (i) to install, construct, maintain or replace the Improvements within the Designated Human Activity Area; and
  - (j) to install a reasonable number of signs for safety as well as interpretive and educational purposes.
- 7.3 Nothing in this Agreement restricts or affects the right of the Owner to do anything reasonably necessary to:
  - (a) prevent potential injury or death to any individual; or
  - (b) prevent, abate or mitigate any damage or loss to any real or personal property.

### 8. OWNER'S OBLIGATIONS

- 8.1 The Owner retains all responsibilities and bears all costs and liabilities related to the ownership, use, occupation and maintenance of the Lands.
- 8.2 The Owner must indemnify the Province, its directors, officers, employees, agents and contractors, from and against any and all liabilities, damages, losses, personal injury or death, causes of action, actions, claims, and demands made, suffered or incurred by or on behalf of any person, arising out of any act or omission, negligent or otherwise, in the use, occupation and maintenance of the Lands or its Amenities by the Owner or its officers, employees, contractors, invitees, licensees or agents.
- 8.3 The Owner is liable for any and all breaches of this Agreement, but the Owner is not liable for:
  - (a) breaches of this Agreement which occurred prior to the Owner becoming the registered owner of any interest in the Lands, provided the previous owner has received a certificate issued by the Province under section 13.2 immediately before or at the time of the transfer of the Lands to the Owner, or the Owner received a certificate issued by the Province under section 13.2 immediately after or at the time of the transfer of the Lands to the Owner, certifying that there were no violations of this Agreement as of the date of issuance of the certificate;
  - (b) injury or alteration to the Lands or the Amenities resulting from natural causes, or causes beyond the Owner's reasonable control, other than as referenced in subsection (c), including accidental fire, flood, storm and earth movement, but excluding injury or alteration resulting from actions of the Owner or any other person with the actual or constructive knowledge of the Owner;
  - (c) injury or alteration to the Lands or the Amenities resulting from the actions of any person without the actual or constructive consent or knowledge of the Owner, including from trespass, vandalism, nuisance or negligence;
  - (d) any prudent action taken by the Owner under emergency conditions to prevent, abate, or mitigate significant injury to the Lands (including improvements) or the Amenities, resulting from natural causes, including accidental fire, flood, storm and earth movement; or
  - (e) injury or alteration to the Lands caused by the Province exercising its rights under this Agreement.
- 8.4 Without limiting the generality of sections 8.1, 8.2 and 8.3, the Owner:
  - (a) is solely responsible and liable for any loss or damage, or liability of any kind (whether civil, criminal or regulatory), in any way connected with

- the existence in, on, from, to or under the Lands (whether through spill, emission, migration, deposit, storage or otherwise) of any pollutant, contaminant, waste, hazardous waste, or any matter that harms the environment; and
- (b) must indemnify the Province from and against any loss, fine, penalty, damage, liability, cause of action, action, proceeding, regulatory action, order, directive, notice or requirement, including those of any government agency, incurred, suffered or brought against the Province, or either of them, in any way associated with anything described in subsection (a).
- 8.5 The Owner must pay when due all taxes, assessments, levies, fees and charges of whatever description which may be levied on or assessed against the Lands and must pay any arrears, penalties and interest in respect of any such unpaid amounts.
- 8.6 The Owner must indemnify the Province from and against any fee, tax or other charge which may be assessed or levied against the Owner or the Province pursuant to any enactment, including the *Income Tax Act* (Canada), with respect to the Lands or this Agreement, including any fee, tax or other charge which may be assessed or levied against the Owner or Province as a result of the amendment or termination of this Agreement.
- 8.7 The indemnities granted by the Owner to the Province under this Article are indemnities granted as an integral part of the section 219 *Land Title Act* covenant created by this Agreement.
- 8.8 Any debts or other amounts due from the Owner to the Province under this Agreement, if not paid within 30 days after notice, will bear interest at the annual interest rate that is one per cent greater than the prime rate of interest. For the purposes of this section, the "prime rate of interest" is the annual rate of interest charged from time to time by the Bank of Montreal, at its main branch in Vancouver, BC, for demand Canadian dollar commercial loans and designated from time to time by the Bank of Montreal as its prime rate.

### 9. STATUTORY RIGHT OF WAY

- 9.1 The Owner grants to the Province a licence, and a statutory right of way pursuant to section 218 of the *Land Title Act*, permitting the Province to do the following:
  - (a) enter upon the Lands to access and inspect for the purposes of monitoring compliance with this Agreement at all reasonable times upon prior written notice by the Province to the Owner of at least 24 hours, unless, in the opinion of the Province, there is an emergency or other circumstance which makes giving such notice impractical;
  - (b) as part of inspection of the Lands under subsection (a), take soil, water or other samples, photographs, and video and sound recordings as

- may be necessary to monitor compliance with and enforce the terms of this Agreement;
- (c) in accordance with Article 10, if an action of the Owner or any other person acting with the actual or constructive knowledge of the Owner contravenes any term of this Agreement, enter upon and protect, conserve, maintain, enhance, rehabilitate or restore, in the Province's sole discretion and at the Owner's expense, the Lands or the Amenities as in the Province's sole discretion is practicable or desirable;
- (d) carry out or evaluate any program agreed upon by the parties for the protection, conservation, maintenance, restoration or enhancement of all or any portion of the Lands or the Amenities; and
- (e) place survey pegs or other markings on the Lands to clearly identify the Lands or access to the Lands, or to increase the visibility of existing survey pegs or other markings.
- 9.2 The Province may bring workers, contractors and employees, and vehicles, equipment and other personal property, onto the Lands when exercising their rights under this Article.

### 10. ENFORCEMENT REMEDIES OF THE PROVINCE

- 10.1 If the Province, in its sole discretion, believes that the Owner has failed to perform any of its obligations under this Agreement, or is otherwise in breach of any term of this Agreement, the Province may give a Notice of Breach to the Owner setting out the particulars of the breach, including the Province's estimated maximum costs of remedying the breach.
- 10.2 On receipt of a Notice of Breach, the Owner must
  - (a) immediately cease all activities giving rise to the breach; and
  - (b) within 60 days remedy the breach or make arrangements satisfactory to the Province to remedy the breach, including with respect to the time within which the breach must be remedied.
- 10.3 For clarity, the requirement in subsection 10.2(b) to remedy a breach requires the Owner to undertake such rehabilitation or restoration necessary to remedy any damage done to the Lands contrary to this Agreement, at the Owner's sole expense.
- 10.4 If the Owner does not comply with the requirements of section 10.2 within the time required or agreed upon, the Province may:
  - (a) enter upon the Lands and take any required actions to cease any activities giving rise to the breach, and to remedy the breach or carry out the arrangements referred to in section 10.2. The Owner must reimburse the Province for any reasonable expenses incurred in taking any action under this section, up to the estimated maximum costs of remedying the breach as set out in the Notice of Breach; and

- (b) enforce the Rent Charge under Article 11.
- 10.5 Expenses incurred by the Province under this Article, until paid, are a debt owed by the Owner to the Province and the Owner agrees to indemnify the Province for such expenses, which indemnity forms an integral part of the covenant under section 219 of the Land Title Act created by this Agreement.
- 10.6 The Owner and the Province agree that the enforcement of this Agreement is entirely within the sole discretion of the Province and that the execution and registration of this Agreement against title to the Lands shall not be interpreted as creating any duty on the part of the Province to the Owner or to any other person to enforce any provision or the breach of any provision of this Agreement.

### 11. RENT CHARGE

- 11.1 As security for the performance of the Owner's obligations under this Agreement, the Owner grants to the Province a perpetual rent charge against the Lands, ranking prior to all other financial charges and encumbrances registered against the Lands, including options to purchase and rights of first refusal. The Rent Charge is granted both under section 219 of the *Land Title Act* as an integral part of the statutory covenant created by this Agreement and as a fee simple rent charge at common law.
- 11.2 The Rent Charge is suspended unless and until the Owner is in breach of any provision of this Agreement and has not cured the breach, cannot cure the breach or is not diligently proceeding to cure the breach.
- 11.3 The Rent Charge secures payment to the Province by the Owners of a Rent Charge Amount in the sum of \$20,000 per year, for each violation occurring within that year.
- 11.4 If, in the sole discretion of the Province, the damage resulting from a breach of this Agreement cannot be repaired or remediated, the Rent Charge Amount shall be doubled.
- 11.5 The Province may enforce the Rent Charge by any of the following:
  - (a) an action against the Owner for the Rent Charge Amount;
  - (b) distraint against the Lands to the extent of the Rent Charge Amount;
  - (c) an action for appointment of a receiver in respect of the Lands; or
  - (d) an order for sale of the Lands.
- 11.6 If the Province wishes to enforce the Rent Charge, it shall provide Notice to that effect to the Owner.
- 11.7 Within ten Business Days of receipt of a Notice given under section 11.6, the Owner must pay the full Rent Charge Amount to the Province.
- 11.8 The Province shall be entitled to recover from the Owner all reasonable expenses incurred as a result of enforcement of the Rent Charge.

#### 12. ASSIGNMENT OF AGREEMENT

12.1 This Agreement is assignable by the Province, but the Province may only assign its rights and obligations under this Agreement to a person or entity authorized to hold statutory rights of way under section 218 of the *Land Title Act* and covenants under section 219 of the *Land Title Act*.

### 13. NOTICE OF CHANGE IN OWNERSHIP BY OWNER

- 13.1 The Owner must notify the Province of any change of ownership prior to the registration of any such change in the applicable provincial land title office.
- 13.2 The Owner may request that the Province visit the Lands and issue a certificate indicating whether or not there are any violations of this Agreement as of the date of the certificate.
- 13.3 Failure by the Owner to comply with section 13.1 does not affect the enforceability of this Agreement against the Owner or its successors in title to the Lands.

#### 14. NOTICE

- 14.1 A Notice required or permitted under this Agreement must be in writing and must be:
  - (a) delivered in person;
  - (b) sent by e-mail; or
  - (c) sent by pre-paid registered mail,

to the parties at their respective addresses set out in section 14.3.

- 14.2 Unless otherwise provided, a notice
  - (a) delivered in person is deemed received on delivery;
  - (b) sent by e-mail is deemed received upon acknowledgement of receipt by the recipient; and
  - (c) sent by pre-paid registered mail is deemed received on the fourth Business Day following the day on which the notice was sent.
- 14.3 The addresses of the parties for notices under this Article are as follows:
  - (a) The Owner:

GREATER VICTORIA GREENBELT SOCIETY, INC.NO. S0014941 1772 Millstream Rd

Victoria BC V9B 6E4

Email: info@marylakeqvqs.com

(b) Province:

HIS MAJESTY THE KING IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA as represented by the Ministry of Environment and Climate Change Strategy, 525 Superior Street, 4<sup>th</sup> Floor, Victoria, British Columbia, V8V 1X4

Email: BCParksPSBAdmin@gov.bc.ca

14.4 Each party agrees to give written notice immediately to the other parties of any change in its address from that set out in section 14.3, and to keep the other parties apprised of any changes to the party's e-mail address.

### 15. WAIVER

15.1 The failure for any reason of the Province to require performance by the Owner at any time of any obligation under this Agreement does not affect the Province's right to subsequently enforce that obligation.

### 16. JOINT AND SEVERAL OBLIGATIONS

16.1 Where at any time there is more than one Owner in this Agreement, the obligations of those Owners are joint and several.

### 17. REMEDIES NOT EXHAUSTIVE

17.1 Exercise or enforcement by a party of any remedy or right under or in respect of this Agreement does not limit or affect any other remedy or right that party may have against the other parties in respect of or under this Agreement or its performance or breach.

### 18. COVENANT RUNS WITH THE LANDS

18.1 Unless specified otherwise, every obligation and covenant of the Owner in this Agreement constitutes both a personal covenant and a covenant granted under section 219 of the Land Title Act in respect of the Lands, and the provisions of Article 9 constitute a statutory right of way granted under section 218 of the Land Title Act, all of which run with the Lands and bind the successors in title to the Lands and each and every part into which the Lands may be subdivided by any means and any parcel with which the Lands or any part of it is consolidated.

### 19. REGISTRATION

- 19.1 The Province and Owner agree to ensure that this Agreement, and the interests it creates, are registered against title to the Lands, with priority over all financial charges, liens and encumbrances, including options to purchase, rights to purchase and rights of first refusal, registered or pending registration in the applicable provincial land title office at the time of application for registration of this Agreement.
- 19.2 This Agreement may only be changed by a written instrument signed by each of the parties and registered at the provincial land title office.

### 20. SEVERANCE

20.1 If any part of this Agreement is held by a court to be invalid, illegal or unenforceable, that part is to be considered to have been severed from the rest of this Agreement and

the rest of this Agreement is to remain in force unaffected by that holding or by the severance of that part as if the part was never part of this Agreement.

#### 21. NO OTHER AGREEMENTS

21.1 This Agreement is the entire agreement between the parties, and it terminates and supersedes all other agreements and arrangements regarding its subject.

### 22. INTERPRETATION

- Where this Agreement provides that something is in the "sole discretion" of a party, that thing is within the sole, absolute and unfettered discretion of that party.
- 22.2 This Agreement must be interpreted in accordance with the laws of British Columbia and the laws of Canada applicable in British Columbia, including Indigenous laws, and the parties agree that the courts of British Columbia have exclusive jurisdiction over any proceeding concerning this Agreement.
- 22.3 This Agreement does not supersede or limit any Indigenous rights or title in relation to the Lands.

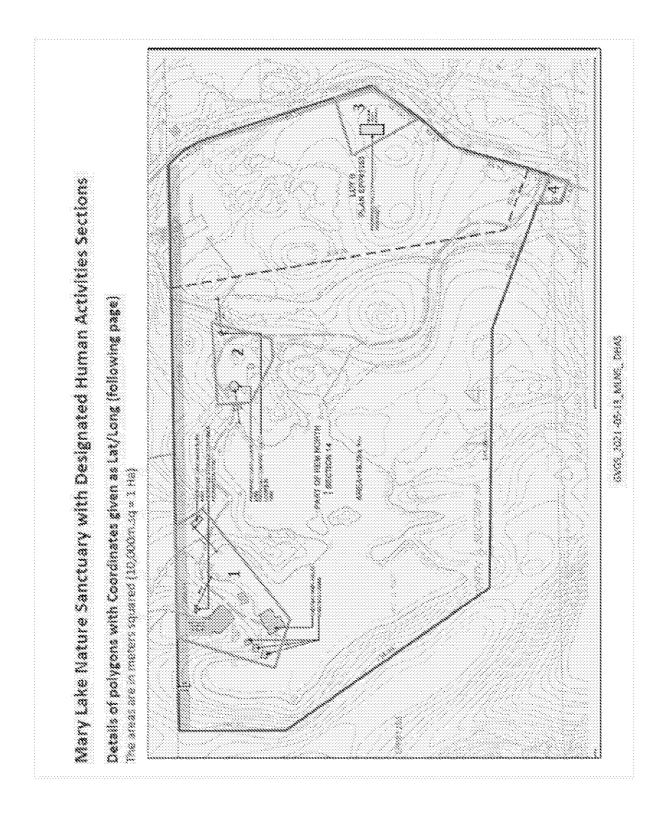
## 22.4 In this Agreement:

- (a) reference to the singular includes a reference to the plural, and vice versa, unless the context otherwise requires;
- (b) where a word or expression is defined in this Agreement, other grammatical forms of the same word or expression have corresponding meanings;
- (c) reference to a particular numbered Article or section, or to a particular lettered Schedule, is a reference to the correspondingly numbered or lettered Article, section or Schedule of this Agreement, except where otherwise provided;
- (d) Article headings have been inserted for ease of reference only and are not to be used in interpreting this Agreement;
- (e) the word "enactment" has the meaning given to it in the *Interpretation*\*\*Act on the reference date of this Agreement;
- (f) reference to any enactment is a reference to that enactment as consolidated, revised, amended, re-enacted or replaced, unless otherwise expressly provided;
- (g) reference to an enactment is to an enactment of the province of British Columbia except where otherwise provided;
- (h) reference to a "party" or the "parties" is a reference to a party or the parties to this Agreement and their respective successors, assigns, trustees, administrators and receivers; and
- (i) reference to a "day", "month" or "year" is a reference to a calendar day, calendar month or calendar year, as the case may be, unless otherwise expressly used.

As evidence of their agreement to be bound by the above terms, the parties each have executed this Agreement under seal by signing Part 1 of the *Land Title Act* Form C to which this Agreement is attached.

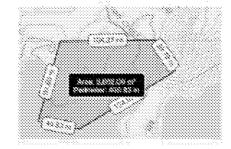
The schedules referred to throughout this document are attached after this page.

## **SCHEDULE A - AREA PLAN**



## **SCHEDULE A - AREA PLAN**

# Area 1 NW comer



# Area 2 middle north

 Size: 3378 m2
 Perimeter 236m

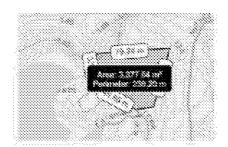
 NW corner
 Lat: 48.500.21 k
 Lat: 123.51616 W

 NE corner
 Lat: 48.400.81 k
 Lat: 123.51628 W

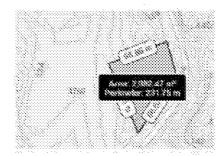
 SE corner
 Lat: 48.400.83 k
 Lat: 123.51628 W

 South corner Lat: 48.400.83 k
 Lat: 123.51609 W

 SW corner
 Lat: 48.50003 k
 Lat: 123.51609 W



# Area 3 east edge



# Area 4 southeast corner

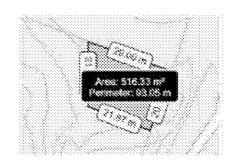
Size: 516m2 Perimeter 93m

NW corner Lat 88.49758 N Lon: 123.51357 W

NE corner Lat: 48.49731 N Lon: 123.51329 W

SE corner Lat: 48.49731 N Lon: 123.51329 W

SW corner Lat: 48.49738 N Lon: 123.51329 W



# Mary Lake Nature (WMÍYETEN) Sanctuary Baseline Report

Prepared by Keefer Ecological Services Ltd.

2021-03-15







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# 1. Summary

## 1.1. Objectives

Keefer Ecological Services Ltd. (KES) was contracted to undertake an ecological inventory of the Mary Lake Nature (WMÍYEŦEN) Sanctuary, to describe the current condition of the property's ecosystems and natural values, which may be relied upon as necessary for future enforcement of a conservation covenant.

Doc #: CB338844

### 1.2. Contributors

**Table 1.** Project contributors. The contributors wish to thank Koi Neah, Ben van Drimmelen, Robert McMinn and Tim Boesenkool for providing background information, access, and orientation to the property.

Name Tom Braumandl, BScF, RPF	<b>Title</b> Senior Ecologist	Organization  Keefer Ecological Services Ltd.
Mike Keefer, MSc, PAg	Lead Visionary	Keefer Ecological Services Ltd.
Andrew Simon, MSc	Biodiversity Specialist &	Keefer Ecological Services Ltd.
	GIS Analyst	
Jason Straka, MSc, RPBio	Program Ecologist	BC Ministry of Environment
		Conservation Data Centre
Elliott Mann, MA, BATech	GIS Specialist	Keefer Ecological Services Ltd.

### 2. Parcel Location and Identification

Located in the Highlands District of the Saanich Peninsula, Vancouver Island, BC, the Mary Lake Nature (WMÍYEŦEN) Sanctuary (hereafter MLNS) includes two parcels of land at approximately 48.4994, - 123.5170, west of Millstream Road. These parcels include one 12.94 ha lot (003-346-668) and another 4.04 ha lot (030-506-000) (Figure 1).

# 3. Indigenous Land Acknowledgment

The MLNS lies within the traditional territories of the WSANEC (Saanich)—SENĆOŦEN-speaking peoples who continue to value the land as grounds for hunting and medicine collection, and as a place of physical and spiritual cleansing. The cultural significance of the land has been attested by Tom Sampson, a respected Elder of Tsartlip First Nation (Jones et al., 2019), as well as by community members and Elders among other nations of SENĆOŦEN-speaking peoples, including the Pauquachin, Tsawout, Tseycum, Esquimalt, and Whyomilth (Songhees) (Greater Victoria Greenbelt Society, 2021). Engagement with First Nations was beyond the scope of this report. Its contents therefore should not be interpreted



as representing or limiting Indigenous rights or knowledge related to the MLNS. The Mary Lake Nature (WMÍYEŦEN) Sanctuary is called WMÍYEŦEN Sanctuary in the SENĆOŦEN language. Where possible, the SENĆOŦEN names are provided for plants and animals with translations from Camosun College (2021) and the SENĆOŦEN Classified Word List (2015).



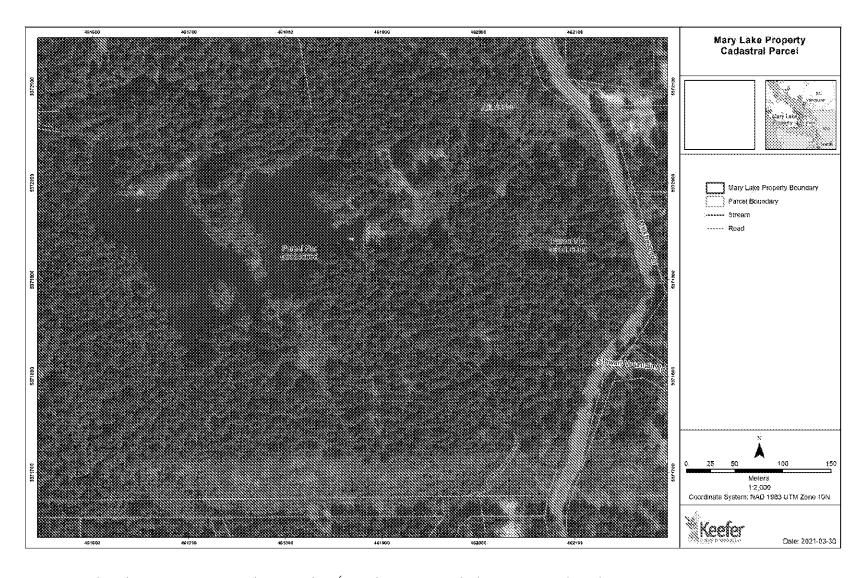


Figure 1. Parcels under covenant at Mary Lake Nature (WMÍYEŦEN) Sanctuary, and adjacent property boundaries



## 4. General Description

The 17 ha MLNS is situated at approximately 160 m above sea level within the 13,000-year-old Millstream Watershed, which begins near Jocelyn Hill in the Gowlland Range and flows 18 km to the ocean at the Esquimalt Harbour, draining an area of 26 km² (Greater Victoria Greenbelt Society, 2021). The underlying geology is composed of metamorphic Wark Gneiss (Muller, 1983). The radiometric ages on this unit mark metamorphism as occurring somewhere between 160–200 million years ago (Canil et al., 2013).

The central feature of the property is Mary Lake, a naturalized lake that is the namesake of the property, which is surrounded by a diversity of wetland and riparian communities associated with several creeks, including the potentially salmon-bearing Millstream Creek. The vast remainder of the land is forested, with coniferous and mixed stands at various stages of ecological succession. This complex landscape includes a broad diversity of ecosystem types, spanning a hydrological gradient from non-forested rock outcrops and dry woodlands to moist riparian forests and freshwater communities, providing habitat for a great diversity of species.

The MLNS lies within the Coastal Douglas-fir moist maritime (CDFmm) Biogeoclimatic Zone, an ecoregion with a semi-Mediterranean climate that supports the highest density of species at risk in the province of British Columbia (BC CDC, 2021a). In this densely populated region, habitat loss and fragmentation continue to pose the greatest threats to ecological communities. Cumulative anthropogenic impacts associated with these threats include: human-induced changes to predator-prey dynamics, which have resulted in increasing browsing pressures by deer and, in turn, diminished native plant abundances, as well as other higher level trophic impacts (e.g., Martin et al., 2011); long-term declines in wildlife populations resulting from fragmentation of surrounding matrix habitat (Shackelford et al., 2018); the dispersal of exotic plant and animal species (Marx et al., 2016; Shackelford et al., 2018); and numerous stressors associated with climate change (Austin et al., 2008; Klassen et al., 2015; Salathé et al., 2008; Spies et al., 2010).

The most significant anthropogenic impacts on the MLNS landscape include small-scale agricultural practices dating to 1887 and logging dating to the period of ca 1935–1947 (Greater Victoria Greenbelt Society, 2021). The earthen dam which initially gave rise to Mary Lake also dates to this period. Mary Lake and its associated watercourses have since been further modified and expanded with the construction of a concrete dam and fish ladder in 1964 (Greater Victoria Greenbelt Society, 2021). Continuing anthropogenic impacts at MLNS include the "Highlands Nature House," several adjacent cabins and out-structures, roads, skidder trails and foot paths, as well as the modified lake, dams, ditches, and associated watercourses. Nevertheless, despite a history of occupancy by First Nations and European settlers, the land remains relatively intact ecologically, retaining many natural values.



## 5. Property Access

The MLNS can officially be accessed from a gated laneway off Millstream Road, near its intersection with Stewart Mountain Road, approximately 6 km north from exit 14 off HW-1.

### 6. Methods

## 6.1.Terrestrial Ecosystem Mapping

Terrestrial ecosystem mapping (TEM) stratifies a landscape into map polygons based on ecological variables such as climate, vegetation, physiography, surficial material, bedrock geology, and soil (Resource Inventory Committee, 1998). Based on the Biogeoclimatic Ecosystem Classification (BEC) system, which was first developed to classify and manage forested ecosystems of British Columbia, the TEM methodology is currently applied to map a range of forested and non-forested communities, supporting ecosystem-based land management of a diverse range of landscapes throughout BC.

Ecological inventory and mapping of the MLNS first entailed the interpretation of satellite imagery and existing geospatial data to divide the landscape into recognizably distinct areas, circumscribed as polygons in a geographic information system (GIS). Field work was then conducted by trained ecologists with expertise in terrestrial ecosystem mapping, and the ecology and biodiversity of the CDF Zone, to ground-truth and classify the communities identified through aerial interpretation. Preliminary terrestrial ecosystem mapping was then refined using spatial analysis tools in QGIS and ArcGIS, to improve the delineation of polygons and ascribe attributes to the ecological communities present at the MLNS.

The terrestrial ecosystem mapping of the MLNS was developed according to RISC standards (Resource Inventory Committee, 1998), meeting the requirements of survey intensity level 1—a level appropriate for an area of the scale of the property. Ecosystem attribution includes sites series, structural stage, and site modifiers. Polygons were classified with up to three ecosystem components or deciles, representing each community present as a fraction of total percent land cover. Components with less than 5% cover were not noted. Site series and map code descriptions used for the attribution of ecosystems are described in Section 8 of this report.

Field work was conducted from November 18<sup>th</sup> to 19<sup>th</sup> 2020, focusing on the classification of ecological communities represented at the MLNS, supplemented by information from a brief site visit and orientation on October 6<sup>th</sup> and 8<sup>th</sup> 2020. Due to the seasonality and limited budget of this survey effort, comprehensive species inventory was beyond the scope of this contract. The resulting TEM mapping for the MLNS provides a summary of the condition and extent of ecological communities present on the land, which may serve as the basis for covenant monitoring, and to inform sampling designs to guide future inventories.



### 6.2. Past Studies and Species Inventories

Prior to conducting inventory work at the MLNS, we conducted a literature review and prepared a summary of species reported for the property (Appendix A). We also queried element occurrences in CDC iMap (BC CDC, 2021b) and the Global Biodiversity Information Facility (GBIF, 2020) to aggregate species reports based on several sources of species occurrence data (Table 2), including biological specimens deposited in herbaria, and observations made on the citizen science platforms eBird and iNaturalist. This geospatial query was based on the property boundary of the MLNS, hence all species reports derived from GBIF are based on georeferenced records.

On review of the total list of historical records, some species reports, including a report of *Hypoymnia heterophylla* (Prato et al., 2020), were deemed spurious. In effort to validate the occurrence of this taxon, which is considered threatened in Canada (1-T SARA 2010; COSEWIC, 2008), we made targeted collections of *Hypoymnia* specimens at the MLNS, which were identified with reference to Goward et al. (1994) using microscopy and chemical spot tests. Based on the evidence summarized in Section 8.4 of this report, the MLNS record of *Hypogymnia heterophylla* should be ruled out.

Historical data based on museum voucher specimens, including the report of the blue-listed bryophyte *Fissidens ventricosus* (S2S3 2015; BC CDC, 2021a), should also be regarded with caution, as the georeferencing of historical voucher specimens is often inaccurate. When considering the species list compiled in Appendix A, land managers should scrutinize sources and make efforts to confirm any questionable reports.

### Table 2. Data Sources

Note: records sourced from the Consortium of Pacific Northwest Herbaria (CPNWH) were redundant, referring to collections at the Royal British Columbia Museum, and are therefore not presented here.

Title	Author(s) / Observer(s)
BC Conservation Data Centre element occurrences	BC CDC (2021b)
Birds at the Mary Lake Nature (WMÍYEŦEN) Sanctuary	Greater Victoria Greenbelt Society (2020)
Cornell Lab of Ornithology (CLO) / eBird	Various (metadata anonymous) (GBIF 2020)
ldentified Wildlife In Mary Lake Nature (WMÍYEŦEN) Sanctuary	Ben van Drimmelen (2020)
iNaturalist	Various (iNaturalist 2020)
Mary Lake Nature (WMÍYEŦEN) Sanctuary Lake Stewardship Project	B. Prato, H. Morrell, & L. Stewart (2020)
(2020)	
Mary Lake Stewardship Report	T. Jones, B. Le, A. May, & E. Ross (2019)
Mary Lake Vegetation Report	H. Roemer (2010)
National Collection of Vascular Plants (DAO)	J. H. Ginns (GBIF 2020)
Royal British Columbia Museum (BCPM, RBCM)	A. & O. Ceska; G. Copley (GBIF 2020)
Species at Risk in Mary Lake Nature (WMÍYEŦEN) Sanctuary	Greater Victoria Greenbelt Society (2019)
University of Alberta	S. Ewan & L. Pugsley (GBIF 2020)
University of Tennessee Herbarium (TENN)	F. M. Boas (GBIF 2020)



University of British Columbia Herbarium (UBC)
Utah State University Intermountain Herbarium (USU)

Various (GBIF 2020)
S. Flowers (GBIF 2020)

# 7. Significance of the Land and the Amenities

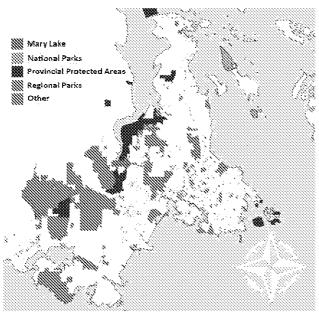


Figure 2. Protected areas surrounding Mary Lake

The MLNS protects a small (17 ha) yet ecologically significant parcel of land in the imperiled CDF Zone. While the property has historically been subjected to considerable disturbance, large tracts of its forested ecosystems have advanced to mature states of ecological succession. These mature forests are significant in the context of the CDF: a landscape that has been dramatically diminished and fragmented by logging, agriculture, and urbanization. Approximately 90% of the CDF Zone has been logged as of the 1990s, leaving only <1% of its forest ecosystems in a mature or old growth state (Austin et al., 2008). In contrast, approximately 8.6 ha (roughly half) of the MLNS comprise of mature forests. The biodiversity values of these forested ecosystems will continue to increase with age, as stand structure becomes more

complex, giving rise to an increasing number of microhabitats for species.

Beyond these forested ecosystems, the MLNS protects a broad range of habitat and species diversity. This ecologically diverse landscape is important not only by virtue of its current ecological state, and species currently present on site, but also for its potential to serve as habitat for the future migration and dispersal of species from the surrounding matrix habitat. Despite its small size, the protection of MLNS represents a significant contribution to efforts to conserve the ecological integrity of the region, which is imperiled by ongoing development pressures. For example, less than 5% of the Saanich Peninsula remains in its natural state (MacDougall et al., 2004). Set into the context of this heavily fragmented area, the biologically rich landscape of Mary Lake serves as an important conservation area that helps to extends the reach of a broader protected area network (Figure 2).



# Mary Lake Nature (WMÍYEŦEN) Sanctuary Baseline Report

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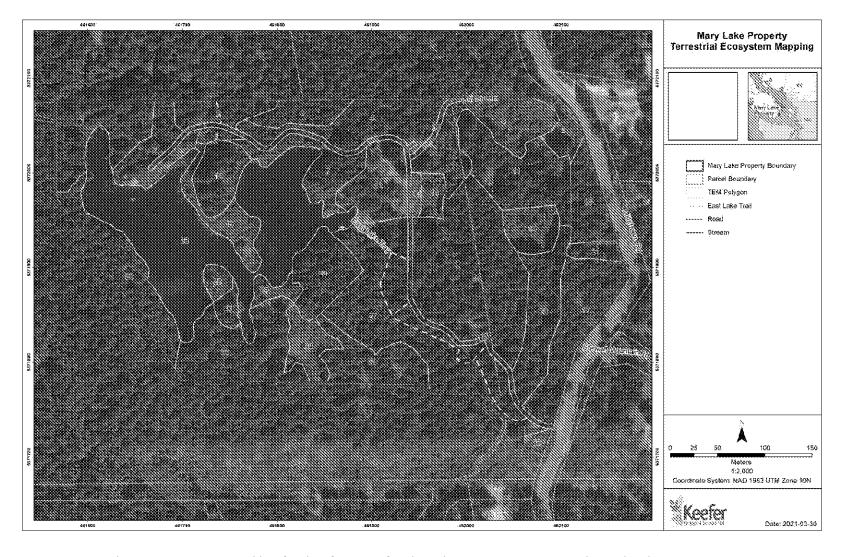


Figure 3. Terrestrial Ecosystem Map. See Table 3 for classifications of ecological communities represented in each polygon.



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# 8. Description and Mapping of Natural State

## 8.1. Ecological Classifications

The terrestrial ecosystem mapping developed for the MLNS circumscribes ten major groups of recognizable ecosystems and land cover types, including forested and non-forested communities. Forested ecosystems fall within several biogeoclimatic units (CDFmm/01, CDFmm/02, CDFmm/05, and CDFmm/11), which are described in the following section. Unforested ecosystems (CDFmm/00) have mostly been classified using a set of more generic map codes (e.g., LA, PD, Ro), though some wetland communities are more precisely classified (e.g., Wm05, Ws50). Other land cover types include anthropogenic rural areas, roads, and "disclimax" communities (e.g., CX, RP, RA, Xa). These forested and non-forested communities are tabulated (Table 3) and described below, in descending rank order of area covered.

Table 3. Ecological communities and land cover types mapped at Mary Lake Nature (WMÍYEŦEN) Sanctuary (November 2020)

Names and rankings were derived from the BC Conservation Data Centre Ecosystem Explorer (BC CDC, 2021a)

Ecological community	Biogeoclimatic Unit	Map Codes	Polygons	Area (ha)	% Total Area
Douglas-fir / dull Oregon grape	CDFmm/01		1, 2, 3, 4, 6, 7, 10,	9.0	53
			11, 12, 16, 17, 20,		
			22, 23, 24, 27, 28,		
			29, 31, 32		
Freshwater	CDFmm/00	LA, PD	8, 33	2.6	15
Douglas-fir - arbutus	CDFmm/02		2, 3, 4, 6, 10, 11, 12,	1.9	11
			13, 16, 17, 24, 25,		
			29, 31		
Anthropogenic	CDFmm/00	CX, RW, RZ, Xa	5, 12, 13, 18, 25, 34	1.2	7
Wet meadows, swamps,	CDFmm/00	Wm, Ws, Ww	8, 14, 15, 19, 22, 25,	1.0	6
shallow water			30, 33		
Hardhack / Sitka sedge	CDFmm/00	Ws50	15, 22	0.5	3
Rock outcrop	CDFmm/00	Ro	11, 15, 31	0.3	2
Western Redcedar - Douglas-fir	CDFmm/05		9, 26, 28	0.3	2
/ Oregon Beaked-moss					
Common cattail marsh	CDFmm/00	Wm05	19, 21, 30	0.1	<1
Western redcedar / sword-fern	CDFmm/11	Ws53	28	0.1	<1
- skunk cabbage					





Figure 4. Mature conifer forests are the predominant community represented in Polygon 24

Conifer forests - Douglas-fir / dull Oregon grape

### CDFmm / 01 – Pseudotsuga menziesii / Berberis nervosa (Pseudotsuga menziesii / Mahonia nervosa)

Conifer forests represent about 53% (9.0 ha) of the MLNS. This ecosystem forms the dominant forest matrix of the Coastal Douglas-fir (CDF) Biogeoclimatic Zone, occurring at middle- to upper-slope positions, on all aspects, and is characterized by a moderately dry (submesic to mesic) soil moisture regime and a poor to medium soil nutrient regime (BC CDC, 2021a). At the MLNS these forests occur at various successional stages but are most prominent as mature forests (Figure 4). These mature second-growth forests feature structurally complex understories and canopies, dominated by Douglas-fir (*Pseudotsuga menziesii*; JSA, JŁĆ) in the age class of roughly 80–140 years of age, based on knowledge of logging history at the site (stand age was not measured during this survey).

At the drier end of the spectrum, these forested ecosystems transition to more open woodland environments classified in the CDFmm/02 site series, with more arbutus (*Arbutus menziesii*; KEKElŁĆ) and oceanspray (*Holidiscus discolor*; KÁZEŁĆ). Where these forests lie in proximity to wetlands and riparian communities, they transition to moist riparian forests classified in the CDFmm/05 site series, with increasing occurrence of western redcedar (*Thuja plicata*; XPA) and bigleaf maple (*Acer macrophyllum*; TFÁ,EŁĆ). Often this riparian influence was found to be quite marginal, however, due to the site's very rocky terrain. For example, the forested community surrounding Millstream Creek in



Polygon 24 was not found to exhibit a significant ecotone in proximity to the creek, hence retaining the classification of CDFmm/01.

The understory of this forested ecosystem is dominated by salal (*Gaultheria shallon*; DAKE IŁĆ), with shrubs such as oceanspray (*Holodiscus discolor*), red huckleberry (*Vaccinium parvifolium*; SKEKĆES), and beaked hazelnut (*Corylus cornuta* ssp. *californica*; KBOX) occurring in gaps in the canopy. On all sites, the moderately well-developed moss layer is dominated by Oregon beaked-moss (*Eurhynchium oreganum*), electrified cats-tail moss (*Rhytidiadelphus triquetrus*), and step moss (*Hylocomium splendens*).

Significant natural features within this ecological community include numerous veteran conifers retained since the last major disturbance, some of which have cavities that offer nesting habitat for birds, as well as a large shore pine (*Pinus contorta* ssp. *contorta*) that stands on an outcrop nearby the margin of a wetland in Polygon 23.

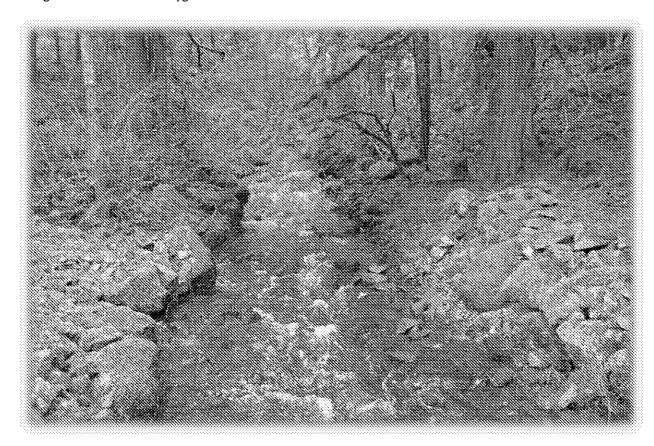


Figure 5. Millstream Creek flows through a culvert beneath the paved road south of Polygon 24

Freshwater

## CDFmm / 00 - LA, PD)

Approximately 2.6 ha (15%) of the Mary Lake landscape have been classified as freshwater communities, including Mary Lake itself, and several other open water bodies, such as the seasonal pond in Polygon 8. The main tributaries to Mary Lake include two creeks which enter the property at its northwestern



margins. The major watercourse, Millstream Creek (Figure 5), runs through the eastern extent of the property. Millstream Creek does not feed into Mary Lake, and is not known to bear anadromous fish at this time.

Mary Lake likely has little extant fish species diversity present, because of its hydrological isolation, and because of the documented presence of pumpkinseed fish (*Lepomis gibbosus*) which is known to reduce invertebrate populations and compete with native fish (Copp et al., 2017). The lake is up to 3.5 m deep, providing habitat for diving ducks, and the water temperature is reportedly sufficient to support salmonids (Jones et al., 2019). The shallow-water margins (technically classified as wetlands) of the lake feature emergent aquatic vegetation that provides important wildlife habitat for a diversity of birds and waterfowl such as dabbling ducks. Other wildlife species observed in association with freshwater ecosystems at Mary Lake include the American beaver (*Castor canadensis*; SKEL,ÁU,) and the North American river otter (*Lontra canadensis*; SKÁ,ET). Bats (SŁEL,BEL,AXEN), several species of which are reported for Mary Lake, are also attracted to freshwater environments due to high levels of aquatic invertebrate productivity.

The streams at Mary Lake, including Millstream Creek, are mapped as linear features. These water features were not incorporated into spatial analysis, as the scope of this baseline report primarily concerns the property's terrestrial ecosystems, and the extent of freshwater ecosystems can be seasonally variable. As such, the extent of freshwater ecosystems may be slightly underestimated in this report.





Figure 6. A small woodland patch crests a bluff at the margin of Polygon 29

Woodlands - Douglas-fir / arbutus

### CDFmm / 02 – Pseudotsuga menziesii / Arbutus menziesii

About 1.9 ha (11%) of the MLNS are woodlands classified in the CDFmm/02 site series. These mixed woodlands tend to occur on slopes and rocky knolls in dry southern exposures, supported by shallow soils found in fissures in the bedrock, though they are also present on different aspects at Mary Lake. Owing to its slope position and gradient, the soil moisture regime of this community is very dry (xeric) to dry (subxeric), and the soil nutrient regime medium to very poor. Prominent tree species include Douglas-fir and arbutus, and, to a lesser extent, Garry oak (*Quercus garryana*; ĆEŊ,IŁĆ). Shrubs such as oceanspray and Scouler's willow (*Salix scouleriana*) also occur frequently throughout this community. At Mary Lake, the occurrence of this ecological community is limited to small patches, generally about 500 m² (0.05 ha) or less in area (Figure 6).

Because this survey was conducted in November it was not possible to undertake a comprehensive inventory of the herbaceous layer, which is generally highly diverse in this community. Characteristic herbaceous and graminoid species previously mapped at Mary Lake include small camas (*Camassia quamash*; SPÁÁNW), sea blush (*Plectritis congesta*), pink twink (*Microsteris gracilis*), western fescue (*Festuca occidentalis*), Pacific fescue (*Vulpia microstachys* var. *pauciflora*), and white fawn lily (*Erythronium oregonum*). In contemporary times, these woodland communities have been dramatically diminished by intensified deer browsing pressure, owing in part to declines in hunting and low-intensity burning practiced by Indigenous peoples, but primarily due to the decline or exclusion of dominant apex predators such as a cougars (*Puma concolor*; WŢEĶTNEĆ) (Martin et al., 2011). The invasion of Scotch broom (*Cytisus scoparius*) and other exotic species also represents a major threat to this community. (Note, however, that the only occurrence of Scotch broom documented during this inventory occurred at the disturbed margins of the woodland community in Polygon 25, though this invasive species is likely present elsewhere on the property.)

A remarkably dense epiphytic community was noted during surveys of the woodlands present at Mary Lake, including liverworts such as *Porella navicularis* and *Frullania nisquallensis*. This latter liverwort species is much less common in woodland environments throughout other parts of the CDF, such as the southern Gulf Islands, where its occurrence is generally limited to humid riparian forests. Its abundance at Mary Lake likely owes to the more humid mesoclimatic regime associated with the surrounding riparian and freshwater ecosystems of the extensive Millstream Watershed. Indeed, watersheds of this extent are uncommon in many other many parts of the CDF Zone, such as the southern Gulf Islands. Other significant natural features mapped in woodland environments include a number of Garry oaks occurring in Polygon 29, though these were of small size (< 15cm dbh) and generally of poor vigour), and the herbaceous communities that occur among rock outcrop complexes mapped in Polygon 31.





Figure 7. An anthropogenic disclimax community borders the bend in the road in Polygon 12.

## Anthropogenic

### CDFmm / 00 - RW, RZ, Xa

Anthropogenic communities extend across approximately 1.2 ha (7%) of the MLNS landscape. These non-forested areas are classified as skidder trails or industry-related disturbances (CX), rural (RW), permanent road surface (RP), and disclimax (Xa) communities. While some of these areas are heavily impacted and ecologically compromised (e.g., the road), other areas remain reasonably ecologically intact, albeit transformed from their natural condition. Such "disclimax" communities are relatively stable ecological communities that have been altered due to human modification, interrupting the natural process of ecological succession (Figure 7). At Mary Lake, such modifications to the landscape include features such as the earthen dam in Polygon 25, and disturbed clearings alongside the road (Polygons 12 and 13). These areas are largely dominated by exotic species, and without ongoing management may present a threat to surrounding natural ecosystems as a source of exotic seed dispersal.





Figure 8. A stand of trembling aspen towers above a seasonally flooded wetland in Polygon 19

## Wetlands

### CDFmm / 00 - Wm05, Wm, Ws50, Ws, Ww

About 1.6 ha (10%) of MLNS are classified as open wetlands. The greater extent (1 ha) of wetland habitats at the MLNS have been significantly modified through a long history of anthropogenic and natural (beaver) disturbances. This disturbance regime is especially well exhibited in the inundated gardens adjacent to Millstream creek (Polygon 8), around which stand numerous dead trees.

Locally mapped ecological communities recognized by the CDC include shrubby hardhack swamps (Ws50) characterized by hardhack (*Spiraea douglasii*; DITELILĆ), willow (*Salix* spp.; SXELE\_ILĆ), and red alder (*Alnus rubra*), and the blue-listed (S3 2004, CDC 2021) common cattail marshes (Wm05) that skirt Mary Lake's rocky shoreline, which are characterized by the presence of the common cattail (*Typha latifolia*; STÁ\_KEN). Other wetland communities present at Mary Lake include marshes (Wm), swamps (Ws), and shallow waters (Ww), featuring emergent aquatic plants such as pond lily (*Nuphar* sp.; LEQI\_) and spring water-starwort (*Callitriche palustris*).

Wetland vegetation is predominantly shrubby, composed of a mosaic of native and exotic species. Prominent native plant species include common cattail, hardhack, Pacific ninebark (*Physocarpus capitatus*), red-osier dogwood (*Cornus sericea*), and salmonberry (*Rubus spectabilis*). Common exotic plants include reed canary grass (*Phalaris arundunacea*), sweetbrier rose (*Rosa rubiginosa*), and



creeping buttercup (*Ranunculus repens*). The introduced eastern soft rush (*Juncus effusus* ssp. *elatus*) was also identified at the margins of Mary Lake (Polygon 5), and Himalayan blackberry (*Rubus bifrons*) in a roadside clearing (Polygon 13). Yellow-flag iris (*Iris pseudacorus*) and reed canary grass present the greatest management concerns in wetlands. These taxa are mapped in Polygon 8 and Polygons 12, 14, & 29 respectively, though they likely have more extensive distribution on the property.

A stand of aspen (*Populus tremuloides*; KEYÁ,LEŚIŁĆ), which occurs infrequently in the CDF, represents a significant wetland feature (*Polygon 19*, Figure 8). Although this community shares an affinity with the rare ecological community classified as CDFmm/14, it lacks key species characteristic of that community (*e.g., Carex obnupta*) and was therefore mapped as CDFmm/00 - Ws in this inventory. Further study is required to adequately classify and map the distribution of this community type in the region.



Figure 9. Rock outcrops define the shoreline at the margin of Polygon 20.

## Rock outcrop

### CDFmm / 00 - Ro

About 0.3 ha (2%) of the MLNS comprise rock outcrops (Ro). Such outcrops occur wherever the underlying metamorphic bedrock becomes exposed, often forming complexes in association with adjacent shallow-soiled woodland environments. These formations generally hold little to no soil, supporting a sparse veneer of herbaceous species such as broadleaf stonecrop (*Sedum spathulifolium*), licorice fern (*Polypodium glycyrrhiza*; TESIP), with drought-tolerant bryophytes such as *Polytrichum* 



piliferum found in more exposed aspects, and those preferring moister conditions (e.g., Bartramia pomiformis) occurring in seeps and shaded aspects. Variation in the underlying geology may also give rise to microhabitats hosting taxa associated with more basic (e.g., calcite) or acidic (e.g., gneiss) conditions. Rock outcrops are mapped throughout Polygons 11, 13, and 31. They also represent a marginal (unmapped) community type defining the rocky shoreline in Polygon 20 (Figure 9).



Figure 10. A small patch of riparian forest emerges at the base of a gully in Polygon 28.

Riparian forest - western redcedar / Douglas-fir - Oregon beaked-moss

# CDFmm / 05 – Thuja plicata - Pseudotsuga menziesii / Eurhynchium oreganum (*Thuja plicata* / *Pseudotsuga menziesii - Kindbergia oregana*)

Riparian forests classified as CDFmm/05 encompass about 0.3 ha (2%) of the MLNS. This community is mapped in Polygons 28 and 9, where it is represented in both old forest (28) and early seral/young forest structural stages (9). Polygon 9 includes an open, disturbed area at the margins of a flooded area near Millstream Creek, featuring bigleaf maple (*Acer macrophyllum*). A drainage runs south from this area through a narrow gully (Polygon 28) that includes a lush riparian community with salmonberry, redosier dogwood, red alder (*Alnus rubra*; SKONEŁĆ), and occasionally, western yew (*Taxus brevifolia*; TEN,KIŁĆ). At the southern reaches of this gully the CDFmm/05 site series comes into its fullest expression in a small patch of old forest dominated by large-diameter western redcedar, with an understory dominated by salal and dull Oregon grape (*Berberis nervosa*; SENI, JŁĆ) (Figure 10).



Porested swamp - western redcedar / sword fern - skunk cabbage

#### CDFmm / 11 / Ws53 - Thuja plicata / Polystichum munitum - Lysichiton americanus

A small pocket of forested swamp classified as CDFmm/11/Ws53 was mapped at Mary Lake, representing about 0.1 ha (<1%) of the landscape. This community lies to the southernmost reaches of the narrow drainage in Polygon 28, surrounded by old riparian forests mapped as CDFmm/05, and is characterized by the presence of skunk cabbage (*Lysichiton americanus; XOQI*) and sword fern (*Polystichum munitum;* STXÁLEM), which together form an understory beneath a canopy of western redcedar. An ephemeral pool dominated by slough sedge (*Carex obnupta*) is also found within this community.

#### 8.2. Wistorical Land Uses

The documentation of Indigenous land-use at the MLNS lies beyond the scope of this report, though testimonials by Indigenous community members in the WSANEC community have been documented by the Greater Victoria Greenbelt Society. After colonization, in 1887, the lands were modified with the construction of a house and gardens to the eastern extent of the property, along Millstream Road (Greater Victoria Greenbelt Society, 2021). Subsequently, from 1935 through 1947, the lands were extensively logged, and an earthen dam constructed, giving rise to Mary Lake. Then began an era of conservation, with efforts made by subsequent owners to conserve and enhance the natural and modified cultural amenities of the property. In 1964, Mary Lake and its associated watercourses were further modified and expanded with the construction of a concrete dam and fish ladder (Greater Victoria Greenbelt Society, 2021). The original homestead constructed in 1887 was removed, and a new house built at the northwestern margins of the lake.

## 8.3. Anthropogenic Features

Among the anthropogenic features currently mapped at the MLNS are several adjacent cabins and outstructures, a paved road, skidder trails and foot paths. Mary Lake itself may also be considered an anthropogenic feature, along with the dams, ditches, and associated watercourses which have dramatically altered this landscape historically. Other anthropogenic features include several bridges constructed along the East Lake Trail, a wooden platform in Polygon 12, and a pile of debris in Polygon 24. An inventory of anthropogenic features and land cover types are presented in Figure 11.



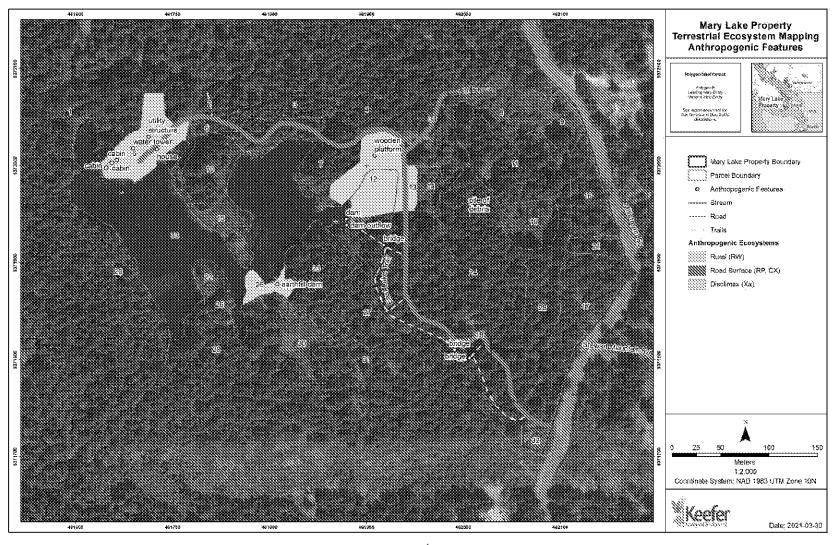


Figure 11. Anthropogenic features mapped at Mary Lake Nature (WMÍYEŦEN) Sanctuary (November, 2020)



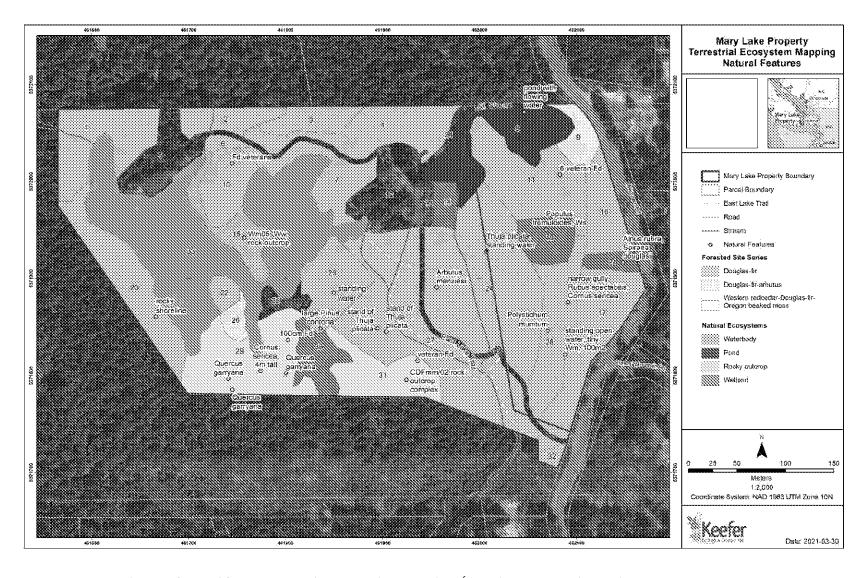


Figure 12. Distribution of natural features mapped at Mary Lake Nature (WMÍYEŦEN) Sanctuary in (November, 2020



## 8.4.Significant Natural Features

Most prominent among the natural features at the MLNS are Mary Lake, Millstream Creek, and their associated wetlands and riparian communities. These freshwater and wetland communities would be mapped as sensitive ecosystems under Sensitive Ecosystem Inventory (SEI) protocols, though they may arguably be considered anthropogenic. Other sensitive ecosystems represented at the MLNS include woodlands, rock outcrops (Ro) and associated terrestrial herbaceous communities, most of which have been mapped in association with the red-listed Douglas-fir - Arbutus ecological community (S2 2004: BC CDC 2021a) correlated with the CDFmm/02 site series.

Other natural features of note at Mary Lake include: veteran conifers, which were mapped as point features wherever they were encountered; a large shore pine in Polygon 23; and a stand of trembling aspen which lies at the centre of the shrub wetland community in Polygon 19. Figure 5 identifies the locations of the natural features mapped during this baseline inventory.

### Ranked Ecological Communities

Five of the ecological communities mapped at Mary Lake are listed by the BC Conservation Data Centre as at-risk ecosystems (BC CDC, 2021a), including three red-listed communities and two blue-listed communities (Table 4). A description of these ecological communities, and a summary of their proportional representation across the landscape of the MLNS, is presented in Section 8.1. Figure 13 and Table 4 identify the polygons within which each of these communities are represented. Note, however, that these communities are mapped as deciles or components of each polygon, following the TEM methodology described in Section 6.1. Thus, there are numerous instances where one ranked community may coincide with other ranked and/or unranked communities within a given polygon. These dimensions of the TEM methodology should be borne in mind when interpreting the map symbology in Figure 13.

Table 4. CDC Ranked Ecological Communities

Ranking	Biogeoclimatic Unit	Ecological community
S1 (2018)	CDFmm / 01	Douglas-fir / dull Oregon grape
52 (2004)	CDFmm / 02	Douglas-fir / shore pine - arbutus
S1 (2009)	CDFmm / 05	western redcedar / Douglas-fir - Oregon beaked-moss
\$37 (2012)	CDFmm / 11	western redcedar / sword-fern - skunk cabbage
\$3 (2004)	CDFmm / Wm05	common cattail marsh



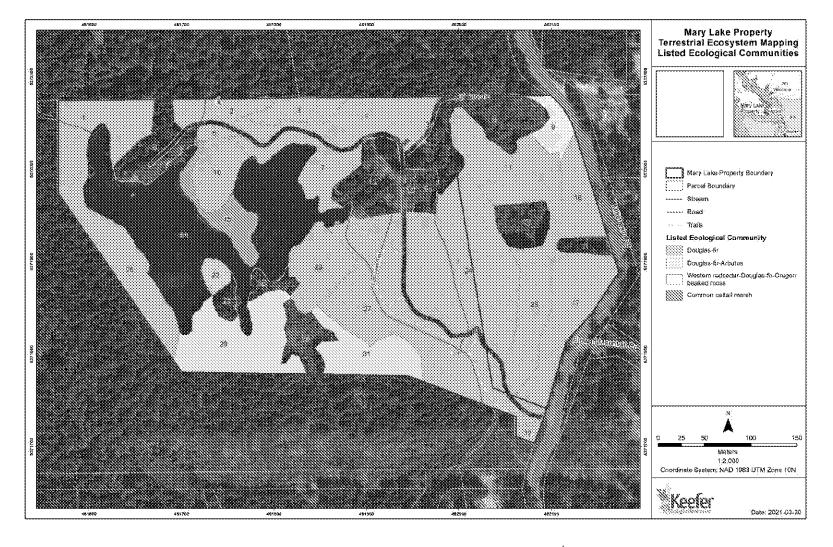


Figure 13. Distribution of ecological communities of conservation concern at Mary Lake Nature (MMÍYEŦEN) Sanctuary (November, 2020). Note: polygons are encoded based on dominant ecosystem components. Some ranked communities that occur as minor components or deciles of polygons (Western redcedar / sword-fern - skunk cabbage and Hardhack / Sitka sedge are not reflected on this map. All communities and their distribution are summarized in Table 3.



#### Species of Conservation Concern

The MLNS provides habitat for nine reported species or subspecies at risk, including six birds, one invertebrate (butterfly), one moss species, and one plant species (Table 5). Two of these are red-listed in British Columbia, while the remainder are blue-listed (BC CDC, 2021a). Species or subspecies assessed by the Committee On the Status of Endangered Wildlife In Canada (COSEWIC) or listed under the Species at Risk Act (2002) include the western screech-owl, kennicottii subspecies (SPEPELKITE), great blue heron, fannini subspecies (SNEKE), peregrine falcon, anatum subspecies, band-tailed pigeon (HEM\_EU), olive-sided flycatcher, barn swallow, and western branded skipper, oregonia subspecies (See Table 5). Other species of conservation concern may be documented with further inventory work.

This report omits record of the seaside bone lichen (*Hypogymnia heterophylla*)—an implausible report (Prato et al., 2020) that could not be verified during inventory work at Mary Lake. Within British Columbia, this lichen species is found only in windswept shoreline environments, with a distribution restricted to the southwest tip of Vancouver Island, Bentinck Island, Sheringham Point, where it primarily occurs as an epiphyte on shore pine, Sitka spruce (*Picea sitchensis*), and Douglas-fir (COSEWIC, 2018). Given the ecological requirements of this species, it is highly unlikely to occur at Mary Lake. Specimens of this genus collected from the MLNS during this inventory included *Hypogymnia apinnata*, *H. enteromorpha*, *H. imshaugii*, *H. inactiva*, and *H. physodes*, all of which are common species of *Hypogymnia* expected to occur in the region.

The Mary Lake record of *Fissidens ventricosus* should be considered plausible but unconfirmed. This record dates to a voucher specimen collected by S. Flowers in 1962, accessioned at Utah State University Intermountain herbarium (GBIF, 2020). Historical voucher specimens deposited in herbaria often have inaccurate georeferencing, hence it is uncertain whether this specimen was indeed collected at the MLNS. The locality information for this specimen reads "Vancouver Island, Millstream, ca. 6 miles W of Victoria," which suggests a considerable amount of uncertainty regarding the precise location of this report. Effort should be made to confirm this report and other uncertain records in the Mary Lake baseline species inventory.

**Table 5.** Species and subspecies at risk reported for Mary Lake as of November, 2020. Scientific names follow conventions used by the BC CDC (2021a). Species marked by an asterisk (\*) are likely, based on nearby element occurrences (BC CDC 2021b).

Scientific Name  Ardea herodias	Common (English) Name great blue heron,	Group Bird	Provincial Status	COSEWIC	SARA
fannini	fannini subspecies		S2S3B, S4N (2018)	SC (2008)	1-SC (2010)
Patagioenas fasciata	band-tailed pigeon	Bird	5354 (2015)	SC (2008)	1-SC (2011)
	olive-sided	Bird			
Contopus cooperi	flycatcher		33348 (2014)	SC (2018)	1-T (2010)
Hirundo rustica	barn swallow	Bird	\$3\$48 (2015)	T (2011)	1-T (2017)



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Falco peregrinus	peregrine falcon,	Bird			
anatum*	anatum subspecies		527 (2011)	NAR (2017)	1-SC (2012)
Megascops	western screech-	Bird			
kennicotti	owl, kennicottii				
kennicotti*	subspecies		\$2\$3 (2017)	T (2012)	1-T (2005)
	western branded	Inverteb			
Hesperia colorado	skipper, oregonia	rate			
oregonia*	subspecies		S1 (2013)	E (2013)	NA
Fissidens ventricosus	NA	Moss	\$2\$3 (2015)	NA	NA
Pyrola aphylla	leafless wintergreen	Plant	33 (2019)	NA	NA

## 9. Threats to condition and natural state

The MLNS is surrounded by a matrix of private land designated for agricultural, commercial, urban, and rural residential use. The activities associated with agriculture, recreation, roads, utility corridors, and nearby subdivision development contribute to numerous stressors having cumulative impacts on the surrounding ecology. These cumulative environmental impacts may result in diminishing wildlife habitat, intensified grazing by ungulates such as black-tailed deer; and increasing invasion by alien species (Martin et al., 2011; Shackelford et al., 2019; Shackelford et al., 2018).

Climate change is also altering the ecology of the Coastal Douglas-fir BEC Zone, causing increasing forest fire risk and drought stress (Klassen et al., 2015), the signs of which are particularly evident in the decline of western redcedar in the region (Seebacher, 2007). These signs of stress were not noted among western redcedar observed at Mary Lake. Nevertheless, the property may still be considered subject to potential risks associated with increasing seasonal drought and more extreme winter precipitation forecasted under future climate scenarios (Klassen et al., 2015; Salathé et al., 2008; Spies et al., 2010).

The Invasive Species Council of BC defines an invasive plant as "any invasive plant species that have the potential to pose undesirable or detrimental impacts on people, animals or ecosystems" (ISC, 2020). Invasive plants can reduce soil productivity, impact water quality and quantity, degrade wildlife habitat, threaten biodiversity, poison livestock and wildlife, and introduce disease (ISC, 2020). Economic losses may also be incurred through the loss of productive forage and the cost of controlling and managing invasive populations (ISC, 2020).

Table 6 provides a list of invasive plant species detected at Mary Lake, based on all field work conducted to date. An asterisk\* denotes species of particular concern which may be managed effectively given sufficient resources. Where possible, detections are located with reference to the unique identifiers



(PNUM) assigned to the ecological communities mapped in Figure 3. See Appendix A (accompanying spreadsheet) for a species checklist of all taxa reported for Mary Lake as of January 2021.

Exotic animal species reported include the red-eared slider (*Trachemys scripta*), the pumpkinseed fish, and the American bullfrog (*Lithobates catesbeianus*), the latter of which has been identified as a priority management concern (Jones et al., 2019). See Appendix A for a comprehensive summary of species reported for Mary Lake, which have been tabulated according to provenance and conservation status.

Table 6. Exotic Plants reported for Mary Lake as of November 2020

An asterisk\* marks invasive species of particular concern.

Note: Mentha aquatica\*\* may be misreported / misapplied to M. canadensis. See Appendix A.

Scientific Name	Common Name	Poygon Number	Source
Agrostis stolonifera	creeping bentgrass		H. Roemer (2010)
Anthoxanthum odoratum	sweet vernal grass		H. Roemer (2010)
Cirsium arvense*	Canada thistle	14, 18	H. Roemer (2010)
Clematis vitalba	Traveler's joy		H. Roemer (2010)
Cytisus scoparius*	Scotch broom	25	H. Roemer (2010)
Dactylis glomerata	orchard grass	24	H. Roemer (2010)
Digitalis purpurea	common foxglove	13	H. Roemer (2010)
Draba verna	common draba		J.H. Ginns (1968) (DAO 10945)
Ger <b>a</b> nium molle	dovefoot geranium	13	H. Roemer (2010)
Geranium robertianum	Robert's geranium	27	H. Roemer (2010)
Hypochaeris radicata	hary cat's-ear		H. Roemer (2010)
llex aquifolium*	English holly	23, 24	T. Braumandl, A. Simon, & J. Straka (2020)
Iris pseudacorus*	yellow flag iris	8	T. Braumandl, A. Simon, & J. Straka (2020)
Juncus effusus ssp. solutus	soft rush	5	T. Braumandl, A. Simon, & J. Straka (2020)
Lepidium heterophyllum	Smith's pepper-grass		G.A. Hardy (1925) (RBCM V007558)
Mentha spicata	spearmint		H. Roemer (2010)
Mycelis muralis	wall lettuce		H. Roemer (2010)
Phalaris arundinacea*	reed canarygrass	12, 14, 29	H. Roemer (2010)
Ranunculus repens	creeping buttercup	14	H. Roemer (2010)
Rosa rubiginosa	sweetbrier		H. Roemer (2010)
Rubus armeniacus	Himalayan blackberry		H. Roemer (2010)
Rubus laciniatus	cutleaf evergreen blackberry	14	T. Braumandl, A. Simon, & J. Straka (2020)
Rumex acetosella	sheep sorrel	12, 29	H. Roemer (2010)
Stellaria media	common chickweed		H. Roemer (2010)
Urtica dioica ssp. dioica	stinging nettle	14	T. Braumandl, A. Simon, & J. Straka (2020)



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Mentha aquatica\*\*

water mint

B. Prato, H. Morrell, & Laura Stewart (2020)

At the MLNS, invasive species such as Scotch broom, Himalayan blackberry (*Rubus armeniacus*), and American bullfrogs have been actively managed with some success by volunteers and caretakers (K. Neah, pers. comm. 2021). However, a systematic approach to controlling invasive species is necessary to ensure that measures are effective in the long term. Each species requires a particular management regime that should be carefully considered in any subsequent management plans developed for the property. Any further modification of the lands, including construction, maintenance, and the everyday use of trails and other infrastructure, may increase the abundance of invasive species on the land. Management plans should account for potential increases in these activities in the future, to ensure the integrity of the ecosystems at Mary Lake. Although Mary Lake has one official, gated, entrance, several alternative (unofficial) access points were noted during field work. The property can theoretically be accessed through trails or historical roads connecting it to adjacent properties at approximately 48.5009, -123.5146; 48.5010, -123.5179; and 48.4980, -123.5246.

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**END OF DOCUMENT** 

Status: Registered

THE PARTIES ACKNOWLEDGE THAT, with respect to Part I of this instrument

- (a) the Transferor(s) and Transferee(s) are correctly identified in Items 5 and 6;
- (b) this agreement has been duly executed by the parties in signing Item 8; and
- (c) the heading titled "Transferor Signature(s)" above any Transferee signature in Item 8
  - (i) was autogenerated;
  - (ii) could not be altered or removed by the Transferee(s); and
  - (iii) does not reflect a representation or understanding that the Transferee(s) executed this agreement as Transferor(s).