Islands Trust Conservancy
Special Meeting Agenda

Date: August 24, 2021
Time: 1:00 pm
Location: Electronic Zoom Meeting

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9. NEXT MEETING

The next meeting will take place on October 5, 2021 at 10:00 am.

10. CLOSED MEETING

10.1. Motion to Close the Meeting

That the meeting be closed to the public in accordance with the Community Charter, Part 4, Division 3, section 90 (1) (e) the acquisition, disposition or expropriation of land or improvements, if the board considers that disclosure could reasonably be expected to harm the interests of the Islands Trust Conservancy; (k) negotiations and related discussions respecting the proposed provision of a service that are at their preliminary stages and that, in the view of the Board, could reasonably be expected to harm the interests of the Islands Trust Conservancy if they were held in public; and that staff be invited to remain in the meeting.

11. ADJOURNMENT

Islands Trust Conservancy

Minutes of Regular Meeting

Date: Tuesday, July 13, 2021
Time: 10:00 am
Location: Electronic Zoom Meeting

Board Members Present
Kate-Louise Stamford, Chair
Sue Ellen Fast, Vice Chair
Doug Fenton
Linda Adams

Board Members Regrets
Donald Clarke

Staff Present
Kate Emmings, Islands Trust Conservancy Manager
Carla Funk, Acting Fundraising Specialist
Corlynn Strachan, Administrative Assistant/Recorder
Devin Hentschel, Conservation Technician
Kathryn Martell, Ecosystem Protection Specialist
Wendy Tyrrell, Species at Risk Program Coordinator

1. CALL TO ORDER

Chair Stamford called the meeting to order at 10:00 am, acknowledged that the meeting was being held on the territory of many Coast Salish peoples and noted it is import to speak to the devastating yet sadly unsurprising news that 160 undocumented and unmarked graves have been discovered on the grounds of the old Kuper Island residential school, on what is now Penelakut Island. I hope we can find ways as an organization and as part of our island communities to acknowledge the effect of the ongoing trauma that the residential school system has had on our friends, neighbours, staff and community members who are First Nations. May we never become immune to these atrocious discoveries.

1.1 Staff Updates

The Islands Trust Conservancy Manager welcomed Wendy Tyrrell as the new Species at Risk Program Coordinator.

2. APPROVAL OF AGENDA

The following items were added to the agenda:

- 5.1 Resolution to Call a Special Meeting
- 3.2.1 Board Appointment Update

By general consent, the agenda was approved as amended.

3. MINUTES/COORDINATION

3.1 Minutes of Meetings/Resolutions without Meetings

3.1.1 Approval of the May 25, 2021 Regular Meeting Minutes

The following amendment to the minutes was presented for consideration:

Item 1.0 Call to Order - change unseeded to unceded

By general consent, the minutes were adopted as amended.

3.2 Follow-up Action List

The Islands Trust Conservancy Manager advised there is a revised Follow-up Action List due to a glitch in the database, and provided verbal updates on the following items:

- The Islands Trust Conservancy Chair signed the lease agreement for Saturnina Island and staff are waiting for confirmation of registration.
- The Sidney Island Ecological Restoration Plan is delayed until August.
- The annual report text went through and staff received a draft mock up from the designer. We are waiting the audit report, as the auditor was not able to complete for today, main driver of special meeting required.
- Request to Trust Council for sponsorship policy of NAPTEP applications, for NAPTEP fees, to be presented at September Trust Council meeting.

3.2.1 Board Appointment Update

Staff provided the required documents to the Crown Agency and Board Resourcing Office. The Minister decided on two of three appointees, and for the third, elected to put out a posting for someone with First Nations expertise. We hope to have two appointed Board members by the end of August.

4. RISE AND REPORT

The Islands Trust Conservancy Board reported on the following items:

4.1 ITC-IC-2021-022 Saturnina Island

The Islands Trust Conservancy Board entered into a lease agreement with the BC Parks Foundation for Saturnina Island.

5. AUDIT REPORT APPROVAL

The Islands Trust Conservancy Manager noted the audit has been delayed and as a result, a special meeting is required to approve the audit document.

5.1 Resolution to Call a Special Meeting

ITC-2021-026
It was MOVED and SECONDED,
that the Islands Trust Conservancy Board direct staff to schedule a Special Meeting of the Islands Trust Conservancy Board for August 24th, 2021.

CARRIED

6. BUSINESS

6.1 Items for Approval

None

6.2 Items for Discussion/Direction

6.2.1 Islands Trust Conservancy - Executive Committee Liaison Meeting

Board members reviewed the agenda and noted the following items for discussion during the round table:

- Update on Howe Sound UNESCO Biosphere Reserve nomination - discussion of a plan for public relations announcements and statements of support, and how we would like forward those, through the Conservancy or the Trust as a whole. Passed stage five of the process and there is one more step of a formal declaration. There will be a Howe Sound Community Forum held on Bowen Island September 22nd.
- Sensitive Ecosystems Mapping – Metro Vancouver
- Island Trust Policy Statement Amendment – how ITC will be reflected and perceived in engagement process

6.2.2 Saturnina Island Update

Chair Stamford briefed Board members on attendance of a recent Saturnina Island event hosted by BC Parks Foundation, noting the Islands Trust Conservancy were guests and highlighting the event was well attended by press, students, and donors.

Board members and staff discussed the role of the Islands Trust Conservancy partnership with BC Parks Foundation, potential for land securement and support of land management, consideration of debriefing to discuss how to improve, inclusion of Snuneymuxh First Nations in process, and suggested sending thank you cards to students and the Wilson Five Foundation.

6.3 Correspondence

6.3.1 Lasqueti Island Nature Conservancy Crown Land Letter, dated July 6, 2021

The Board received the correspondence for information and directed staff to provide further guidance on a response at a future Islands Trust Conservancy meeting.

ITC-IC-2021-027
It was MOVED and SECONDED,
that the Islands Trust Conservancy Board direct staff to provide a briefing on the status of the Crown Land Acquisition Program.

CARRIED

6.4 Updates for Information

6.4.1 Public Acquisitions Report

The Ecosystem Protection Specialist provided an update on the Crystal Mountain file, noting a recent site visit to look at lot changes and the pagoda.

6.4.2 Public Covenants Report

The Islands Trust Conservancy Board reviewed the Public Covenants Report for information.

6.4.3 Regional Conservation Plan Progress Report

The Islands Trust Conservancy Board reviewed the Regional Conservation Plan Progress Report for information.

Board members discussed possible impacts of the recent "heat dome" on forage fish in the Islands Trust area and the Salish Sea, and suggested the "heat dome" event could be listed as an event and indicator to monitoring.

6.4.4 Budget Report

The Islands Trust Conservancy Board reviewed the Budget Report for information.

7. PUBLIC COMMENTS AND DELGATIONS

There were no public comments or delegations.

8. NEW BUSINESS

There was no new business.

9. NEXT MEETING

The next meeting will be held Tuesday, August 24, 2021 at 1:00 pm.

10. CLOSED MEETING

10.1 Motion to Close the Meeting

ITC-2021-028
It was MOVED and SECONDED,
that the meeting be closed to the public in accordance with the Community Charter, Part 4 Division 3, section: 90 (1) (e) the acquisition, disposition or expropriation of land or improvements, if the board considers that disclosure could reasonably be expected to harm the interests of the Islands Trust Conservancy board; and that staff be invited to remain in the meeting.

CARRIED

11. ADJOURNMENT

By general consent, the meeting adjourned at 11:31 am.

_____

Kate-Louise Stamford, Chair

Certified Correct:

_____

Corlynn Strachan, Recorder

Islands Trust Conservancy - Executive Committee Liaison Meeting
Minutes of Regular Meeting

Date: Tuesday, July 13, 2021
Time: 1:00 pm
Location: Electronic Zoom Meeting

ITC Board Members Present
Kate-Louise Stamford, Chair
Sue Ellen Fast, Vice Chair
Doug Fenton
Linda Adams

EC Members Present
Dan Rogers, Vice-Chair
Laura Patrick, Vice-Chair
Peter Luckham, Chair

Regrets
Donald Clarke

Staff Present
Carla Funk, Acting Fundraising Specialist
Clare Frater, Director, Trust Area Services
Corlynn Strachan, Administrative Assistant/Recorder
Devin Hentschel, Conservation Technician
Erin Coulson, Acting Communications Specialist
Kate Emmings, ITC Manager
Kathryn Martell, Ecosystems Protection Specialist

Regrets
Russ Hotsenpiller, Chief Administrative Officer

1. CALL TO ORDER

1.1 Introductions and context for annual meeting

Chair Stamford called the meeting to order at 1:00 pm, acknowledged that the meeting was being held on the territory of many Coast Salish peoples and noted it is important to speak to the devastating yet sadly unsurprising news that 160 undocumented and unmarked graves have been discovered on the grounds of the old Kuper Island residential school, on what is now Penelakut Island. She stated that she hopes we can find ways as an organization, and as part of our island communities, to acknowledge the effect of the ongoing trauma that the residential school system has had on our friends, neighbours, staff and community members who are First Nations. She stated that we should never become immune to these atrocious discoveries.

2. APPROVAL OF AGENDA

By **general consent** the agenda was approved.

3. MINUTES/COORDINATION

3.1 Review of the July 14, 2020 meeting minutes.

4. BUSINESS

4.1 Items for Information

4.1.1 ITC 2020/21 Year in Review (presentation)

Islands Trust Conservancy staff provided a presentation on the following topics:

- Islands Trust Conservancy staff and board
- Regional Conservation Plan updates
- Species at Risk Program
- covenant and nature reserve management
- restoration activities
- communications – social media, new website, Heron newsletter, annual report
- fund development and donor engagement
- climate change project
- engagement and reconciliation with First Nations

Executive Committee members thanked staff for their work and discussed:

- ways local trust committee chairs can do a better job of spreading key messages, about the Conservancy and sharing Conservancy communication products such as the Heron newsletter
- Islands Trust Conservancy topics are lost in local trust committee meetings and that Islands Trust Conservancy staff could attend local trust committee meetings annually to increase exposure
- role of the Islands Trust Conservancy in the BC Parks Foundation acquisition of Saturnina Island in the Gabriola Island Local Trust Area
- timeline of Sandy Beach Nature Reserve management plan development
- potential Islands Trust Conservancy involvement in the Howe Sound UNESCO Biosphere Reserve project
- mapping, habitat creation and wetland restoration, watershed protection
- the importance of providing opportunities for Islands Trust Conservancy to have exposure in local communities in ways other than local trust committee meetings
- impact of climate change

4.1.2 2020/21 Executive Committee Updates (verbal)

Director Frater provided the following updates:

- Provincial Funding Request
  There has been no new action since the last liaison meeting, Trust Council passed a model fees bylaw which should strengthen any ask that does take place. We are in a good position to make a request but due to other Trust

Council and Executive Committee priorities, work has not been completed on this. Executive Committee members expressed their support for continued work and will purse as opportunity arises.

- NAPTEP Exemption Increase
  No further work has not been done on this due to a lack of staff time. Next steps would be a potential budget request for next year for development of a business case to provide to affected governments and the Province. Contract assistance may be required. The change would be a regulation change compared to an act change, which could be achieved quickly.

4.2 Roundtable - Focus on Collaboration

4.3 Items for Collaboration

4.3.1 Strategic Fund Development – Briefing

The Acting Fundraising Specialist highlighted that the Conservancy is on a quest for relationship building to help people understand what the Conservancy is achieving, and goals for the future.

Executive Committee members recognized Carla Funk for her great work and for bringing national attention, discussed results and the importance of developing long term connection, and suggested using a simple graphic that shows the Conservancy does not compete with local conservancies but works in partnership to protect the land.

4.3.2 Working with Crown Agencies for Forest Protection

Director Frater advised we are continuing to work with Forests, Lands, and Natural Resource Operations and Rural Development Ministry staff to talk about developing an updated protocol agreement and letter of understanding, and merge the ones the Islands Trust already has in place. This is an ongoing process in relationship building. This is at the introductory stage with intent to achieve something within the year.

4.3.3 Policy Statement Amendment Project (verbal)

Director Frater advised Trust Council received a draft new Policy Statement and recommend it be put forward to public engagement, referral agencies, and First Nations, with intent to be consider First Reading in December.

Board members and staff discussed assistance with communications, Islands Trust and Islands Trust Conservancy connection, potential negative brand implications, and Board members offered positive feedback on the Conservancy being acknowledged in the draft new Policy Statement.

Executive Committee members encouraged the Conservancy to provide feedback on what they feel is important to maintain, and why.

4.3.4 Islands Trust Strategic Plan / Regional Conservation Plan Overlap – Briefing

The Islands Trust Conservancy Manager presented the briefing and highlighted six areas of overlap.

Discussion ensued on:

- Coastal Douglas-fir forest protection
- Conservancy education
- carrying the stewardship message
- collaborative items across Trust Area, what the Conservancy can contribute
- planners have conversations with landowners and offer ITC resources
- the need to build a case for particular ask to Province in respect to tree cutting

4.3.5 Nature Smart Climate Solutions Fund Grant Application – Briefing

Director Frater presented the briefing noting more details will be released in the fall, including eligibility and selection criteria and highlighting that staff are currently at maximum capacity for managing initiatives, so would need to ensure that there is sufficient capacity to do any funded work.

5. NEXT MEETING

To be determined in late 2021.

6. ADJOURNMENT

By **general consent**, the meeting was adjourned at 3:00 pm.

_____

Kate Louise Stamford, Chair

Certified Correct:

_____

Corlynn Strachan, Recorder

ISLANDS TRUST CONSERVANCY

Print Date: August 19, 2021

Follow Up Action Report

Trust Conservancy Board

24-Sep-2010

	Activity	Responsibility	Dates	Status
1	Staff to work with landowners to clarify wording of Cunningham Covenant (Salt Spring) regarding vegetation removal, while maintaining conservation as a priority.	Jemma Green Kate Emmings	Target: 17-Dec-2021	In Progress

26-Nov-2019

	Activity	Responsibility	Dates	Status
1	Staff to: a) develop a modification agreement to allow for maintenance of the septic field in the Woodwinds NAPTEP Covenant (North Pender); and, b) allow for maintenance of the septic field in the Woodwinds NAPTEP Covenant; and, c) provide resources about alternatives to traditional septic fields to land owners contemplating septic field maintenance or replacement, and new covenants.	Jemma Green Kathryn Martell	Target: 31-Dec-2021	In Progress

26-May-2020

	Activity	Responsibility	Dates	Status
1	Determine and develop access for Fairyslipper Forest Nature Reserve (Thetis Island). *See IC minutes of May 26, 2020 meeting.	Kathryn Martell Nuala Murphy	Target: 31-Oct-2021	In Progress

ISLANDS TRUST CONSERVANCY

Print Date: August 19, 2021

Follow Up Action Report

Trust Conservancy Board

26-May-2020

Activity	Responsibility	Dates	Status
2 It was MOVED and SECONDED, that the Islands Trust Conservancy Board approve the Climate Change Project Charter as drafted and request that staff forward the Climate Projections for Islands Trust Area final report to Trust Council and Bowen Island Municipality for information.	Kathryn Martell	Target: 31-Dec-2021	Completed

06-Oct-2020

Activity	Responsibility	Dates	Status
1 Staff to complete an ITC Reconciliation Action Plan that incorporates actions in Goal 2 of the Regional Conservation Plan.	Kate Emmings Lisa Wilcox	Target: 05-Oct-2021	In Progress

24-Nov-2020

Activity	Responsibility	Dates	Status
1 Staff to investigate the use of electronic meetings and return to the Board with a revised meeting bylaw to increase use of electronic meetings if possible.	Carmen Thiel Kate Emmings	Target: 05-Oct-2021	In Progress
2 Staff to report back to board on the progress of of sustainable investing using the "Impact GIC" offered by Cash Management Group at Canaccord Genuity.	Julia Mobbs Kate Emmings	Target: 13-Jul-2021	In Progress

ISLANDS TRUST CONSERVANCY

Print Date: August 19, 2021

Follow Up Action Report

Trust Conservancy Board

26-Jan-2021

Activity	Responsibility	Dates	Status
1 Staff to provide recommendations about revised objectives to the Interim SAR Project Charter after a SAR Program Coordinator is in place.	Wendy Tyrrell	Target: 05-Oct-2021	In Progress
2 Staff to proceed with the approved actions regarding the Morrison Waxler Biodiversity Protection Legacy Fund. *See IC minutes January 26, 2021	Carla Funk	Target: 31-Dec-2021	In Progress

30-Mar-2021

Activity	Responsibility	Dates	Status
1 Staff to request that Trust Council develop policy guidance for sponsorship of Natural Area Protection Tax Exemption Program (NAPTEP) applications.	Clare Frater Kate Emmings	Target: 21-Sep-2021	In Progress
2 ITC Staff to update the Climate Change Impacts Project Charter and to return to the Board for approval	Kathryn Martell	Target: 23-Nov-2021	In Progress

25-May-2021

Activity	Responsibility	Dates	Status

ISLANDS TRUST CONSERVANCY

Print Date: August 19, 2021

Follow Up Action Report

Trust Conservancy Board

25-May-2021

Activity	Responsibility	Dates	Status
1 Staff to move forward with the Crystal Mountain Society proposal to register a Statutory Right of Way across Lot A on the upper ridge, in favour of Islands Trust Conservancy, to provide legal access to the eastern part of Lot A via the legal easement across neighbouring Lots B and C.	Kathryn Martell	Target: 31-Dec-2021	In Progress
2 Staff to request that the Crystal Mountain Society update the Ecological Inventory report and other relevant documents to reflect the proposed boundary changes, prior to transfer of the land.	Kathryn Martell	Target: 30-Jun-2021	In Progress
3 Staff to indicate to the Crystal Mountain Society that the Islands Trust Conservancy Board accepts their proposal to register a Statutory Right of Way for emergency access on Lot A in favour of the Capital Regional District prior to subdivision, subject to Crystal Mountain Society's working with ITC staff to develop an appropriate agreement.	Kathryn Martell	Target: 30-Jun-2021	In Progress
4 Staff to link "A Place in the Islands" document to information provided for the landowner contact partnership with Gabriola Land and Trails Trust.	Jemma Green	Target: 30-Jun-2021	In Progress
5 Staff to return to the Board for approval of the final Sidney Island Ecological Restoration Plan at the July 13th meeting.	Jemma Green Kate Emmings	Target: 30-Jun-2021	Completed

ISLANDS TRUST CONSERVANCY

Print Date: August 19, 2021

Follow Up Action Report

Trust Conservancy Board

13-Jul-2021

Activity	Responsibility	Dates	Status
1 Staff to schedule a Special Meeting of the Islands Trust Conservancy Board for August 24th, 2021.	Corlynn Strachan Kate Emmings	Target: 24-Aug-2021	Completed
2 Staff to provide a briefing on the status of the Crown Land Acquisition Program.	Kate Emmings	Target: 05-Oct-2021	In Progress
3 Staff to send thank you cards to students who attended the Saturnina Island BC Parks event and the Wilson Five Foundation.	Carla Funk Kate-Louise Stamford	Target: 24-Aug-2021	Completed

ISLANDS TRUST CONSERVANCY

REQUEST FOR DECISION

To:	**Islands Trust Conservancy Board**	**For the Meeting of:**	August 24, 2021
From:	**Staff**	**Date Prepared:**	June 11, 2021

SUBJECT: 2020/21 Audited Financial Statements

RECOMMENDATION: That the Islands Trust Conservancy approve the Audited Financial Statements for the 2020/21 fiscal year, and refer the statements to Islands Trust Council for information.

1 **PURPOSE:** To review and approve the Audited Financial Statements for 2020/21 fiscal year.

2 **BACKGROUND:** The Islands Trust Conservancy undergoes an annual audit each year. The Audited Financial Statements and Audit Findings Report are provided to the board for review and approval. There are no findings that require any action.

3 IMPLICATIONS OF RECOMMENDATION

ORGANIZATIONAL: There are no findings that require action.

FINANCIAL: None.

POLICY: None.

IMPLEMENTATION/COMMUNICATIONS: The approved Audited Financial Statements will be posted to the Islands Trust Conservancy website and included in the 2020/21 Annual Report. The Audited Financial Statements will be provided to Trust Council at their September meeting as an information item.

OTHER: New items included in the 2020/21 financial statements are highlighted in the Audit Report. These include income and expenses associated with grants and the establishment of the Property Management Fund.

4 **RELEVANT POLICY(S):** None.

5 **ATTACHMENT(S):**

- Islands Trust Conservancy Audit Findings Report for the Year Ended March 31, 2021
- Audited Financial Statements of the Islands Trust Conservancy Year Ended March 31, 2021

RESPONSE OPTIONS

Recommendation: That the Islands Trust Conservancy approve the Audited Financial Statements for the 2020/21 fiscal year, and refer the statements to Islands Trust Council for information.

Alternative: None identified.

Prepared By: Kate Emmings, Manager, Islands Trust Conservancy

Islands Trust Conservancy

Audit Findings Report
for the year ended March 31, 2021

KPMG LLP

For the meeting on August 24, 2021

kpmg.ca/audit

KPMG

Table of contents

Executive summary

Purpose of this report[1]

The purpose of this Audit Findings Report is to assist you, as a member of the Board, in your review of the results of our audit of the financial statements as at and for the year ended March 31, 2021. This Audit Findings Report builds on the Audit Plan.

Changes from the Audit Plan

There have been no significant changes regarding our audit from the Audit Planning Report previously provided to you.

Finalizing the Audit

As of the date of this report, we have completed the audit of the financial statements, with the exception of certain remaining procedures, which include amongst others:

- completing our discussions with the Board;
- obtaining evidence of the Board's approval of the financial statements; and
- obtaining the signed management representation letter.

We will update the Board, and not solely the Chair, on significant matters, if any, arising from the completion of the audit, including the completion of the above procedures. Our auditors' report will be dated upon the completion of any remaining procedures.

Audit risks and results

We discussed with you at the start of the audit a number of financial reporting risks. These risks have been addressed in our audit.

We also discussed with you some other areas of audit focus. We have no significant matters to report to the Board in respect of them.

Significant accounting policies and practices

There have been no initial selections of, or changes to, significant accounting policies and practices to bring to your attention.

Adjustments and differences

We did not identify differences that remain uncorrected. We identified one classification adjustment between investments and cash that was communicated to management and subsequently corrected in the financial statements.

Control and other observations

We did not identify any control deficiencies that we determined to be significant deficiencies in internal control over financial reporting.

Independence

We are independent with respect to the Conservancy within the meaning of the relevant rules and related interpretations prescribed by the relevant professional bodies in Canada and any applicable legislation bodies in Canada and any applicable legislation or regulation.

Current developments

We have provided information with regards our audit response to COVID-19 and resources which may be of assistance to the Board and management in responding to this pandemic. See page 4.

[1] This Audit Findings Report should not be used for any other purpose or by anyone other than the Board. KPMG shall have no responsibility or liability for loss or damages or claims, if any, to or by any third party as this Audit Findings Report has not been prepared for, and is not intended for, and should not be used by, any third party or for any other purpose.

Audit risks and results

We highlight our significant findings in respect of significant financial reporting risks as identified in our discussion with you in the Audit Plan, as well as any additional significant risks identified.

1	**Significant Risk**	Fraud risk from management override of controls.

Why is it significant?

This is a presumed fraud risk.

We have not identified any specific additional risks of management override relating to this audit.

Our response and significant findings

We performed the required procedures under professional standards:

- Test all material journal entries made in the preparation of the year-end financial statements and other adjustments.
- A retrospective review of estimates, including the assumptions used by management.
- Evaluating the business rationale of significant unusual transactions.

We are satisfied that our audit work has appropriately dealt with the fraud risk from management override of controls.

Audit risks and results (continued)

Significant findings from the audit regarding other areas of focus are as follows:

2 Donation of land

Our response and significant findings

During fiscal 2021, the Conservancy purchased 2 properties, Sandy Beach Nature Reserve on Keats Island and Baile Nature Reserve on North Pender Island.

Sandy Beach – the fair value of the property was estimated using the BC Assessment value. There was no 3rd party appraisal performed on the land. The Conservancy paid $1 for the property, and the excess of fair value over purchase price was recognized as donation revenue of $2,703,000. The transfer also included $12,000 in cash transferred and to be used in accordance with ITC policy which may include land management.

Baile – the fair value of the property was appraised to be $320,000 and the difference between the fair value and purchase price of $1 was appropriately recognized as donation revenue.

We performed the following procedures:

- We obtained and inspected the purchase agreements.
- We inspected the appraisal of the land and BC Assessment value.
- We reviewed the accounting treatment and presentation of the transaction in the financial statements.

No discrepancies were noted in the procedures performed.

Audit risks and results (continued)

3 Species at Risk (SAR) Grant

Our response and significant findings

During fiscal 2021, the Conservancy entered into an agreement with Environment and Climate Change Canada for funding the Species at Risk (SAR) Program, supporting consolidation of SAR data, monitoring for SAR and incorporation of SAR needs and recovery into land management plans. The federal funding available is up to
$597,000 or 38% of total contributions. The project will be completed over a period of 3 years and the agreement ends March 31, 2023.

The total grant for the first year of the agreement is $187,000. During fiscal 2021, the Conservancy received $133,500 and recognized $53,500 as accounts receivable.

Expenses related to the program are incurred by Islands Trust. As a result, the Conservancy recognized revenue for the funds received and owing of $187,000 and an expense to provide these funds to Islands Trust for costs incurred to execute the program.

We inspected the terms of the agreement, agreed the grant to cash received and assessed the accounting for transactions in the Conservancy financial statements. We noted no errors or adjustments.

4 Audit response to COVID-19 Pandemic

Our response and significant findings

In March 2020, the COVID-19 outbreak was declared a pandemic by the World Health Organization and has had a significant financial market and social dislocating impact. The situation is dynamic and the ultimate duration and magnitude of the impact on the economy and businesses is not known at this time.

For the March 31, 2021 financial statements, we considered the impact of the pandemic on the assets and liabilities, including the following:

- Accounting standards indicate where long term assets no longer contribute service potential to the Entity, an impairment is required. The pandemic has not impacted the use of assets of the Conservancy, therefore, no impairment was considered necessary.
- Investment markets have been volatile since the declaration of the pandemic. Since investments are recorded at market value, the impact of this volatility has been reflected in the investment balances presented at March 31, 2021. Where there is a permanent impairment in investment valuation, a write-down is required. There was no permanent impairment assessed by management, as investments are held for long-term purposes.
- KPMG discussed the impact of the pandemic with management. At this time management considers it not practicable to calculate the impact on the Conservancy of future cash flows, any significant changes to assets or liabilities and the magnitude of impact on future operations.
- Management has included a disclosure in the financial statements.

We concur the impact of the pandemic has been appropriately represented in the financial statements.

Financial statement presentation and disclosure

The presentation and disclosure of the financial statements are, in all material respects, in accordance with the Conservancy's relevant financial reporting framework. Misstatements, including omissions, if any, related to disclosure or presentation items are in the management representation letter.

We also highlight the following:

Form, arrangement, and content of the financial statements	Adequate
Application of accounting pronouncements issued but not yet effective	We include a summary of future accounting standards in Appendix 4.

Uncorrected differences and Corrected Adjustments

Differences and adjustments include disclosure differences and adjustments.

Professional standards require that we request of management and the Board that all identified differences be corrected. We have already made this request of management.

Uncorrected differences

We did not identify differences that remain uncorrected.

Corrected adjustments

We recommended and management reclassified $113,961 from investments to cash related to investments that matured during the year and were no longer held as investments but rather as cash.

Appendices

Content

Appendix 1: Other Required Communications

In accordance with professional standards, there are a number of communications that are required during the course of and upon completion of our audit. These include:

Auditor's report	Management representation letter
The conclusion of our audit is set out in our draft auditors' report attached to the draft financial statements.	We will obtain from management at the completion of the annual audit. In accordance with professional standards, a copy of the representation letter is provided to the Board in Appendix 3.

Appendix 2: Audit Quality and Risk Management

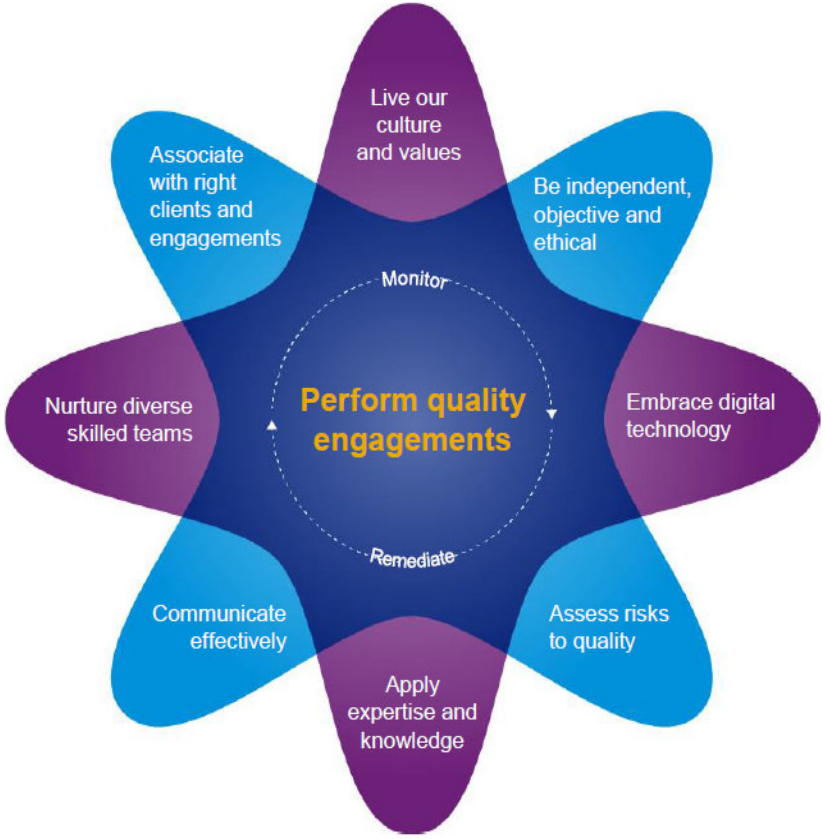
Quality essentially means doing the right thing and remains our highest priority. Our **Global Quality Framework** outlines how we deliver quality and how every partner and staff member contributes to its delivery.

'Perform quality engagements' sits at the core along with our commitment to continually monitor and remediate to fulfil on our quality drivers.

Our **quality value drivers** are the cornerstones to our approach underpinned by the **supporting drivers** and give clear direction to encourage the right behaviours in delivering audit quality.

We define '**audit quality**' as being the outcome when:

- audits are **executed consistently**, in line with the requirements and intent of **applicable professional standards** within a strong **system of quality controls;** and
- all of our related activities are undertaken in an environment of the utmost level of **objectivity, independence, ethics,** and **integrity.**



Doing the right thing. Always.

Appendix 3: Management Representation Letter

Prior to the release of the auditors' report, we will obtain from management a signed management representation letter – a copy of the letter is included below.

Date of Board approval of Financial Statements

Ladies and Gentlemen:

We are writing at your request to confirm our understanding that your audit was for the purpose of expressing an opinion on the financial statements (hereinafter referred to as "financial statements") of Islands Trust Conservancy ("the Entity") as at and for the period ended March 31, 2021.

General:

We confirm that the representations we make in this letter are in accordance with the definitions as set out in **Attachment I** to this letter.

We also confirm that, to the best of our knowledge and belief, having made such inquiries as we considered necessary for the purpose of appropriately informing ourselves:

Responsibilities:

1) We have fulfilled our responsibilities, as set out in the terms of the engagement letter dated January 10, 2017, including for:
   a) the preparation and fair presentation of the financial statements and believe that these financial statements have been prepared and present fairly in accordance with the relevant financial reporting framework.
   b) providing you with all information of which we are aware that is relevant to the preparation of the financial statements, such as all financial records and documentation and other matters, including:
      - the names of all related parties and information regarding all relationships and transactions with related parties; and
      - the complete minutes of meetings, or summaries of actions of recent meetings for which minutes have not yet been prepared, of the board of trustees and committees of the board of trustees that may affect the financial statements. All significant actions are included in such summaries.
   c) providing you with unrestricted access to such relevant information.
   d) providing you with complete responses to all enquiries made by you during the engagement.
   e) providing you with additional information that you may request from us for the purpose of the engagement.
   f) providing you with unrestricted access to persons within the Entity from whom you determined it necessary to obtain audit evidence.
   g) such internal control as we determined is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error. We also acknowledge and understand that we are responsible for the design, implementation and maintenance of internal control to prevent and detect fraud.
   h) ensuring that all transactions have been recorded in the accounting records and are reflected in the financial statements.

Internal control over financial reporting:

2) We have communicated to you all deficiencies in the design and implementation or maintenance of internal control over financial reporting of which we are aware.

Fraud & non-compliance with laws and regulations:

3) We have disclosed to you:

a) the results of our assessment of the risk that the financial statements may be materially misstated as a result of fraud.
b) all information in relation to fraud or suspected fraud that we are aware of that involves:

- management;
- employees who have significant roles in internal control over financial reporting; or
- others

where such fraud or suspected fraud could have a material effect on the financial statements.

c) all information in relation to allegations of fraud, or suspected fraud, affecting the financial statements, communicated by employees, former employees, analysts, regulators, or others.
d) all known instances of non-compliance or suspected non-compliance with laws and regulations, including all aspects of contractual agreements, whose effects should be considered when preparing financial statements.
e) all known actual or possible litigation and claims whose effects should be considered when preparing the financial statements.

Subsequent events:

4) All events subsequent to the date of the financial statements and for which the relevant financial reporting framework requires adjustment or disclosure in the financial statements have been adjusted or disclosed.

Related parties:

5) We have disclosed to you the identity of the Entity's related parties.
6) We have disclosed to you all the related party relationships and transactions/balances of which we are aware.
7) All related party relationships and transactions/balances have been appropriately accounted for and disclosed in accordance with the relevant financial reporting framework.

Estimates:

8) The methods, the data and the significant assumptions used in making accounting estimates, and their related disclosures are appropriate to achieve recognition, measurement or disclosure that is reasonable in the context of the applicable financial reporting framework.

Going concern:

9) We have provided you with all information relevant to the use of the going concern assumption in the financial statements.
10) We confirm that we are not aware of material uncertainties related to events or conditions that may cast significant doubt upon the Entity's ability to continue as a going concern.

Misstatements:

11) We approve the corrected misstatements identified by you during the audit described in Attachment II.

Non-SEC registrants or non-reporting issuers:

12) We confirm that the Entity is not a Canadian reporting issuer (as defined under any applicable Canadian securities act) and is not a United States Securities and Exchange Commission ("SEC") Issuer (as defined by the Sarbanes-Oxley Act of 2002).
13) We also confirm that the financial statements of the Entity will not be included in the consolidated financial statements of a Canadian reporting issuer audited by KPMG or an SEC Issuer audited by any member of the KPMG organization.

Other information:

14) We confirm that the final version of Annual Report will be provided to you when available, and prior to issuance by the Entity, to enable you to complete your audit procedures in accordance with professional standards.

Commitments & contingencies:

15) There are no:
    a) other liabilities that are required to be recognized and no other contingent assets or contingent liabilities that are required to be disclosed in the financial statements in accordance with the relevant financial reporting framework, including liabilities or contingent liabilities arising from illegal acts or possible illegal acts, or possible violations of human rights legislation
    b) other environmental matters that may have an impact on the financial statements.

Yours very truly,

ISLANDS TRUST CONSERVANCY

_____

Mr. Russ Hotsenpiller, Chief Administrative Officer

_____

Ms. Julia Mobbs, Director of Administrative Services

Attachment I – Definitions

Materiality

Certain representations in this letter are described as being limited to matters that are material.

Information is material if omitting, misstating or obscuring it could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

Judgments about materiality are made in light of surrounding circumstances, and are affected by perception of the needs of, or the characteristics of, the users of the financial statements and, the size or nature of a misstatement, or a combination of both while also considering the entity's own circumstances.

Fraud & error

Fraudulent financial reporting involves intentional misstatements including omissions of amounts or disclosures in financial statements to deceive financial statement users.

Misappropriation of assets involves the theft of an entity's assets. It is often accompanied by false or misleading records or documents in order to conceal the fact that the assets are missing or have been pledged without proper authorization.

An error is an unintentional misstatement in financial statements, including the omission of an amount or a disclosure.

Attachment II – Summary of Audit Misstatements

A reclassification of $113,961 from investments to cash related to investments that matured during the year and were no longer held as investments but rather as cash.

Appendix 4: Current developments and audit trends

Thought leadership

Thought leadership	Overview	Link
2020 Audit Quality and Transparency Report	Learn about KPMG's ongoing commitment to continuous audit quality improvement. We are investing in new innovative technologies and building strategic alliances with leading technology companies that will have a transformative impact on the auditing process and profession. How do we seek to make an impact on society through the work that we do?	Link to report
KPMG 2020 CEO Outlook	2020 was a year of unprecedented change and hardship for individuals and organizations alike. This year's CEO Outlook report represents combined feedback from two global surveys: a pre-pandemic study and a more recent COVID-19 Pulse Survey. The report finds that despite challenges faced, Canadian leaders are moving forward have accelerated digital transformations across the board and are leveraging technology more than ever to drive growth, manage their digital workforces, and position themselves to thrive in the new reality. They are also re-evaluating what it means to "lead with purpose".	Link to report
2021 CEO Pulse Survey	Building on our findings from the CEO Outlook report, this year's survey remains aligned with these three key themes: growth in a digitally accelerated economy, digital workforces, and leading with purpose. The findings have revealed while there has been a shift in priorities in some areas, other areas have remained unchanged.	Link to report
The business implications of coronavirus (COVID-19)	Resources to help you understand your exposure to COVID-19, and more importantly, position your business to be resilient in the face of this and the next global threat.	Learn more
	KPMG Global IFRS Institute - COVID-19 financial reporting resource center	Learn more
Put your data to work to gain competitive advantage	There is no "digital economy". The economy is digital and "digits" refer to data. Data is the lifeblood of every organization on this planet and organizations that embrace this notion are well positioned to grow as industries continue to evolve and disrupt at an ever-increasing pace.	Link to report

Appendix 4: Current developments (continued)

Public Sector Accounting Standards

Standard	Summary and implications
Asset Retirement Obligations	- The new standard is effective for fiscal years beginning on or after April 1, 2022. The effective date was deferred by 1 year due to COVID-19. - The new standard addresses the recognition, measurement, presentation and disclosure of legal obligations associated with retirement of tangible capital assets in productive use. Retirement costs will be recognized as an integral cost of owning and operating tangible capital assets. PSAB currently contains no specific guidance in this area. - The ARO standard will require the public sector entity to record a liability related to future costs of any legal obligations to be incurred upon retirement of any controlled tangible capital assets ("TCA"). The amount of the initial liability will be added to the historical cost of the asset and amortized over its useful life. - As a result of the new standard, the public sector entity will have to: • Consider how the additional liability will impact net debt, as a new liability will be recognized with no corresponding increase in a financial asset; • Carefully review legal agreements, senior government directives and legislation in relation to all controlled TCA to determine if any legal obligations exist with respect to asset retirements; • Begin considering the potential effects on the organization as soon as possible to coordinate with resources outside the finance department to identify AROs and obtain information to estimate the value of potential AROs to avoid unexpected issues.
Revenue	- The new standard is effective for fiscal years beginning on or after April 1, 2023. The effective date was deferred by one year due to COVID-19. - The new standard establishes a single framework to categorize revenues to enhance the consistency of revenue recognition and its measurement. - The standard notes that in the case of revenues arising from an exchange transaction, a public sector entity must ensure the recognition of revenue aligns with the satisfaction of related performance obligations. - The standard notes that unilateral revenues arise when no performance obligations are present, and recognition occurs when there is authority to record the revenue and an event has happened that gives the public sector entity the right to the revenue.
Purchased intangibles	- In October 2019, PSAB approved a proposal to allow public sector entities to recognize intangibles purchased through an exchange transaction. Practitioners are expected to use the definition of an asset, the general recognition criteria and the GAAP hierarchy to account for purchased intangibles. - PSAB has approved Public Sector Guideline 8 which allows recognition of intangibles purchased through an exchange transaction. Narrow-scope amendments were made to Section PS 1000 Financial statement concepts to remove prohibition on recognition of intangibles purchased through exchange transactions and PS 1201 Financial statement presentation to remove the requirement to disclose that purchased intangibles are not recognized. - The effective date is April 1, 2023 with early adoption permitted. Application may be retroactive or prospective.

Appendix 4: Current developments (continued)

Standard	Summary and implications
Employee Future Benefit Obligations	– PSAB has initiated a review of sections PS 3250 *Retirement Benefits* and PS 3255 *Post-Employment Benefits, Compensated Absences and Termination Benefits*. In July 2021, PSAB issued an exposure draft for PS 3251 *Employee Benefits*, which will replace PS 3250 and PS 3255. Comments are due on November 25, 2021. – In developing the standard, PSAB has decided to use International Public Sector Accounting Standard 39 *Employee Benefits* as a starting point, with modification of the IPSAS 39 principles, where required. – The proposed standard provides guidance for short-term employee benefits, post-employment benefits, other long-term employee benefits and termination benefits. It also provides additional guidance on the discount rate to use for employee benefits valuations and the treatment of deferral provisions. – Given the complexity of issues involved and potential implications of any changes that may arise from the review of the existing guidance, PSAB will implement a multi-release strategy for the new standards. The first standard will provide foundational guidance. Subsequent standards will provide additional guidance on current and emerging issues.
Public Private Partnerships ("P3")	– PSAB has proposed new requirements for the recognition, measurement and classification of infrastructure procured through a public private partnership. PSAB in the process of reviewing feedback provided by stakeholders on the exposure draft. – The exposure draft proposes that recognition of infrastructure by the public sector entity would occur when it controls the purpose and use of the infrastructure, when it controls access and the price, if any, charged for use, and it controls any significant interest accumulated in the infrastructure when the P3 ends. – The exposure draft proposes that the public sector entity recognize a liability when it needs to pay cash or non-cash consideration to the private sector partner for the infrastructure. – The infrastructure would be valued at cost, with a liability of the same amount if one exists. Cost would be measured by discounting the expected cash flows by a discount rate that reflects the time value of money and risks specific to the project. – The effective date is April 1, 2023. Application may be retroactive or prospective.

Appendix 4: Current developments (continued)

Standard	Summary and implications
Concepts Underlying Financial Performance	– PSAB is in the process of reviewing the conceptual framework that provides the core concepts and objectives underlying Canadian public sector accounting standards. – PSAB has released four exposure drafts for the proposed conceptual framework and proposed revised reporting model, and their related consequential amendments. – PSAB is proposing a revised, ten chapter conceptual framework intended to replace PS 1000 *Financial Statement Concepts* and PS 1100 *Financial Statement Objectives*. The revised conceptual framework would be defined and elaborate on the characteristics of public sector entities and their financial reporting objectives. Additional information would be provided about financial statement objectives, qualitative characteristics and elements. General recognition and measurement criteria, and presentation concepts would be introduced. – In addition, PSAB is proposing: • Relocation of the net debt indicator to its own statement and the statement of net financial assets/liabilities, with the calculation of net debt refined to ensure its original meaning is retained. • Separating liabilities into financial liabilities and non-financial liabilities. • Restructuring the statement of financial position to present non-financial assets before liabilities. • Changes to common terminology used in the financial statements, including re-naming accumulated surplus (deficit) to net assets (liabilities). • Removal of the statement of remeasurement gains (losses) with the information instead included on a new statement called the statement of changes in net assets (liabilities). This new statement would present the changes in each component of net assets (liabilities), including a new component called “accumulated other”. • A new provision whereby an entity can use an amended budget in certain circumstances. • Inclusion of disclosures related to risks and uncertainties that could affect the entity’s financial position.
Government Not-for-Profit Strategy	– PSAB is in the process of reviewing its strategy for government not-for-profit (“GNFP”) organizations. PSAB intends to understand GNFPs’ fiscal and regulatory environment, and stakeholders’ financial reporting needs and concerns. – A consultation paper was released in May 2019 and has closed. PSAB will use the comments received to determine its next steps.

kpmg.ca/audit

Financial Statements of

THE ISLANDS TRUST CONSERVANCY

And Independent Auditors' Report thereon

Year ended March 31, 2021

INDEPENDENT AUDITORS' REPORT

To the Trustees of The Islands Trust Conservancy Board, the Trustees of Islands Trust and the Minister of Municipal Affairs and Housing

Opinion

We have audited the financial statements of the Islands Trust Conservancy (the Entity) which comprise:

- the statement of financial position as at March 31, 2021
- the statement of operations for the year then ended
- the statement of changes in fund balances for the year then ended
- the statement of cash flows for the year then ended
- and notes to the financial statements, including a summary of significant accounting policies

(hereinafter referred to as the "financial statements").

In our opinion, except for the possible effects of the matter described in the 'Basis for Qualified Opinion' section of our auditors' report, the financial statements present fairly, in all material respects, the financial position of the Entity as at March 31, 2021, and its results of operations, its changes in fund balances and cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Basis for Qualified Opinion

In common with many not-for-profit organizations, the Entity derives revenue from donations, the completeness of which is not susceptible to satisfactory audit verification. Accordingly, verification of these revenues was limited to the amounts recorded in the records of the Entity.

Therefore, we were not able to determine whether any adjustments might be necessary to:

- the current assets reported in the statements of financial position as at March 31, 2021 and March 31, 2020
- the donations revenues and excess of revenues over expenses reported in the statements of operations for the years ended March 31, 2021 and March 31, 2020
- the fund balances, at the beginning and end of the year, reported in the statements of changes in fund balances for the years ended March 31, 2021 and March 31, 2020
- the excess of revenues over expenses reported in the statements of cash flows for the years ended March 31, 2021 and March 31, 2020.

Our opinion on the financial statements for the year ended March 31, 2020 was qualified accordingly because of the possible effects of this limitation in scope.

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the **"*Auditors' Responsibilities for the Audit of the Financial Statements*"** section of our auditors' report.

We are independent of the Entity in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Entity's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Entity's financial reporting process.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.

  The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Entity's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Entity to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Chartered Professional Accountants

Victoria, Canada
_____, 2021

THE ISLANDS TRUST CONSERVANCY

Statement of Financial Position

March 31, 2021, with comparative information for 2020

	Opportunity Fund	Restricted Fund	Capital Fund	Endowment Fund	2021 Total	2020 Total
						(Schedule 1)
Assets:						
Current assets:						
Cash	$ 15,754	$ 348,420	$ -	$ -	$ 364,174	$ 196,907
Short-term investments (note 3)	-	189,225	-	88,000	277,225	249,433
Federal grants receivable	-	53,500	-	-	53,500	
Due from Islands Trust	-	-	-	-	-	191
	15,754	591,145	-	88,000	694,899	446,531
Investments	-	-	-	-	-	113,155
Land (notes 4 and 6)	-	-	10,327,169	6,886,532	17,213,701	14,190,701
	$ 15,754	$ 591,145	$ 10,327,169	$ 6,974,532	$ 17,908,600	$ 14,750,387
Liabilities:						
Current liabilities:						
Accounts payable	$ -	$ -	$ -	$ -	$ -	$ 3,715
Due to Islands Trust	-	81,598	-	-	81,598	-
	-	87,598	-	-	81,598	3,715
Fund Balances:						
Unrestricted	15,754	-	-	-	15,754	21,731
Investment in land (note 4)	-	-	10,327,169	-	10,327,169	7,624,169
Internally restricted (note 5)	-	35,632	-	-	35,632	23,268
Externally restricted (note 5)	-	473,915	-	-	473,915	422,972
Restricted for endowment purposes (note 6)	-	-	-	6,974,532	6,974,532	6,654,532
	15,754	509,547	10,327,169	6,974,532	17,827,002	14,746,672
	$ 15,754	$ 591,145	$ 10,327,169	$ 6,974,532	$ 17,908,600	$ 14,750,387

The accompanying notes are an integral part of these financial statements.

Approved by the Trust Conservancy Board:

_____ Board member

_____ Board member

THE ISLANDS TRUST CONSERVANCY

Statement of Operations

Year ended March 31, 2021, with comparative information for 2020

	Opportunity Fund	Restricted Fund	Capital Fund	Endowment Fund	2021 Total	2020 Total
						(Schedule 2)
Revenue:						
Donations:						
Cash	$ 15,938	$ 1,025	$ -	$ -	$ 16,963	$ 209,405
Land	-	-	2,703,000	320,000	3,023,000	70,000
Grants	-	207,144	-	-	207,144	5,219
Rental income	-	10,455	-	-	10,455	10,306
Investment income (loss)	110	28,870	-	-	28,980	(6,119)
	16,048	247,494	2,703,000	320,000	3,286,542	288,811
Expenses:						
Repairs and maintenance - Alton property	-	9,108	-	-	9,108	2,595
Bank charges	31	79	-	-	110	31
Donations to conservancy groups	9,994	-	-	-	9,994	6,220
Species at Risk	-	187,000	-	-	187,000	-
	10,025	196,187	-	-	206,212	8,846
Excess of revenue over expenses	$ 6,023	$ 51,307	$ 2,703,000	$ 320,000	$ 3,080,330	$ 279,965

The accompanying notes are an integral part of these financial statements.

THE ISLANDS TRUST CONSERVANCY

Statement of Changes in Fund Balances

Year ended March 31, 2021, with comparative information for 2020

	Opportunity Fund	Restricted Fund	Capital Fund	Endowment Fund	Total
Fund balances, March 31, 2019	$ 28,844	$ 464,092	$ 7,624,169	$ 6,349,601	$ 14,466,706
Excess (deficiency) of revenue over expenses	(2,613)	212,579	-	70,000	279,966
Interfund transfer	(4,500)	(230,431)	-	234,931	-
Fund balances, March 31, 2020	21,731	446,240	7,624,169	6,654,532	14,746,672
Excess (deficiency) of revenue over expenses	6,023	51,307	2,703,000	320,000	3,080,330
Interfund transfer (note 7)	(12,000)	12,000	-	-	-
Fund balances, March 31, 2021	$ 15,754	$ 509,547	$ 10,327,169	$ 6,974,532	$ 17,827,002

The accompanying notes are an integral part of these financial statements.

THE ISLANDS TRUST CONSERVANCY

Statement of Cash Flows

Year ended March 31, 2021, with comparative information for 2020

	2021	2020
Cash provided by (used in):		
Operating activities:		
Excess of revenue over expenses	$ 3,080,330	$ 279,966
Item not involving cash:		
Donation of land	(3,023,000)	(70,000)
Changes in non-cash operating working capital:		
Accounts payable	(3,715)	3,715
Federal grants receivable	(53,500)	-
Due to Islands Trust	81,789	(2,818)
	81,904	210,863
Capital activities:		
Cash paid to acquire land	-	(234,931)
Investing activities:		
Increase in short-term investments	(27,792)	(44,928)
(Increase) decrease in long-term investments	(806)	9,277
Redemption of investments	113,961	-
	85,363	(35,651)
Increase (decrease) in cash	167,267	(59,719)
Cash, beginning of year	196,907	256,626
Cash, end of year	$ 364,174	$ 196,907

The accompanying notes are an integral part of these financial statements.

The Islands Trust Conservancy (the "Trust Conservancy") is incorporated under The Islands Trust Act of British Columbia and is empowered to accept donations, grants and bequests on behalf of The Islands Trust and to hold land and other property in compliance with a Trust Conservancy plan approved by the Ministry of Municipal Affairs and Housing.

The Islands Trust (the "Trust") is also incorporated under The Islands Trust Act of British Columbia. The objectives of the Trust are to preserve and protect the Trust area and its unique amenities and environment for the benefit of the residents of the Trust area and of the Province generally.

The Trust Conservancy is administered by the Trust and for financial reporting purposes, the Trust and the Trust Conservancy are reported on separately. The Trust Conservancy's annual expenses are funded by and reported as part of the Trust in accordance with The Islands Trust Act. These financial statements present the financial position and changes in fund balances of the Trust Conservancy.

1. Significant accounting policies:

The financial statements have been prepared in accordance with Canadian Public Sector Accounting Standards including the 4200 standards for government not-for-profit organizations:

(a) Fund accounting:

The Trust Conservancy follows the restricted fund method of accounting for contributions.

The Opportunity Fund reports unrestricted resources.

The Restricted Fund reports the assets, liabilities, revenue and expenses related to internally and externally restricted assets.

The Capital Fund reports the assets, liabilities, revenue and expenses related to the Trust Conservancy's capital assets.

The Endowment Fund reports resources that are contributed for endowment purposes.

(b) Financial instruments:

Financial instruments are recorded at fair value on initial recognition. Derivative instruments and equity instruments that are quoted in an active market are reported at fair value. All other financial instruments are subsequently recorded at cost or amortized cost unless management has elected to carry the instruments at fair value. Management has elected to record all investments at fair value as they are managed and evaluated on a fair value basis.

Unrealized changes in fair value are recognized in the statement of remeasurement gains and losses until they are realized, when they are transferred to the statement of operations.

1. Significant accounting policies (continued):

(b) Financial instruments (continued):

Transaction costs incurred on the acquisition of financial instruments measured subsequently at fair value are expensed as incurred. All other financial instruments are adjusted by transaction costs incurred on acquisition and financing costs, which are amortized using the straight-line method.

All financial assets are assessed for impairment on an annual basis. When a decline is determined to be other than temporary, the amount of the loss is reported in the statement of operations and any unrealized gain is adjusted through the statement of remeasurement gains and losses. When the asset is sold, the unrealized gains and losses previously recognized in the statement of remeasurement gains and losses are reversed and recognized in the statement of operations. During the years presented, there are no unrealized gains and losses, and as a result, no statement of remeasurement gains and losses has been included in these financial statements. All investments held by the Trust Conservancy are classified as Level 2 investments for fair value measurement and there were no changes in classification in the years presented.

(c) Land:

Purchased land is recorded at cost. Contributed land is recorded at estimated fair value at the date of contribution.

(d) Revenue recognition:

Restricted contributions are recorded as revenue of the appropriate restricted fund when received or receivable, if the amount can be reasonably estimated and collection is reasonably assured.

Unrestricted contributions are recorded as revenue of the Opportunity Fund in the year received or receivable if the amount can be reasonably estimated and collection is reasonably assured.

Contributions for endowment are recorded as revenue in the Endowment Fund balance.

Interest income earned on Endowment Fund resources is restricted for the purpose of maintaining certain specified property and is recorded in the Restricted Fund. Interest income of internally restricted funds is recorded as revenue of the Restricted Fund. Other interest income is recorded as revenue of the Opportunity Fund when earned.

All other forms of income are recorded as revenue of the Opportunity Fund when received or receivable.

1. Significant accounting policies (continued):

(e) Liability for contaminated sites:

A liability for contaminated sites is recognized when a site is not in productive use and the following criteria are met:

(*i*) an environmental standard exists;

(*ii*) contamination exceeds the environmental standard;

(*iii*) the Trust Conservancy is directly responsible or accepts responsibility;

(*iv*) it is expected that future economic benefits will be given up; and

(*v*) a reasonable estimate of the amount can be made.

The liability is recognized as management's estimate of the cost of post-remediation including operation, maintenance and monitoring that are an integral part of the remediation strategy for a contaminated site.

(f) Natural assets:

The Trust Conservancy is fortunate to have, and to be mandated to protect, many natural assets in the Island Trust Area that reduce the need for engineered infrastructure that might otherwise be required by other government agencies to provide various services to the islands. This includes island aquifers (water storage and filtration); streams, ditches and wetlands (rain water management); forests (carbon sequestration); and foreshore areas (natural seawalls). Canadian public sector accounting standards do not provide for the valuation and recording of such assets in the financial statements. As such, these natural assets are not reported in these financial statements. Nevertheless, the Conservancy acknowledges the importance of these assets and the need to manage them in conjunction with engineered infrastructure that is managed by other government agencies.

(g) Use of estimates:

The preparation of financial statements in conformity with Canadian generally accepted accounting principles requires management to make estimates and assumptions which affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenditures during the period. Significant estimates include assumptions used in estimating the fair value of contributed land at the date of contribution. Actual results could differ from those estimates.

2. COVID-19 Pandemic:

In March 2020, the COVID-19 outbreak was declared a pandemic by the World Health Organization. The pandemic impacted the Conservancy’s operations resulting in a decrease in certain types of revenue, and changes in expenses and cash flows. As the situation is dynamic and the ultimate duration and magnitude of the impact are not known, an estimate of the future financial effect on the Conservancy is not practicable at this time.

3. Short-term investments:

Short-term investments consist of an endowment fund with the Victoria Foundation and Municipal Finance Authority of British Columbia ("MFA") Short Term Bond and Money Market Funds. Investments in MFA Funds are recorded at market value.

4. Land:

	Acquisition date	2021	2020
Inner Island Nature Reserve, Denman Island	1992	$ 70,000	$ 70,000
Coats Millstone Reserve, Gabriola Island	1994	100,000	100,000
Medicine Beach Nature Sanctuary, North Pender Island	1996	477,000	477,000
Cunningham Reserve, Salt Spring Island	1994	265,000	265,000
Deep Ridge Reserve, Salt Spring Island	1992	255,000	255,000
Lower Mt. Erskine Nature Reserve, Salt Spring Island	1996	284,000	284,000
Kwel Nature Sanctuary, Lasqueti Island	1997	195,497	195,497
Singing Woods Nature Reserve, Bowen Island	1999	157,000	157,000
Trincomali Nature Sanctuary, Galiano Island	2001	242,406	242,406
Horton Bayviary Nature Reserve, Mayne Island	2002	210,000	210,000
Morrison Marsh Nature Reserve, Denman Island	2006	438,000	438,000
Brigade Bay Bluffs Nature Reserve, Gambier Island	2006	150,000	150,000
Long Bay Wetland Nature Reserve, Gambier Island	2006	305,000	305,000
Elder Cedar Nature Reserve, Gabriola Island	2007	658,000	658,000
Mount Artaban Nature Reserve, Gambier Island	2009	1,177,000	1,177,000
Fairy Fen Nature Reserve, Bowen Island	2011	1,817,000	1,817,000
Laughlin Lake Nature Reserve, Galiano Island	2013	56,000	56,000
Vanilla Leaf Land Nature Reserve, Galiano Island	2014	217,000	217,000
Fairy Slipper Forest Nature Reserve, Thetis Island	2017	550,266	550,266
Sandy Beach Nature Reserve, Keats Island	2021	2,703,000	-
		$ 10,327,169	$ 7,624,169

5. Restricted Fund balances:

	2021	2020
Internally restricted:		
McFadden Creek management fund	$ 23,632	$ 23,268
Property Management fund	12,000	-
Externally restricted:		
Alton Nature Reserve - maintenance fund	160,128	130,590
Morrison Fund	20,294	20,269
Covenant Defense Fund	115,273	113,508
Lasqueti Acquisition Fund	35,304	33,069
Gambier Acquisition Fund	129,121	124,243
Thetis Island Acquisition Fund	1,295	1,293
Conservation Stimulus Fund	12,500	-
	473,915	422,972
	$ 509,547	$ 446,240

6. Restricted for endowment purposes:

	Acquisition date	2021	2020
Short-term investments			
Alton Nature Reserve - maintenance	2002	$ 88,000	$ 88,000
Land:			
Lindsay Dickson Nature Reserve, Denman Island	2001	2,200,000	2,200,000
Alton Nature Reserve, Salt Spring Island	2002	454,000	454,000
McFadden Creek Nature Sanctuary, Salt Spring Island	2015	422,601	422,601
Properties acquired under the Federal Government Ecological Gifts program:			
Mt. Trematon Nature Reserve, Lasqueti Island	2006	320,000	320,000
David Otter Nature Reserve, Bowen Island	2007	620,000	620,000
John Osland Nature Reserve, Lasqueti Island	2012	890,000	890,000
Valens Brook Nature Reserve, Denman Island	2013	280,000	280,000
Burren's Acres Nature Reserve, Gabriola Island	2014	210,000	210,000
Moore Hill Nature Reserve, Thetis Island	2017	780,000	780,000
Valens Brook Nature Reserve, Denman Island	2019	85,000	85,000
Salish View Nature Reserve, Lasqueti Island	2020	304,931	304,931
Baile Nature Reserve, North Pender Island	2021	320,000	-
		6,886,532	6,566,532
		$ 6,974,532	$ 6,654,532

Investment gains (losses) on endowment funds for the year of $22,914 (2020 - ($13,127)) have been recorded in the Restricted Fund.

Two properties owned by the Trust Conservancy, the Lindsay Dickson property on Denman Island, and the Alton property on Salt Spring Island, were donated on the condition that the properties be used and managed in certain ways. The Lindsay Dickson property was donated "for so long as the land is used as a nature reserve for the use, benefit and enjoyment of the residents of B.C.". The Alton property is to be held, managed and preserved for its ecological environment and scenic features and not as a recreational park. The residence, gardens and driveway are to be preserved and managed for non-profit purposes.

In the event that these properties are not managed accordingly, the properties could revert to the Province of British Columbia in the case of the Lindsay Dickson Nature Reserve and to the Executors of the donor's estate in the case of the Alton Nature Reserve.

In 2015, the McFadden Creek Nature Sanctuary on Salt Spring Island was donated to the Trust Conservancy on the condition that the property was to be protected, preserved and maintained in its natural state. Should a disposition of this property ever be triggered, there is a Right of First Refusal on the property in favor of the Wild Bird Trust of BC.

Certain properties as listed in the preceding table were acquired under the Federal Government Ecological Gift program. Recipients of ecological gifts are responsible for maintaining the biodiversity and environmental heritage values of the property in perpetuity.

7. Interfund transfer:

During the year, there was an interfund transfer of $12,000 from the Opportunity Fund to the Restricted Fund representing cash contributions associated with the acquisition of the Sandy Beach Nature Reserve on Keats Island.

8. Related party:

The Trust is related to the Trust Conservancy through the composition of the Trust Conservancy's Board. The Trust Conservancy's Board is comprised of three members from the Trust's Council and up to three members appointed by the Minister of Municipal Affairs and Housing.

The Trust Conservancy's annual expenses are funded by and reported as part of the Trust in accordance with The Islands Trust Act. The expenses are summarized as follows:

	2021	2020
Operations and property management	$ 701,124	$ 527,344
Board	5,378	19,043
Administration	232,547	216,627
	$ 939,049	$ 763,014

For the year ended March 31, 2021, amounts owing to Islands Trust were $81,598 (2020 - nil).

9. Financial risks and concentration of risk:

The Trust Conservancy's financial instruments consist of cash, short-term investments, investments and amounts due to Islands Trust. It is management's opinion that the Trust Conservancy is not exposed to significant interest, currency or credit risk arising from these financial instruments. The maximum exposure to credit risk at March 31, 2021 is the carrying value of cash, short-term investments and investments. The Trust Conservancy deals with creditworthy counterparties to mitigate credit risk. The Trust Conservancy manages its liquidity risk by monitoring its operating requirements. Interest rate risk is not significant due to the short term nature of investments held. There have been no significant changes to risk exposure in the years presented.

THE ISLANDS TRUST CONSERVANCY

Statement of Financial Position

Schedule 1

March 31, 2020

	Opportunity Fund	Restricted Fund	Capital Fund	Endowment Fund	2020 Total
Assets:					
Current assets:					
Cash	$ 25,205	$ 171,702	$ -	$ -	$ 196,907
Short-term investments (note 2)	-	161,433	-	88,000	249,433
Inventory of fundraising items	26	165	-	-	191
	25,231	333,300	-	88,000	446,531
Investments	-	113,155	-	-	113,155
Land (notes 4 and 6)	-	-	7,624,169	6,566,532	14,190,701
	$ 25,231	$ 446,455	$ 7,624,169	$ 6,654,532	$ 14,750,387
Liabilities:					
Current liabilities:					
Accounts payable	$ 3,500	$ 215	$ -	$ -	$ 3,715
Due to Islands Trust	-	-	-	-	-
	3,500	215	-	-	3,715
Fund Balances:					
Unrestricted	21,731	-	-	-	21,731
Investment in land (note 4)	-	-	7,624,169	-	7,624,169
Internally restricted (note 5)	-	23,268	-	-	23,268
Externally restricted (note 5)	-	422,972	-	-	422,972
Restricted for endowment purposes (note 6)	-	-	-	6,654,532	6,654,532
	21,731	446,240	7,624,169	6,654,532	14,746,672
	$ 25,231	$ 446,455	$ 7,624,169	$ 6,654,532	$ 14,750,387

THE ISLANDS TRUST CONSERVANCY

Statement of Operations

Schedule 2

Year ended March 31, 2020

	Opportunity Fund	Restricted Fund	Capital Fund	Endowment Fund	2020 Total
Revenue:					
Donations:					
Cash	$ 3,486	$ 205,919	$ -	$ -	$ 209,405
Land	-	-	-	70,000	70,000
Grants	-	5,219	-	-	5,219
Rental income	-	10,306	-	-	10,306
Investment income (loss)	152	(6,271)	-	-	(6,119)
	3,638	215,173	-	70,000	288,811
Expenses:					
Repairs and maintenance - Alton property	-	2,594	-	-	2,595
Bank charges	31	-	-	-	31
Donations to conservancy groups	6,220	-	-	-	6,220
	6,251	2,594	-	-	8,846
Excess (deficiency) of revenue over expenses	$ (2,613)	$ 212,579	$ -	$ 70,000	$ 279,965

The accompanying notes are an integral part of these financial statements.

REQUEST FOR DECISION

To:	ITC Board	**For the Meeting of:**	August 24, 2021
From:	Staff	**Date Prepared:**	August 18, 2021

SUBJECT: Sidney Island Ecological Restoration Plan Approval

RECOMMENDATIONS:
That the Islands Trust Conservancy Board approve the Sidney Island Ecological Restoration Project Plan, including the Sidney Island Forest Restoration Strategy (Part A) and Fallow Deer Eradication on Sidney Island (Part B), dated July 2021 and provided to staff August 18, 2021.

That the Islands Trust Conservancy Board direct staff to work with the Steering Committee of the Sidney Island Ecological Restoration Project to develop appropriate waivers to the Sidney Island conservation covenants for the Sallas Forest Strata once an operations plan is developed to implement the Sidney Island Ecological Restoration, and to return to the Board for approval of proposed waivers.

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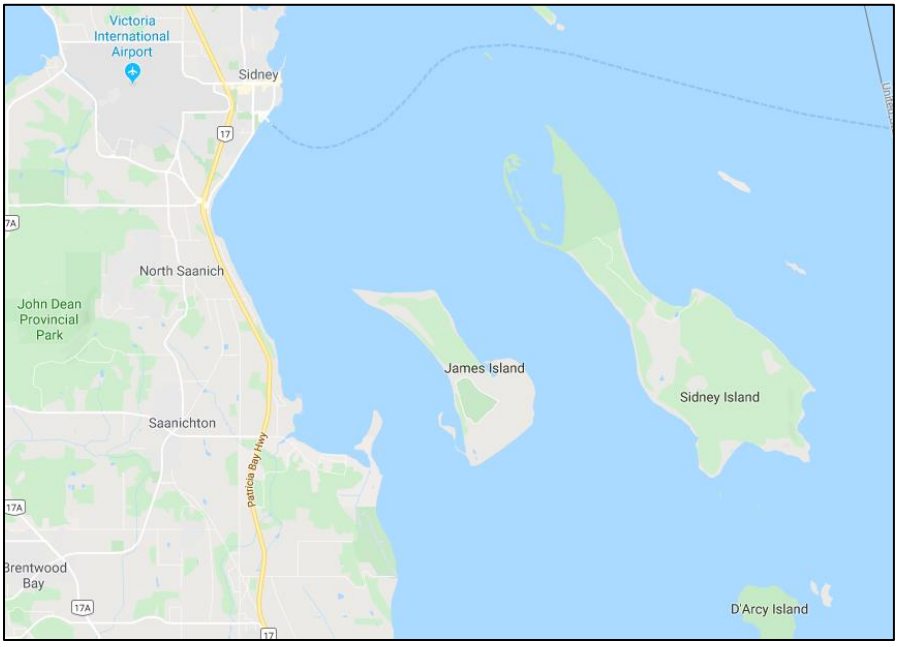
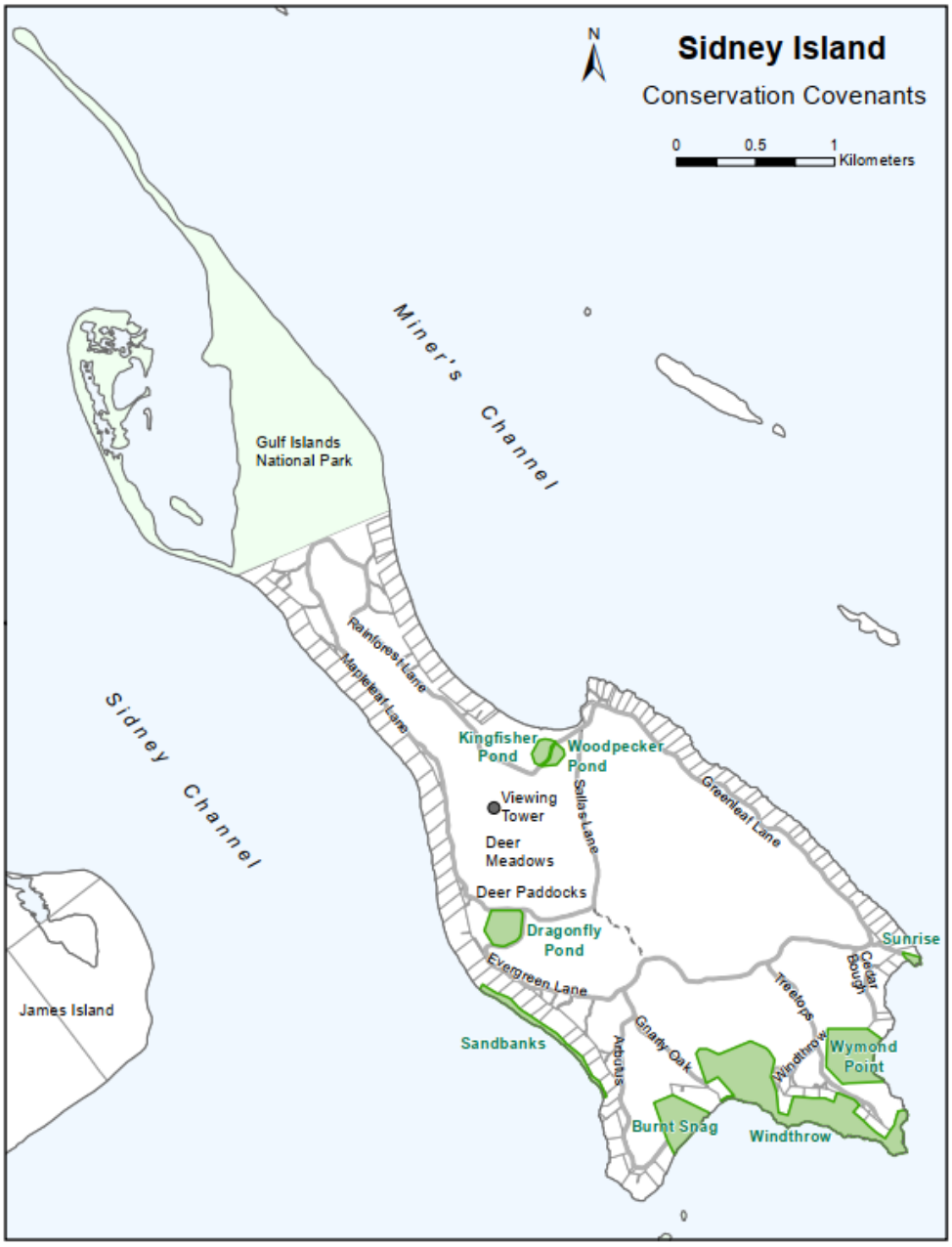
1 **PURPOSE:** To approve the proposal for the Sidney Island Ecological Restoration and to provide direction to ITC staff regarding development of appropriate waivers to the Sidney Island conservation covenants to enable the Sidney Island Ecological Restoration.

2 **BACKGROUND:** Sidney Island is in the North Pender Island Local Trust Area and is to the east of the Saanich Peninsula (Map 1). In 2001-2003, as part of the strata subdivision of Sidney Island, the ITC registered eight conservation covenants on Sidney Island (Map 2).



Map 1. Location context of Sidney Island.



Map 2. ITC covenants on Sidney Island.

In April 2020, the Islands Trust Conservancy Board, along with Sallas Forest Strata, Parks Canada Agency, and the Province of British Columbia, signed the Sidney Island Ecological Restoration Project (SIERP) Memorandum of Understanding (MOU) to work cooperatively to facilitate the recovery of Sidney Island's forest and meadow ecosystems. Since signing the MOU, the ITC has been working with the SIERP Steering Committee[1] to collaboratively develop a restoration plan. In August 2020, the SIERP Steering Committee formed two independent working groups, a Vegetation Working Group and a Deer Working Group, which have worked to develop a forest restoration plan and fallow deer eradication plan. Together these plans make up the Sidney Island Ecological Restoration Project Plan (SIERP Plan).

[1] The SIERP Steering Committee includes the W̱SÁNEĆ Leadership Council (representing the SȾÁUTW̱ (Tsawout), W̱SIḴEM (Tseycum) and W̱JOŁEŁP (Tsartlip)), the BOḰEĆEN (Pauquachin) First Nation, Quw'utsun (Cowichan) Tribes, the ITC, Sallas Forest Strata, Parks Canada Agency, and the Province of British Columbia.

Staff have represented the ITC at the SIERP Vegetation Working Group and the SIERP Steering Committee and have reviewed the Sidney Island Ecological Restoration Project Plan. A draft of the SIERP Plan was provided to the ITC Board for discussion at the May 25, 2021 board meeting. The SIERP Plan is now complete and ready for final approval. Edits of note include:

- Addition of information about community consultation (Part C: Results of Community Consultation);
- Edits to the Deer Eradication Plan as follows:
    - Addition of Section "3.5 Biosecurity Plan";
    - Addition of Section "4.3 Managing Black-tailed Deer Following Eradication"; and
    - Addition of Section "5.8 Post-eradication Clean Up."

The SIERP Plan has also been shared with the public via Parks Canada's Impact Assessment process under the federal *Impact Assessment Act* (see: https://aeic-iaac.gc.ca/050/evaluations/proj/81629?version=6724&culture=en-CA).

3 IMPLICATIONS OF RECOMMENDATION:

ORGANIZATIONAL: Once the SIERP Plan is approved by all parties, staff time is required to participate in project management and review of the operations plan.

FINANCIAL: None at this time, although legal costs may arise through discussions of liability. These costs would be anticipated to be under $1,000.

POLICY: None.

IMPLEMENTATION/COMMUNICATIONS: Staff will communicate the decision of the ITC Board to the Steering Committee. The SIERP Steering Committee has a Communications Working Group for the project to respond to communications needs related to public engagement. ITC is represented on the Communications Working Group.

FIRST NATIONS: The Provincial Consultative Areas Database identifies the following First Nations for consultation for Sidney Island:

- Penelakut Tribe
- Cowichan Tribes
- Tsartlip First Nation
- Stz'uminus First Nation
- Lyackson First Nation
- Tsawout First Nation
- Te'Mexw Treaty Association
- Pauquachin First Nation
- Lake Cowichan First Nation
- Songhees First Nation
- Semiahmoo First Nation
- Halalt First Nation
- Tseycum First Nation

The Steering Committee includes representation from the WSANEC Leadership Council (representing the Tsartlip, Tseycum and Tsawout Nations), the Pauquachin First Nation and Cowichan Tribes. Penelakut Tribe has also been involved in the Steering Committee in earlier meetings and Parks Canada has reached out to Lyackson, Halalt, and Stzuminus Nations.

The park reserve portion of Sidney Island will be closed to the public starting November 1st, to facilitate Indigenous hunting.

CLIMATE CHANGE: Restoring forest habitat on Sidney Island will increase carbon sequestration as the growing vegetation removes and stores carbon from the atmosphere. This project may mitigate biodiversity loss through protection, reintroduction and enhancement of native species and management of ecologically damaging invasive species. The restoration of vegetation will also help to control erosion, which is an important factor as the climate changes and storm intensity increases, and also because Sidney Island is naturally very susceptible to erosional processes. Climate change is considered one of the greatest threats to biodiversity.

4 RELEVANT POLICY(S):

2.1 Board Approval of Projects and Transactions
3.1 Islands Trust Conservancy and Local Planning Services Coordination
3.3 Relationships with External Groups Policy

5 ATTACHMENT(S):

Sidney Island Ecological Restoration (SIERP) Plan, July 2021
SIERP Summer 2021 Project Update

RESPONSE OPTIONS

Recommendations:
That the Islands Trust Conservancy Board approve the Sidney Island Ecological Restoration Project Plan, including the Sidney Island Forest Restoration Strategy (Part A) and Fallow Deer Eradication on Sidney Island (Part B), dated July 2021 and provided to staff August 18, 2021.

That the Islands Trust Conservancy Board direct staff to work with the Steering Committee of the Sidney Island Ecological Restoration Project to develop appropriate waivers to the Sidney Island conservation covenants for the Sallas Forest Strata once an operations plan is developed to implement the Sidney Island Ecological Restoration, and to return to the Board for approval of proposed waivers.

Alternative:
That the Islands Trust Conservancy Board decline to approve the Sidney Island Ecological Restoration Plan.

That the Islands Trust Conservancy Board request edits to the Sidney Island Ecological Restoration Plan.

Prepared By: Kate Emmings, Manager, Islands Trust Conservancy

Reviewed By/Date: Jemma Green, Covenant Management & Outreach Specialist / August 19, 2021

Sidney Island Ecological Restoration Project

July 2021




Contents

Photographs: Cover page (clockwise from top left: Parks Canada Agency, Parks Canada Agency, Judith Cullington, Parks Canada Agency).

Background

The Impact of Fallow Deer on Sidney Island Ecology

The ecosystems of Sidney Island have been radically transformed since the introduction of non-native fallow deer (*Dama dama*) in the first part of the 20th Century. Despite ongoing control efforts, the fallow deer population has significantly impacted understorey vegetation and ecosystem processes, negatively impacting native plant and animal species.

While other options have been considered, the eradication (100% removal) of fallow deer is the single most significant management action that can be undertaken to restore the natural processes, facilitate forest recovery, and protect the species that are dependent on the habitats Sidney Island supports (Golumbia 2008).

Sidney Island Ecological Restoration Plan (SIERP)

A cross-jurisdictional initiative known as the Sidney Island Ecological Restoration Project (SIERP) has been established to create a collaborative approach to manage native populations of plants and animals and ecosystem processes impacted by non-native invasive species, fallow deer in particular, on Sidney Island. This collaboration is made up of seven partners:

In April 2020, Sallas Forest Strata, Islands Trust Conservancy, Parks Canada Agency, and the Province of British Columbia signed a Memorandum of Understanding (MOU) (see **Appendix**) to work cooperatively to facilitate the restoration of the Sidney Island forests and meadows. W̱SÁNEĆ Leadership Council and Pauquachin Nation leadership provided signed letters of support. This MOU provided clear direction to consider the option of complete eradication of fallow deer on Sidney Island, and to plan forest restoration activities to support recovery of the island ecosystems.


Memorandum of Understanding
on the Collaborative Restoration of
Sidney Island, British Columbia
The Sidney Island Ecological Restoration Project
Between
Parks Canada Agency (Gulf Islands National Park Reserve)
(hereinafter referred to as Parks Canada)
A body corporate established under section 3 of the Parks Canada Agency Act, (Canada)
-and-
Sallas Forest Strata Corporation
(hereinafter referred to as Sallas Strata)
A strata corporation established under the Strata Property Act (British Columbia)
-and-
Islands Trust Conservancy
(Hereinafter referred to as ITC)
A corporation under the Islands Trust Act (British Columbia)
-and-
Her Majesty the Queen in right of British Columbia as represented by the Minister of Forests, Lands, Natural Resource Operations and Rural Development)
(Hereinafter referred to as The Province)
A regulatory body responsible for the management of wildlife in the Province
Together referred to as the "Participants" and each referred to as a "Participant"
WHEREAS the Participants share complementary priorities to work towards a healthy, sustainable, and balanced native forest ecosystem on Sidney Island.
8. Signatures
The Participants have entered into this Memorandum of Understanding to cooperate towards ecological restoration of Sidney Island, as attested by the signatures of their duly authorized representatives for such purposes.
For the Parks Canada Agency:
Signature
Name: Marcia Morash
Title: Superintendent, Gulf Islands National Park Reserve of Canada
April 16, 2020
Sidney, B.C.
Dated: City, Province
For Sallas Forest Strata Corporation:
Signature
Name: Ross C. McCutcheon
Title: President, Sidney Island Strata Council
April 20, 2020
Sidney, B.C.
Dated: City, Province
For Islands Trust Conservancy:
Signature
Name: Kate-Louise Stamford
Title: Chair, Islands Trust Conservancy Board
April 21, 2020
Gambier Island, B.C.
Dated: City, Province
For The Province:
Signature
Name: Mike Stalberg
Title: A/Director Resource Managment
May 20, 2020
Dated: City, Province
Nanaimo, B.C.

Memorandum of Understanding (first and last pages)

The purpose of the MOU was:

- "To coordinate an integrated approach, across jurisdictions, to manage native populations of plants and animals and ecosystem processes impacted by non-native invasive species, fallow deer in particular, on Sidney Island;
- To reflect the intent of all Participants to work together in good faith towards the goals and objectives of the Project as stated in Part 3 of the MOU: *Vision, goal and objectives*; and
- To develop and strengthen the Participants' relationships over time and to work together in an open and transparent manner."

This SIERP project is funded through the federal Fur to Forest program (managed by Parks Canada Agency) that is addressing the management of hyperabundant black-tailed deer in the Gulf Islands National Park Reserve (GINPR), and invasive fallow deer on Sidney Island.

MOU Vision, Goals and Objective

Vision: The vision for Sidney Island is an island with healthy native forests, meadows, and ecosystem processes that support native wildlife and human well being. Relationships within and between communities are strengthened by a shared desire and collective responsibility for continued recovery and preservation of the natural environment.

Goal: The goal of the Project is to work respectfully towards a healthy, sustainable, and balanced native forest ecosystem on Sidney Island.

Objectives:

1. Collaboratively plan and implement eradication of fallow deer, and prevention of re-invasion.
2. Collaboratively develop a forest restoration strategy, including invasive plant management and native plant restoration.
3. Collaboratively develop a viable management strategy for black-tailed deer post-eradication.

Steering Committee and Working Groups

A SIERP Steering Committee, with representation from all of the project partners, has been leading the implementation of the project objectives.

In August 2020, two working groups were established. These groups, made up of representatives from the project partners, were tasked with developing plans for the three objectives. The Vegetation Working Group developed **Part A: Sidney Island Forest Restoration Strategy** and the Deer Working Group has developed **Part B: Fallow Deer Eradication on Sidney Island**. The Deer Working Group will also prepare management strategies for black-tailed deer and biosecurity.

SIERP members and advisors discussing restoration opportunities. Photo Judith Cullington.

Forest Restoration

As described in **Part A: Sidney Island Forest Restoration Strategy**, the most significant action to restore the forest and other island ecosystems is the removal of the fallow deer. In the interim, the Vegetation Working Group are recommending establishing a series of deer exclosures throughout the island and planting them with native species that were or are found naturally in these ecosystems, including plants that are culturally important to local Indigenous people and can be harvested once they are sufficiently abundant. The Forest Restoration Strategy also highlights the importance of removing invasive plants, notably English hawthorn which is present in the island meadows.

Fallow Deer Eradication

Eradication of a deer population is not something to be taken lightly, even for an invasive deer species. However, all project partners agree that the eradication of invasive fallow deer provides the best opportunity for the forest ecosystems on Sidney Island to thrive. Eradication would be undertaken by globally recognized teams with extensive expertise and would adhere to internationally-accepted principles for humane and ethical wildlife control. Eradication will take place during the appropriate biological window (September to May), which also coincides with times when there are fewest people on the island.

As outlined in **Part B: Fallow Deer Eradication on Sidney Island**, the Deer Working Group have recommended multiple eradication methods, to be used at different periods of the project, as deer behaviour changes over time. The primary methods would be:

- Aerial shooting. This is a well-established, effective and safe method, that would likely be used for a short period of time.
- Fenced zoning. Teams would temporarily fence off sub-sections of the island, and marksmen with specially trained dogs would dispatch deer from each zone before moving to the next, gradually clearing the island from south to north.
- Other methods that could be used as required are spotlight/FLIR (forward-looking infrared) shooting; bait station shooting; drop netting; sentinel deer monitoring; and use of the Sallas capture facility (active and passive capture).

There is a small population of native black-tailed deer on Sidney Island. As the retention of these deer compromises the likelihood of achieving eradication success, all of these deer will be incidentally dispatched during the eradication process. The Deer Working Group recommends that black-tailed deer be allowed to naturally repopulate the island (by swimming from nearby islands); however, Sidney Islanders may express a preference for translocating some deer to Sidney Island. Please see **Part B: Fallow Deer Eradication on Sidney Island Section 4** for details.

The Deer Working Group considered many factors when developing the eradication plan: following the internationally recognized principles of eradication, using a “one-island” approach, using adaptive management approaches, considering the wellbeing of people and the deer, and following bylaws, regulations and Indigenous processes. **Part B: Fallow Deer Eradication on Sidney Island Section 5** describes how eradication may impact residents and visitors, and how those impacts will be minimized

and mitigated. It also outlines some of the work required during the preparation for and implementation of the eradication process (**Section 6**).

Feedback Received on the Draft Document

An earlier version of this document (*Draft for Community Comment*) was provided to the SIERP partners and their communities and organizations to give a sense of what a fallow deer eradication plan and forest restoration plan for Sidney Island would involve. The document also includes the reasoning behind the proposed approaches, the recommended methodologies, and the work required to make this happen. This draft was shared with all project partners, with a request for feedback.

At the same time, Parks Canada Agency sought public input through their Detailed Impact Assessment (DIA) process.

The DIA process resulted in 29 comments, with another ~50 from the Sidney Island community in response to the *Draft for Community Comment*. The comments, with notes on where this document has been updated in response, are summarized in **Part C: Results of Consultation**.

This FINAL document incorporates minor changes resulting from the input received. This document outlines the project design and describes the approaches and rationale behind the methods that will be used. It can be used by the partners to determine if they do or do not support moving forward with the plans.

Appendix: Memorandum of Understanding

Memorandum of Understanding
on the Collaborative Restoration of
Sidney Island, British Columbia

The Sidney Island Ecological Restoration Project

Between
Parks Canada Agency (Gulf Islands National Park Reserve)
(hereinafter referred to as Parks Canada)
A body corporate established under section 3 of the *Parks Canada Agency Act*, (Canada)

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Sallas Forest Strata Corporation
(hereinafter referred to as Sallas Strata)
A strata corporation established under the Strata Property Act (British Columbia)

-and-

Islands Trust Conservancy
(Hereinafter referred to as ITC)
A corporation under the *Islands Trust Act* (British Columbia)

-and-

Her Majesty the Queen in right of British Columbia as representd by the Minister of Forests, Lands, Natural Resource Operations and Rural Development)
(Hereinafter referred to as The Province)
A regulatory body responsible for the management of wildlife in the Province

Together referred to as the "Participants" and each referred to as a "Participant"

WHEREAS the Participants share complementary priorities to work towards a healthy, sustainable, and balanced native forest ecosystem on Sidney Island.

WHEREAS Parks Canada is mandated to maintain and restore the health of the ecosystems of Canada's national parks and national park reserves, including the 426 acres of Sidney Island that are a part of Gulf Islands National Park Reserve. Guidance regarding the management of exotic species is provided by the Parks Canada Guiding Principles and Operational Policies, which states that all practical efforts will be made to prevent the introduction of exotic plants and animals into national parks, and to eliminate them when it is feasible to do so.

WHEREAS Sallas Strata owners have as a priority the continued recovery and preservation of the natural environment, in particular forests, ponds, and plant life, as set out in the 2016 Sallas Strata Community Planning Document. Sallas Strata owners collectively and individually hold fee simple title over Strata Plan VIS5122, the approximately 1700 acres of land that encompass the southern two thirds of Sidney Island.

WHEREAS The Islands Trust Conservancy (ITC) is a corporation of the provincial government under the *Islands Trust Act* (British Columbia) with the express purpose of carrying out the objective of the Islands Trust, which is "to preserve and protect the trust area and its unique amenities and environment for the benefit of the residents of the trust area and of British Columbia generally, in cooperation with municipalities, regional districts, improvement districts, other persons and organizations and the government of British Columbia." To carry out this purpose, ITC may hold and manage lands and interests in lands. The ITC currently holds interests on 133 acres of land on Sidney Island through covenants held under Section 219 and statutory rights of way held under Section 218 of the *Land Title Act* (British Columbia). These covenants state that the lands contain significant amenities, including flora, fauna and natural features of great importance, and state an intent to protect, preserve, conserve, maintain, enhance or restore the lands and their amenities in a natural state.

WHEREAS The Province is responsible for the conservation and management of wildlife populations and habitat in BC outside of national parks and national park reserves, including non-native fallow deer. The *Wildlife Act* (British Columbia), establishes that "ownership in all wildlife in British Columbia is vested in the government". Hunting and trapping regulations for all wildlife species including fallow deer are set by the province with conservation of native species as a priority.

AND WHEREAS all Participants respect the deep connection that First Nations have to the land, with stewardship responsibilities to the land and nearshore marine environments, and support the continued involvement of local First Nations in the Sidney Island Ecological Restoration Project.

Now THEREFORE the participants intend to work cooperatively within and consistent with their respective mandates, to facilitate restoration of the Sidney Island forests and meadows as a whole through collaboration of the Participants in the Sidney Island Ecological Restoration ("SIERP" or the "Project").

THIS MEMORANDUM OF UNDERSTANDING (MOU) THEREFORE ESTABLISHES that the Participants express their intentions as follows:

1. **Purpose**

The purpose of this MOU is:

- To coordinate an integrated approach, across jurisdictions, to manage native populations of plants and animals and ecosystem processes impacted by non-native invasive species, fallow deer in particular, on Sidney Island.

- To reflect the intent of all Participants to work together in good faith towards the goals and objectives of the Project as stated in Part 3 of the MOU: *Vision, goal and objectives*.

- To develop and strengthen the Participants' relationships over time and to work together in an open and transparent manner.

2. Context for Project

Global

- Island ecosystems are critically important for biodiversity conservation because many species occur only on select islands (<5% of the earth's surface, but support >20% of bird, reptile and plant species).

- Islands play key roles in larger marine ecosystem dynamics, including healthy nearshore marine systems, reefs and global nutrient cycling, as the primary breeding habitat for species of seabirds and seals with dual marine-terrestrial life history.

- Island shorelines are key habitat for invertebrate and fish species, including important nursery and breeding areas for young fish and invertebrates which are important food sources for birds and mammals.

- Islands are key to the livelihoods, economies, well-being and cultural identities of 600 million islanders—or one-tenth of world's population.

- Globally, about 40% of all threatened species on the International Union for the Conservation of Nature (IUCN) Red List of Threatened Species are found on islands.

- Non-native species have been introduced to thousands of islands globally, including the Gulf Islands, often causing major deleterious ecosystem impacts. As a result, invasive non-native species on islands are the leading cause of documented species extinctions, a leading threat to many species and prominent disruptors of ecosystem processes. Recovery of native species and ecosystem processes is proven to be possible by the removal of invasive non-native species from islands.

- To date, more than 1,100 successful eradications of invasive non-native species from over 750 islands have been accomplished worldwide using globally proven eradication techniques, including over 230 whole island ungulate eradications, delivering multiple benefits to the people that rely on the islands and to the migratory birds, wildlife resources, and nearshore marine waters.

British Columbia

- BC's Gulf Islands are important for biodiversity conservation in Canada: the Coastal Douglas-fir biogeoclimatic zone which includes significant areas of the Southern Gulf Islands is home to the highest plant diversity and overwintering bird diversity in BC, including many unique plants and animals that do not occur elsewhere in Canada. It is also highly imperilled, with the highest density of at-risk species and ecosystems, and over 150 invasive non-native species.

- Coast Salish peoples have been active as managers and stewards of the lands and waters of BC's Gulf Islands for millenia. Many of the plants, animals and areas found within the Gulf Islands have significant cultural importance and are negatively impacted by invasive non-native species, including fallow deer.

Sidney Island

- Fallow deer are considered a non-native species because they are introduced from Europe and are considered *invasive* because they have the ability to spread to other islands and negatively impact many native species. On Sidney Island, fallow deer have significantly degraded the island ecosystem, resulting in lower bird diversity, shrub cover, and decreased plant species richness when compared to other islands in the region.

- Sidney Island is home to rare plant species, such as rigid apple moss, that are listed under the Species at Risk Act (Canada), which are likely negatively affected by the presence of fallow deer.

- Sidney Island includes identified sensitive ecosystems, including terrestrial herbaceous, coastal bluff, coastal cliff and wetland ecosystems.

- The vegetation and forests of Sidney Island are important to natural coastal systems, including marine ecosystems which rely on vegetated coastlines for regulation of beach temperatures for spawning fish, overhanging vegetation for food sources and root structures for stabilization of shorelines.

- Sidney Island represents a unique opportunity to restore a significant tract of the Coastal Douglas-fir biogeoclimatic zone. The eradication of invasive non-native fallow deer, represents a critical primary activity for achieving broader ecological and cultural restoration goals.

- With the eradication of fallow deer from Sidney Island, native black-tailed deer and native plants may recover, and occurrences of invasive plants may increase. Eradication of fallow deer must therefore be accompanied by collaborative management strategies for black-tailed deer and invasive plants.

- With the eradication of fallow deer from Sidney Island, reinvasion of fallow deer to Sidney Island will be a continued threat requiring effective biosecurity guidance and implementation to protect the island and respond effectively.

3. Vision, Goal and Objectives

Vision: The vision for Sidney Island is an island with healthy native forests, meadows, and ecosystem processes that support native wildlife and human well being. Relationships within and between communities are strengthened by a shared desire and collective responsibility for continued recovery and preservation of the natural environment.

Goal: The goal of the Project is to work respectfully towards a healthy, sustainable, and balanced native forest ecosystem on Sidney Island.

Objectives: The objectives of the Project include the following:

1. Collaboratively plan and implement eradication of fallow deer, and prevention of re-invasion.
2. Collaboratively develop a forest restoration strategy, including invasive plant management and native plant restoration.
3. Collaboratively develop a viable management strategy for black-tailed deer.

In addition to achieving the objectives, the Participants anticipate that the Project will achieve the following outcomes:

- Facilitated recovery of the natural environment;
- Facilitated recovery of culturally important species and practices;
- Facilitated use and enjoyment of the Island, within the Park Reserve; and,
- Strengthened relationship of the Participants related to Sidney Island.

4. Project Phases

The Project will occur in three phases:

Phase 1: Collaboratively develop the project plan and, if necessary, conduct trials, to inform project development.

Phase 2: Impliment the project, including monitoring, and adaptive management.

Phase 3: Sustain the project into the future and maintain the restoration of Sidney Island.

This MOU represents the intention of the Participants to undertake Phase 1. The collaborative process will generate a project plan. Following the completion of the project plan, and review of the planning outcomes, the Participants will each decide whether they support moving to Phase 2. This MOU is not intended to represent a commitment to Phase 2.

5. Acknowledgements of Participants:

The Participants acknowledge:

- First Nations will continue to be involved in project planning, and will also evaluate planning outcomes.
- Fallow deer eradication is a critical step towards the long-term sustainable ecological restoration of Sidney Island.
- Eradication of any species is always a difficult decision and is not a normal component of local Indigenous cultures. However, when an introduced species is dramatically impacting the survival of native plants and animals, action must be taken to restore balance to the ecosystem.
- Fallow deer eradication means that every single individual fallow deer is removed from Sidney Island, and this is only possible if all Participants are supportive of this goal.
- Sidney Island is one island, and the Participants envision a "one island, one project" approach and strategy. Because Sidney Island is a whole functioning ecosystem, the opportunity exists to permanently remove (eradicate) an invasive non-native species (fallow deer) and ensure that it is a permanent solution through prevention of re-invasion.
- The SIERP has the potential to serve as a model and provide a vision for all the Gulf Islands – an opportunity to facilitate healthy ecosystems by engaging in collaborative deer management.
- People are part of the landscape in which this Project will be developed and implemented:
    - For many Sidney Islanders the island is now home year-round or seasonally,
    - First Nations have a deep connection to the land, with stewardship responsibilities to the land and nearshore marine environment; and continue to use parts of the Island for access to food, medicines, and cultural practices,
    - Visitors to the Park Reserve use and enjoy the area seasonally.
- Deer management activities must be conducted humanely in accordance with locally and globally recognized animal welfare standards.
- The outcomes of the Project will result in changes to the ecosystem of Sidney Island, as well as changes beyond biodiversity. It is anticipated that the benefits and unexpected outcomes go beyond just the ecosystem, but include human communities as well.
- The SIERP is an opportunity to integrate multiple ways of knowing, including traditional knowledge, local knowledge, and scientific knowledge into ecosystem management.

- Island restoration success stories, and the lessons learned from the global community can be used to inform the Project. Further, each Participant has a history of collaboration with one or more of the other Participants toward restoration objectives, which includes fallow deer control (not eradication) efforts implemented over decades.

- Supporting and honouring mutually respectful relationships between and among community members, including reconciliation with Coast Salish Peoples, is important.

- The Participants intend to support communication with the public, Sallas community members, park reserve visitors, First Nations communities, local government, and others, to facilitate the Sidney Island Ecological Restoration Project.

- The Participants support the development of a coordinated approach to monitor, communicate, and respond to media inquiries and may, by agreement, appoint one or more of the Participants to act as a spokesperson for the Project.

- Each Participant is uniquely positioned to contribute to the Project.

6. Intentions of the Participants

Parks Canada Intends to:

- Facilitate the development and implementation of a collaborative planning process, for the purpose of achieving the Project objectives outlined above.
- Provide resources as available for the Project.
- Coordinate meetings of the Project steering committee.

Sallas Strata Intends to:

- Work with the MOU participants on the development and implementation of a collaborative planning process.
- Work collaboratively to develop the plan contemplated by the MOU.
- Support participation of Sallas Strata in project-related activities as needed.
- Make decisions regarding Project approvals within their jurisdiction moving forward.
- Engage with Sallas Strata owners to explore whether and how to provide access to common and private lands for project-planning purposes.
- Identify Sallas Strata by-laws that may be relevant to project-related activities.
- Identify Sallas Strata by-law exemptions that may be required to facilitate the implementation of Phase 2.

Islands Trust Conservancy Intends to:

- Interpret the covenants held by the ITC on Sidney Island as they relate to this Project.
- Communicate to all Participants covenant restrictions and any required approvals within their jurisdiction related to Project activities.

- Provide staff resources for on-the-ground management, where appropriate and as approved by the ITC.
- Provide other resources, as available and as approved by the ITC, for the Project .
- Act as a liason in respect of the Project with Islands Trust.

The Province Intends to:

- Consult the Provincial regulatory framework to provide guidance regarding permitting and other necessary regulatory approvals in respect of the Project.
- Consider Project specific regulatory authorisations where necessary
- Provide advice, expertise and equipment when available and where needed.

7. General Terms

7.1 Funding and Resources

7.1.1 Specific legal agreements may be negotiated jointly between the Participants, if required, to address any issues respecting commitment of funds or other resources, to carry-out activities associated with this MOU.

7.2 Communications, Products and Marketing

7.2.1 Any communications, products or marketing material developed, or referencing the cooperation under this MOU, must comply with each Participant's policies and guidelines on the use of their official trademarks and symbols, and will be agreed upon by the Participants before it can be used.

7.2.2 Each Participant understands that any recognition in respect of cooperation or activities under this MOU will not constitute or imply endorsement of each other's products or services.

7.3 Independent Activities

This MOU does not limit the Participants' autonomy within their respective operations, including the ability to enter into other cooperative arrangements with other partners.

7.4 Exchange of Information

7.4.1 The Participants will endeavour to exchange information in order to support the vision, goals and objectives of this MOU. The Participants acknowledge that they may be bound by policies, protocols or laws that dictate how information can be used and shared. Further agreements may be developed by the Participants in order to facilitate the respectful exchange of information as appropriate and desired by the Participants.

7.5 Financial Considerations

7.5.1 Each Participant understands and acknowledges that there is no financial obligation to the Project or any other Participant as a result of entering into this MOU.

7.6 Duration

7.6.1 This MOU will come into effect upon the date of the last signature and will remain in effect for a period of three (3) years from this effective date and may be renewed for a further term or terms by agreement of the Participants. Prior to the end of the term of this MOU, within a timeframe agreed upon by all Participants, the Participants will conduct a joint evaluation to inform future direction of the cooperation.

7.6.2 The Participants intend to meet annually to review this MOU and to ensure that their respective and combined needs and longer term goals are being met. The time, place and format of the meeting, whether in person or by teleconference, will be agreed upon by the Participants.

7.6.3 This MOU may be amended in writing at any time with the consent of the Participants.

7.6.4 A Participant may withdraw from the MOU at any time, upon giving of ninety (90) days prior written notice to the other Participants.

7.7 Resolution of Disagreements

Any disagreement regarding the application or interpretation of this MOU will be resolved by consultation among the Participants and will not be referred to a third party for resolution.

7.8 Legal Disclaimer

7.8.1 This MOU is not a contract and does not create any legally-binding obligations among the Participants, but represents their desire to cooperate, collaborate and to exchange information and knowledge for the benefit of the Project.

7.8.2 The Participants acknowledge that this MOU does not constitute an association for the purpose of establishing a legal partnership or joint venture and does not create an agency relationship between or among any of the Participants and that it in no way implies any agreement or undertaking to conclude any subsequent agreement.

8. Signatures

The Participants have entered into this Memorandum of Understanding to cooperate towards ecological restoration of Sidney Island, as attested by the signatures of their duly authorized representatives for such purposes.

For the Parks Canada Agency:

Signature
Name: Marcia Morash
Title: Superintendent, Gulf Islands National Park Reserve of Canada

April 16, 2020
Sidney, B.C.
Dated: City, Province

For Sallas Forest Strata Corporation:

Signature
Name: **Ross C. McCutcheon**
Title: **President, Sidney Island Strata Council**

April 20, 2020
Sidney, B.C.
Dated: City, Province

For Islands Trust Conservancy:

Signature
Name: Kate-Louise Stamford
Title: Chair, Islands Trust Conservancy Board

April 21, 2020
Gambier Island, B.C.
Dated: City, Province

For The Province:

Signature
Name: Mike Stalberg
Title: A/Director Resource Managment

May 20, 2020
Dated: City, Province
Nanaimo, B.C.

Sidney Island Ecological Restoration Project

Part A: Sidney Island
Forest Restoration Strategy

July 2021



SIERP Vegetation Working Group

Contents

Figures

Tables

Acknowledgements

The SIERP Forest Restoration Strategy was prepared by the Sidney Island Ecological Restoration Project Vegetation Working Group:

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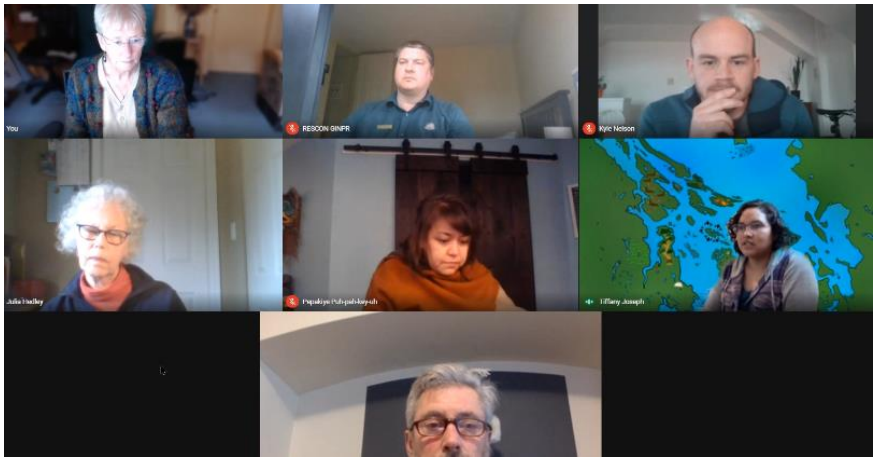


Funding for the SIERP is provided by the federal Fur to Forest program.

Photographs: Cover page (clockwise from top left: Parks Canada Agency, Parks Canada Agency, Fritz Mueller Visuals, Judith Cullington).

1. Introduction

1.1. The SIERP Vegetation Working Group

The SIERP Memorandum of Understanding (MOU) set an objective to:

- *Collaboratively develop a forest restoration strategy, including invasive plant management and native plant restoration.*

The Vegetation Working Group was tasked to provide advice to the SIERP Steering Committee, including working collaboratively to develop the Forest Restoration Strategy. The Working Group included representatives from Sallas Forest Strata, W̱SÁNEĆ Leadership Council, Islands Trust Conservancy and Parks Canada. (Pauquachin Nation and Cowichan Tribes were invited but unable to participate.) This diverse group enabled the sharing of Indigenous, local and scientific knowledge.

1.2. Purpose of Forest Restoration Strategy

The Working Group were asked to consider appropriate methods for restoration of the Sidney Island forests, both in the presence of fallow deer (prior to eradication) and following eradication. These are set out on this part of the document.

The Forest Restoration Strategy rests on the shoulders of the fallow deer eradication. The project funders (the federal Fur to Forest Program) will not continue to provide funding for forest restoration activities unless it is coupled with fallow deer eradication, recognizing that the persistence of a fallow deer population would undermine attempts to restore the natural ecology. However, necessary preliminary work building and planting exclosures, and removing invasive species, is continuing in advance of that final determination.

2. The Ecology of Sidney Island

2.1. Past

Indigenous peoples have used and stewarded this island for thousands of years.

W̱SÁNEĆ peoples once lived in the winter village of ȾELXOLU on what is known, in BC geography, as Sidney Island (Figure 1). The islets named by settlers as Sallas Rocks, have been known to the W̱SÁNEĆ as XEXMELOSEṈ long before settler arrival. And what Parks Canada staff members call Eagle Islet, the W̱SÁNEĆ say is known better to them as SḴEḴEŦÁMEN. When W̱SÁNEĆ people would paddle from their villages on the Saanich Peninsula and were crossing to their villages in the San Juan Islands, JSIṈTEN says the people would take a stopover at W̱YOMEĆEṈ to take a break. W̱YOMEĆEṈ means place of caution, perhaps this was a reminder to the W̱SÁNEĆ people to look after themselves in their travels. W̱IĆK̠INEM says his elders would harvest ferns on these islands, which were said to grow to heights taller than the height of an adult person.

Figure 1: W̱SÁNEĆ place names.

Map courtesy W̱SÁNEĆ Leadership Council

When you look at historical maps, you'll see evidence of meadows, particularly in the area of what is now an airstrip. These meadowlands were places for W̱SÁNEĆ families to grow ḰŁO,EL , camas. This camas was a food staple to the W̱SÁNEĆ people. Many animals, such as deer, also enjoy the meadowlands to forage for food, and this was a prime opportunity for W̱SÁNEĆ hunters to harvest deer to feed their families. The wetlands would have drawn other hunters in the form of birds of prey like the hawks, and would be great habitat for amphibians.

The W̱SÁNEĆ peoples' experience of Sidney Island would have been much more abundant in biodiversity of plants, amphibians, birds, and insects. It wasn't long ago that a person could lay in a field among the hum of bees pollinating the meadow. And, perhaps today you can still hear the frogs croaking during the WEXES moon (the second moon of the W̱SÁNEĆ new year). This moon tells us spring has arrived, and the flowers will be blooming, and that our canoe travels will be safer now that the fall and winter storms are over. This ṮEṮÁĆES is a relative of the deep, placed in the sea by our creator XÁLS to protect the W̱SÁNEĆ peoples. And, XÁLS bestowed, upon the W̱SÁNEĆ people, the responsibility to care for these relatives as well. Living on the islands, harvesting seafoods, meat, plants, and medicines, tending to the meadows with controlled burns, and selectively harvesting logs for cedar longhouses and cedar canoes, and stripping cedar bark for baskets and clothing were all integral to the well-being of the W̱SÁNEĆ people and every area of the territory.

2.2. Present

As a result of European settlement, First Nations were systematically removed from much of their traditional lands. Predators like wolves and cougars are now mostly absent, and Indigenous hunting in the Gulf Islands is less prevalent than it once was.

Settlement of Sidney Island has created many changes to the natural ecosystems, exacerbated by a large population of invasive fallow deer introduced to nearby James Island in the early 20th Century for sport hunting. After fallow deer colonized Sidney Island many decades later, the population grew until it was estimated that the island had the densest population of fallow deer in the world. This has had devastating effects for the diversity and structure of the forest vegetation, as well as the flora and fauna that depend on it.

Extensive deer control efforts by Sidney Islanders have reduced fallow deer populations, enabling some recovery of the understorey vegetation since 'peak deer' populations in 2008-09. However, the understorey, where a variety of plants should cover the forest floor, is lacking in diversity and abundance with the exception of less palatable plants such as salal (Figure 2). The "next generation" of trees like arbutus, Garry oak, bigleaf maple, are rare, as seedlings are eaten by the deer (unless protective fencing is provided). There is a stark absence of young ocean spray plants and wildflowers that bring diversity and beauty to the island. Typical shrub species, such as Saskatoon berry and huckleberry, are rare.

Figure 2: Sallas forest showing lack of understorey diversity (2021).

Photo Judith Cullington.

As a result of its fallow deer population, Sidney Island has the unfortunate distinction of being the least diverse island in the region (Martin *et al.* 2011). Research conducted in the region has found that the cover, richness, and diversity of native shrubs is significantly lower in areas with abundant deer compared to areas with little or no deer (Arcese *et al.* 2014). Recent monitoring data indicates that shrub species richness and cover was lower for Sidney Island when compared to D'Arcy Island, where native black-tailed deer are hyperabundant, and Portland Island, which has no deer (Paleczny 2018).

Many of the island's songbirds, particularly those that nest in the forest understorey, are also absent. Songbird communities are an indicator of the impacts of overbrowsing by deer, as many bird species depend on understorey vegetation for foraging and nesting habitat. In a survey of 18 islands in the southern Gulf Islands and San Juan Islands, Sidney Island had both the highest density of deer as well as the least diverse songbird community out of all islands studied (Martin *et al.* 2011). Songbird monitoring

studies conducted by Parks Canada in 2015 indicated that Sidney Island had the lowest abundance of songbirds of island studies in the region (Lawn 2015).

2.3. And Future?

The Society for Ecological Restoration defines ecological restoration as: "*The process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed*."[1] This approach recognizes that the task is to assist a natural recovery process, by addressing ecosystem threats and supporting natural processes to enable the degraded ecosystem to gradually recover to a more natural state.

On Sidney Island, an exceptional opportunity exists to restore, protect and maintain at-risk coastal Douglas-fir forests. The potential exists for an island with abundant native vegetation that would support cultural practices and healthy animal communities. This Forest Restoration Strategy sets out a proposed approach to assist island ecosystems along the path to ecological restoration.

There is reason for optimism. Eagle Islet (located within Sidney Lagoon) was fenced off in 2008 to keep deer out. With ongoing fence maintenance and invasive plant control this islet has seen a flourish of regrowth (Figure 3).

Figure 3: Eagle Islet

Prior to 2008 fence construction (left) and in 2016 (right). (Photos not taken in identical locations.) Photos: Kyle Nelson.

[1] Society for Ecological Restoration. https://www.ser-rrc.org/what-is-ecological-restoration

3. Critical Threats and Their Impacts

The natural ecosystems of Sidney Island have been significantly altered and degraded in multiple ways:

- Over-browsing by **fallow deer** (an invasive, non-native species) has resulted in lower bird diversity, lower shrub cover and decreased plant species richness compared to other islands in the region. The large population of fallow deer is also thought to have contributed to low numbers of native black-tailed deer. Sidney Islanders have undertaken multiple efforts to reduce fallow deer populations over the past two decades, which has enabled some partial recovery of the island ecosystems. However, complete removal of the fallow deer population (and ongoing control of black-tailed deer numbers) will facilitate a rapid and complete ecosystem recovery.

  A collaborative monitoring program of the Sallas Ecological Stewardship Committee and Dr. Peter Arcese (UBC) provides students the opportunity to monitor vegetation recovery as a measure of deer control progress. Results of annual monitoring have demonstrated that though there is evidence of slight recovery as deer populations have been reduced, there is still a very long way to go.

- **Invasive plants** have taken over habitats of native plant species, decreasing their abundance and changing environmental conditions (water, light, nutrients). Species such as English hawthorn and Scotch broom are particularly widespread (Figure 4), as are many non-native grasses and forbs.

- **Historic human activities** (agriculture and manufacturing) have led to clearing of once-forested areas. These activities have created disturbed areas that enable invasive species such as Scotch broom to colonize these areas.

- **Forestry activities** (mostly now discontinued in the park reserve but ongoing on Sallas side) have led to an even-aged forest, and few forest openings that would encourage understorey growth.

- **Development** of residences has resulted in clearing of land for buildings and gardens, and creation of a gravel pit.

- **Changes in natural regimes** include:

  - The loss of Indigenous burns that kept meadows open and produce large numbers of camas and other plants, and

  - A higher risk of uncontrolled wildfire with more fuel (deadwood) on forest floor, made worse by increased summer droughts, and human activities including fire suppression.

- **Climate change** is bringing increased summer drought, extreme seasonal temperatures, extreme weather events (including high winds), as well as sea level rise.

Figure 4: Invasive species.

Clockwise from top left: English hawthorn: photo Parks Canada Agency; English hawthorn, English holly, Scotch broom: photos Judith Cullington

4. Restoration Activities on Sidney Island

Efforts to restore the vegetation on Sidney Island have taken place over many years.

Sallas Side

On the Sallas side, there have been numerous and substantial efforts to reduce the fallow deer population through recreational hunts, capture culls and professional cull hunting. Since 1982, over 14,000 deer have been removed from the island, at considerable cost and effort to Sidney Islanders.[2]

The Sallas Ecological Stewardship Committee was formed in 2012. These volunteers oversee deer control, forest management, invasive species control and monitoring.

Sallas forest has been logged extensively a couple of times in the last century. Since logging, the forest has been managed to plant replacement trees together with spacing, pruning and occasional thinning. The resulting forest is made up of uniform stands of trees with closed canopy, and very little diversity. Deer have browsed any understorey there may have been, with the exception of salal. This year (2021), forest management work included two micro-cuts designed to open the canopy and create the opportunity to plant a variety of species in these open areas.

The committee have also worked on invasive plant removal, seeking viable strategies for control of invasive English hawthorn and Scotch broom.

Park Reserve

Restoration efforts on Sidney Island by Parks Canada have focused on protecting several species at risk. To expand these species' critical habitat within the sensitive ecosystem of Sidney Spit, the coverage of invasive plants has been drastically reduced and native populations have been augmented with seeding and translocation. Additional efforts to protect endangered Foothill Sedge from encroachment in the island's meadows have slowed invasive English hawthorn expansion and resulted in the sedge's population growth, but additional efforts are required to control hawthorn island-wide.

Figure 5: Scotch broom removal

Scotch broom removal on Eagle Islet. Photo: Kyle Nelson.

[2] K. Poskitt, letter to Parks Canada Agency January 2021.

5. Scope and Vision

5.1. Scope

The Vegetation Working Group agreed that the Forest Restoration Strategy should use "whole island thinking," while recognizing that different techniques may apply to different parts of the island.

There are many diverse ecosystem types on Sidney Island, including wetlands, coastal bluffs and dunes in addition to forested areas and open meadows. The Working Group agreed that SIERP activities should focus on forested ecosystems and the "forest-meadow mosaic"[3], noting that all efforts towards ecosystem restoration were welcomed and encouraged.

In developing the Strategy, the group considered a variety of goals for forest restoration, and then narrowed the scope to focus on a few activities that could be supported within the available SIERP budget (Figure 6).

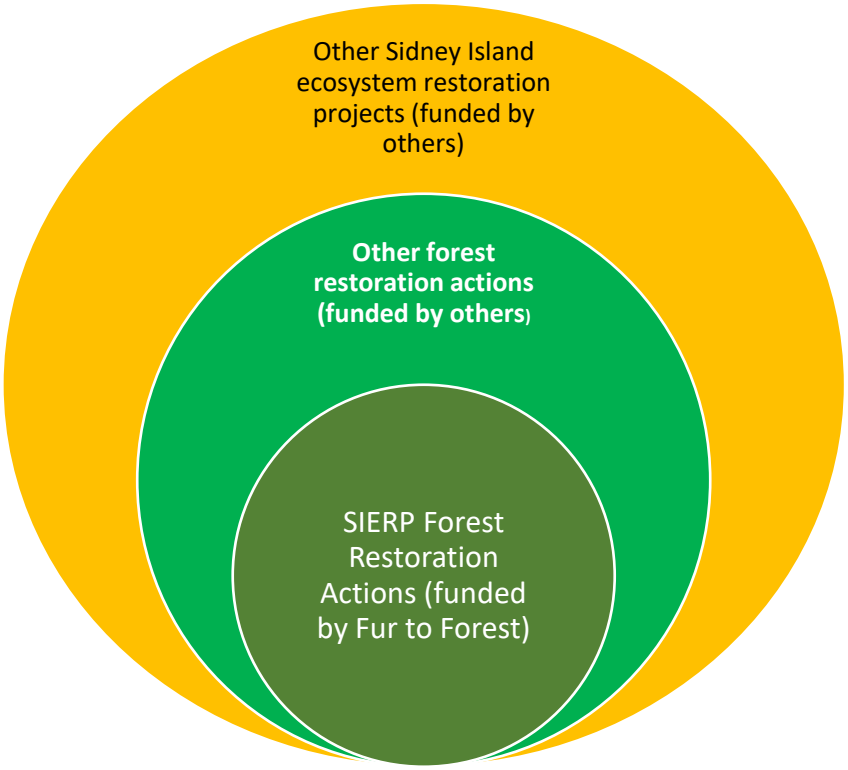


Figure 6: Project scope

[3] A landscape interspersed with forest and meadows.

5.2. Vision

The Forest Restoration Strategy envisages a "healthy, resilient forest ecosystem on Sidney Island."

A healthy and resilient forest ecosystem would feature a diversity of native tree species, both coniferous and deciduous. Trees, shrubs and other species that are typical to the Coastal Douglas-fir biogeoclimatic zone and suited to future climate conditions, would be present and thriving.

While Coastal Douglas-fir forests represents the steady-state vegetation community in this biogeoclimatic zone, the Working Group recognizes that forests would not have been continuous across the historic landscape of Sidney Island; rather, the landscape would have been comprised of a forest-meadow mosaic, maintained by dry/shallow soil conditions in some areas and by controlled burns in other areas. A healthy forest includes this forest-meadow interface, which supports high biodiversity, including many species that are currently at-risk and many species that thrive in the "edge habitat" at the interface of forest and meadow.

Restoring this healthy, resilient forest ecosystem will bring multiple benefits. It will re-establish habitat for diverse species of native plants and animals, including birds, pollinators, and species at risk. It will re-establish culturally important plants that can be harvested for foods, medicines, and other resources. It will support places for cultural and spiritual activity, places for learning about ecosystems and ecosystem management, a beautiful and enjoyable environment for Island residents and visitors.

This project endeavours to provide an example of successful restoration following removal of invasive animals and plants. Most importantly, this project will put in place the processes and relationships necessary for continued restoration and whole-island partnerships beyond the scope of this project.

Figure 7 shows the extent of forest and other ecosystems on Sidney Island.

6. Goals and Strategies

6.1. Project Goal

The goal of the Forest Restoration Strategy is to identify and implement actions that will lead towards a healthy, resilient forest ecosystem on Sidney Island.

The Working Group defined elements of a healthy forest ecosystem as:

- A diverse, multi-aged forest
- Abundant and diverse native forest understorey vegetation
- The forest-meadow mosaic
- Native plants that are resources for local Indigenous peoples and local community members
- Reduced impacts from invasive plants and animals

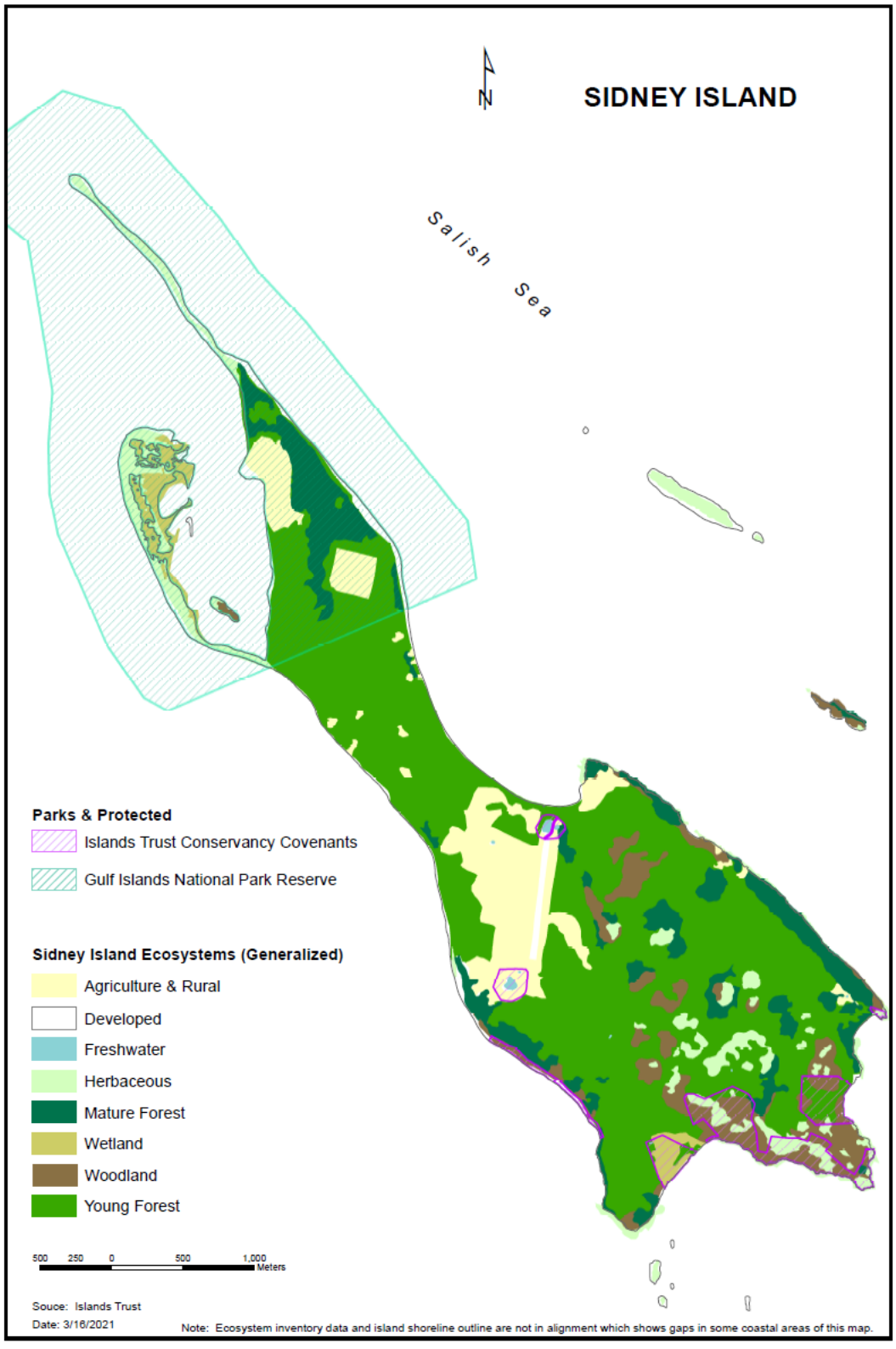


Figure 7: Ecosystems of Sidney Island.

Map courtesy Islands Trust Conservancy.

6.2. Forest Restoration Strategies

Based on the elements of a healthy, resilient forest ecosystem, the Working Group has identified five forest restoration strategies that would assist the process of ecosystem restoration. Note that not all of these will be undertaken through the SIERP funding—see **Section 7 Proposed SIERP Restoration Activities** for proposed federally-funded[4] activities.

1. Foster a Diverse, Multi-aged Forest

Ways to achieve a diverse multi-aged forest include:

- Planting a diversity of native trees (including deciduous species) to fill missing age gaps and serve as future seed sources
- Creating forest openings to improve growing conditions for multiple tree species
- Conducting forest thinning where required (to reflect density under natural disturbance regimes)

2. Restore Forest Understorey Vegetation

Ways to restore forest understorey include:

- Reducing browse pressure and negative impact of invasive alien animals by eradicating fallow deer and maintaining native black-tailed deer populations at ecologically-appropriate levels
- Creating deer exclosures and planting with native shrubs and berries that will provide a seed stock for vegetation recovery in the absence of fallow deer

3. Retain and Enhance the Forest/ Meadow Mosaic

Ways to retain/enhance the forest-meadow mosaic include:

- Controlling invasive plants
- Reintroducing natural and cultural disturbances (e.g., prescribed burns)
- Facilitating the growth and spread of native meadow-associated species (including grasses, forbs, some shrubs and certain trees)

4. Restore Native Plants as Resources for Local Indigenous Peoples and Communities

Ways to restore native plants as resources include:

- With Indigenous communities, identifying and planting preferred species/locations for harvesting in the park reserve
- With Sallas community, identifying and planting preferred species/locations for harvesting on Sallas common property
- Planting and managing appropriate species, using exclosures as needed (until fallow deer have been removed)

5. Reduce the Impact of Invasive Plants

Ways to reduce the impact of invasive plants include:

- Removing English hawthorn and preventing re-establishment
- Identifying priority areas for Scotch broom control, and developing a long-term plan for removal and ongoing management in those areas
- Establishing an "Early Detection and Rapid Response" program to manage invasive plants with potential to spread (e.g., English holly)

[4] Funded through the Fur to Forest program.

7. Proposed SIERP Restoration Activities

This plan was created under the assumption that a population of native black-tailed deer would be present after eradication of fallow deer. The eradication plan proposes that black-tailed deer be allowed to naturally repopulate following the deer eradication, something that may take several years. If that option is selected, exclosures could be used for a shorter period of time (i.e., until the completion of the eradication), and future restoration work could focus on introducing a variety of plants in multiple locations around the island. The approach could be to select plants based on existing conditions, and plantings could be customized in a way that the limitations of a few exclosures cannot allow. The result would likely be increased and accelerated success in terms of forest restoration.

In the short term at least (during the period of available SIERP funding), exclosures will be required for any successful planting work.

In the short time frame available (3 years), and with limited funds, the SIERP Forest Restoration Strategy focuses on ways to set the forest ecosystems up for future success. Hence, the proposed actions are short-term, but based on long-term thinking.

The Working Group considered the range of possible activities that would support forest restoration and, based on the level of ecological benefit, available resources, and feasibility, recommend that the following activities be funded through SIERP.

This section (**Section 7**) provides an overview of the proposed restoration activities; the Appendices provides additional details and background information for the methods.

7.1. Reduce Browse Pressure

Method

Please refer to the fallow deer eradication plan and black-tailed deer management plans for details.

Rationale

Reducing browse pressure will facilitate recovery of existing native vegetation and allow new vegetation to regenerate and grow.

Proposed Actions

Action as per Deer Working Group recommendations.

7.2. Increase Abundance and Diversity of Native Woody Vegetation

"Native woody vegetation" refers to trees and shrubs.

Method

Create deer exclosures in multiple locations around the island, and plant with desired species such as such as Nootka rose and flowering red currant (Figure 8). Fenced areas will provide protection from browse pressure, allowing planted specimens to establish and start growing vigorously while deer management is being undertaken. The goal is to have a series of established, healthy patches of native vegetation across Sidney Island. These "islets" would act as seed sources after browse pressure is reduced (Tanentzap *et al*. 2009).

Figure 8: Woody vegetation

L: Nootka rose. R: Flowering red currant. Photos Judith Cullington

Rationale

Woody vegetation is critical for high quality animal habitat and provides food, medicine, and cultural resources for local Indigenous peoples and local community members.

Proposed Actions

Appendices A1 to A4 provide additional detail on deer exclosures and species selection.

1. Create deer exclosures within the park reserve and plant with native species

In 2021, identify potential exclosure sites, and conduct a cultural assessment to confirm appropriate locations and acquire permits for building

a. Working with local First Nations and Parks Canada, identify and source appropriate species for planting

b. In 2021, build and plant out six exclosures

c. Place signage on exclosures to explain the project and the purpose of the exclosures

d. Identify up to nine additional exclosure locations for building and planting in 2022 and 2023.

2. **Create exclosures on Sallas lands and plant with native species**
    a. In 2021, identify potential exclosure locations
    b. In 2021, build at least three and up to six exclosures
    c. Working with Sallas Ecological Stewardship Committee, W̱SÁNEĆ Leadership Council, Saanich Native Plants, and Parks Canada, identify and source appropriate species and plant for least two exclosures
    d. Place signage on exclosures (including unplanted ones) to explain the project and the purpose of the exclosures
    e. Identify locations for up to ten additional exclosures to be built and planted in 2022 and 2023.
3. **Plant and provide protection for tree seedlings**
    a. Provide fencing or other forms of protection around young trees (that have been planted or are naturally generating) to reduce deer browse.
4. **Monitor exclosures (see Section 8 for more information)**

7.3. Restore Forest Vegetation to Support Future Harvesting of Plants

Indigenous partners have voiced concern over the decrease in, and even absence of, key culturally important plant species on Sidney Island. Private homeowners have also voiced concern over the lack of understorey species diversity. Indigenous and Sallas participation will be encouraged to assist with species selection and to actively restore some of those species to enable future harvesting, resulting in shrub protection zones being established on park reserve and Sallas lands.

Culturally important native plants such as camas, chocolate lily, fawn lily, shooting star, and native grasses including California oatgrass, blue wildrye, and red fescue have all been successfully propagated and used in restoration projects throughout the Gulf and San Juan Islands.

Method

Planting in exclosures (as above).

Rationale

Overbrowsing has removed many species once used for Indigenous food, medicinal and other purposes. Local community members would like to be able to harvest berries and other resources. Planting in exclosures will allow some of these species to return, and ultimately spread beyond the exclosures (in the absence of fallow deer).

Proposed Actions

1. Identify suitable species and locations

a. In 2021, work with Indigenous and Sallas communities to identify preferred locations and species for planting, including berries, shrubs and other cultural resources for future harvesting. **Appendix A4** lists some of the potential species and their cultural uses. (Figure 9).

b. Plant and manage appropriate species, using exclosures as needed.

Figure 9: Plants for harvesting.

Clockwise from top left: red flowering currant, swordfern, red elderflower, June plum. Photos: Judith Cullington

7.4. Remove Invasive English Hawthorn

Invasive English hawthorn (*Crataegus monogyna*) has been identified as a key threat to meadow plant communities on Sidney Island by Sidney Islanders, academic researchers and Parks Canada. Continued English hawthorn invasion will degrade ecosystem health by supplanting native species and changing local environmental conditions to favour shrubs and trees, rather than meadow species.

Management of English hawthorn on Sidney Island has been ongoing since 2008, but the English hawthorn population has been progressively expanding into open meadows. Hawthorn removal trials in 2019 evaluated the effectiveness of several methods, and the findings are being applied in the proposed approach (see **Appendix A5**).

Methods

Continue programs for hawthorn removal throughout the island that include mechanical removal, applying herbicide, cutting down and removing dead hawthorn, and disposing of the biomass.

Rationale

The forest-meadow mosaic is a key element of coastal Douglas-fir forests, one that is currently being disrupted by several invasive plant species.

Proposed Actions

1. **English hawthorn removal**

   English hawthorn on Sidney Island primarily occurs in three meadows: the campground meadow and radar field within the Park reserve, and the central Sallas meadow.

   The treatment methods will differ between the park reserve and Sallas.

   Park reserve:

   a. Acquire necessary permits.

   b. The two park meadows will each be divided into three zones. Zone 1 of each meadow will be treated in the first year, followed by Zone 2 in the second year and Zone 3 in the third year.

   c. Parks Canada staff or a qualified contractor will treat plants through direct application of herbicide using either a stump or basal bark application method, depending on the size of the plant.

   d. After effective treatment, remaining above-ground biomass will be cut down and either burned or chipped on site.

   Sallas:

   a. Sallas Forest Strata will engage their contractor to remove hawthorn using an excavator where this is the most effective approach. Removal sites will be selected based on accessibility. If sites are not accessible, other removal techniques including herbicides could be considered.

b. For any hawthorn removal in Conservancy lands, Islands Trust Conservancy permission will be sought prior to use of herbicides (if applicable) or any activity that would disturb native vegetation.

2. Work with W̱SÁNEĆ Leadership Council to teach about beneficial uses of hawthorn

a. Indigenous people used the native Douglas hawthorn (*Crataegus douglasii*) for food and medicines, and have used the non-native English hawthorn in the same way. If there are volunteer days that take place in early fall (after the first frost), W̱SÁNEĆ members could be encouraged to offer teaching opportunities for people to learn about the uses of hawthorn red berries as heart medicine and making jelly from the berries. This will make use of some of the biomass being removed (as an alternative to disposal).

3. Monitor results and continue to apply best practices

a. In 2022 & 2023, review the results of the 2021 efforts and continue to remove hawthorn using best practices.

7.5. Control Scotch Broom (where practical)

The threats posed by Scotch broom are much the same as English hawthorn. However, ***removing*** Scotch Broom from the island is a desirable but impractical goal. Scotch broom is challenging to deal with as it produces very large numbers of seeds that remain viable for over 50 years. This means any efforts to control it must focus on a very long-term strategy, with action every year to remove flowering plants.

Working group members recognized that any efforts to ***control*** broom need to be strategic, and part of a very long-term commitment. Given the limited funding and magnitude of the problem, any actions to control Scotch broom will also need to be very constrained and geographically limited. This activity would only apply if there are available funds once the other priority activities (exclosures and hawthorn removal) have been addressed.

Methods

Mechanical methods are most effective. See **Appendix A6** for best practices.

Rationale

Scotch broom is an aggressive invader that outcompetes native plants, particularly within the forest-meadow mosaic. The fallow deer have likely been helping to keep the spread of Scotch broom at bay; removing browse pressure will likely lead to significant growth of Scotch broom.

Proposed Actions (subject to available funding)

1. Remove broom from exclosure sites

a. In 2021, clear broom from existing meadow exclosures to remove seed sources.

2. Identify sites where long-term control is practical

a. With Sallas Forest Strata and Parks Canada Agency Ecologists, identify sites for long-term treatment of broom. Sites should be:

    a. Easily accessible

    b. Far from sources of seed recruitment

    c. In areas where broom removal will allow for regrowth of native shrubs and trees

3. Use best practices to remove broom from target areas

Best practices for removing broom are detailed in **Appendix A6.**

7.6. Other Invasive Species

The Working Group identified "early invaders"—species such as English Holly—that are present on the island in low numbers. A program of "early detection and rapid response" may be appropriate to remove these species before they spread widely.

8. Long-term Maintenance and Project Monitoring

Maintenance of exclosures and on-going monitoring of the ecological responses to this restoration plan's activities will be an important part of the process. The Vegetation Working Group is continuing to develop a more detailed approach to monitoring.

To ensure that there are people who have the skills and experience to undertake the monitoring, the SIERP project should include training for local Indigenous people and Sallas residents who wish to participate.

8.1. Maintenance

Maintenance of the exclosures will include checking to ensure that the fencing remains intact and removing any invasive species from within and near to the exclosures.[5]

8.2. Monitoring

The purposes of monitoring are to:

- Ensure that fences are keeping deer out (and take steps to correct this if need be)
- Identify which planted species are/are not thriving in the exclosures (and using this information to adjust planting choices and techniques as required)
- Identify whether the planted species are spreading beyond the exclosures (in the absence of deer), and thus assisting ecosystem recovery
- Identify the success of the invasive plant species removal

Monitoring will tell us which activities are being successful, to what extent are they successful, and whether some activities need to be adapted to improve their success.

It will be important to gather some baseline information (e.g., by using pre-defined transects with a species count) from areas close to the exclosures, so that their impact can be measured over time.

Short-term monitoring goals (during the first year after planting) will be to:

- Look for signs of browse damage (ensuring that the fences are indeed keeping the deer out)
- Monitor and record which plants thrived, or failed to thrive during their first year
- Check for regrowth of hawthorn and other invasives where it has been removed

Medium-term monitoring goals (years 2–5) will be to:

- Assess the health of the plants planted (which species are doing well, which are struggling, and which have died and guesses at why)
- Identify if there has been any dispersal beyond the exclosure
- Track the overall height of the plantings

[5] This includes removal of species such as Scotch broom and holly. It will not be feasible to remove all invasive grasses and forbs as they are too prolific.

- Check for regrowth of hawthorn and other invasives where it has been removed. In the first three years of the project, annual surveys will follow each round of English hawthorn treatment to evaluate the efficacy of the methods used. These visual surveys will check for survival and re-sprouting of treated plants, as well as germination of new plants within the seed bank. As multiple treatment methods will be used (excavation, cut and herbicide, and basal bark), we will have the flexibility to adapt our methods based on the results of these surveys to maximize removal success.

Long-term monitoring goals (5–10 years) will be to:

- Identify if there has been any dispersal beyond the exclosure
- Track the overall height of the plantings
- Identify the impacts on other populations (have songbird and pollinator populations rebounded?)

8.3. Long-term Ecosystem Response

Long-term monitoring on the Sallas side will be determined with the Sallas Ecological Stewardship Committee.

Long-term monitoring on the park reserve side of Sidney Island will fall within the existing framework of GINPR's Ecological Integrity monitoring. Recovery of Sidney Islands vegetation will be tracked through the Forest Understorey Health measure, which will be carried out every five years. The methods for this monitoring are currently under development, but the overall aim is to assess the structure and development of understorey vegetation across the park reserve, particularly in light of browse pressure and deer management.

Long-term monitoring of faunal responses within GINPR to these restoration actions will be covered by the park reserve's long-standing Forest Songbird Monitoring Protocol. Occurring every three years, these acoustic point count methods will track changes in songbird community composition as the forest responds to the management actions proposed in this plan.

Appendix: Forest Restoration Plan Details

A 1: Planting in Exclosures

In order to begin the restoration of Sidney Island's ecologically degraded forest patches, native plants must be protected from overbrowsing by native black-tailed (*Odocoileus hemionus*) and introduced fallow deer (*Dama dama*). Until fallow deer are eradicated, restoration can be initiated by constructing tall fencing around existing or transplanted native plant species to protect them from browsing by deer (Figure 9).

The goal of the proposed restoration activity is to establish zones of protected shrubs which are dispersed throughout forested areas on Sidney Island. These zones will serve as 'islands' from which seeds can disperse and accelerate the process of native plant regeneration. This assisted natural regeneration method, which establishes numerous, small source populations of vegetation within a larger degraded landscape, is more efficient and cost-effective than seeding such areas by hand or transplanting sufficient seedlings to cover the desired area completely (Benayas *et al.*, 2008). The sites selected for shrub protection zones should be conducive to shrub growth, such as forest edges or canopy openings with sufficient soil depth because environmental conditions are suitable for promoting vigorous shrub growth.

Creating deer-proof zones presents logistical challenges, as is well known locally and is documented in literature—deer are known to leap even 2.1-metre-tall fences (15% of deer observed by Vercauteren *et al*. (2010) were able to jump such fences). The design of fences to exclude deer from restoration areas therefore must include tall, sturdy fences able to withstand repeated attempts at entry from deer. In order to guarantee long-term (3–10 years) structural integrity of the fences, the intent is to either use metal (5 cm diameter, ~ 2.5–3 metres in height) or wooden posts (~ 10 cm thickness, 2.1 – 2.5 metres in height above ground) as vertical supports, to which wire mesh at least 2.1 metres in height would be attached.

Figure 9: Images from Sallas' Deer Exclosure.

Photos Judith Cullington.

A 2: Exclosure Design

Footprint size

Two potential sizes are:

- 5m x 5m x 2m
- 10m x 10m x 2m

Larger 10 x 10 exclosures will be used where feasible. These larger exclosures will have space for more transplanted shrubs and will allow us to plant shrubs farther away from fence edges where foliage risks being browsed by deer. They may be harder to maintain as free from invasive species (Figure 10).

Layout

Two options are currently proposed for exclosure design, however only Option 1 is approved for use on park reserve land.

- Option 1 = Freestanding, stabilized by posts
- Option 2 = Use existing trees to anchor fencing

Construction activities, methods, materials, and equipment

Construction activities would include digging, small handheld electric and gas-powered tool use (chainsaw, auger, line trimmer, drills, etc.), pounding the posts or poles into the ground, and fixing the metal mesh fences to the posts or poles. Activities may also include the addition of a ground-level high-tensile wire or a supplementary layer of wire mesh, or pins securing the lower portion of the fence or potentially the placement of recently downed coarse woody debris found *in situ* near the fence's base, to impart greater durability to prevent deer and other animals from crawling under, or bending, the wire mesh. High-tensile wires may also be placed above the wire mesh to further reduce the ability of deer to enter the enclosed shrub area. Gates will be installed to allow access for stewards. The exclosures will be assembled *in situ*. Cement may also be used to secure fence posts in areas with shallow soil.

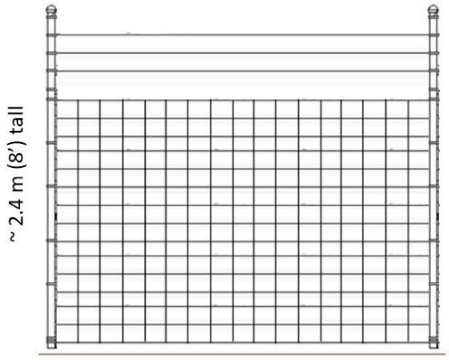
Cost

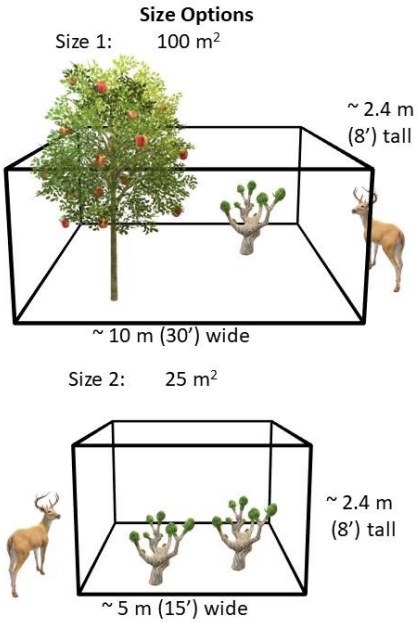
Each exclosure will cost approximately $1,200 (based on size 10m x 10m x 2m) for materials (funded under Fur to Forest program).

Note: Exclosure on Sallas side may differ slightly from this description. Because existing trees can be used as posts, the sizes and shapes of the exclosures may not be as described.

Option One: Exclosures with Wood or Metal Posts

Pros:
1. Very strong structurally.
2. Typical fence construction technique – many materials designed for this structural layout.





Option Two: Completely above-ground exclosure that uses trees as physical supports

Pros:
1. No digging / concrete required.
2. Fewer posts / no posts required (cost savings)

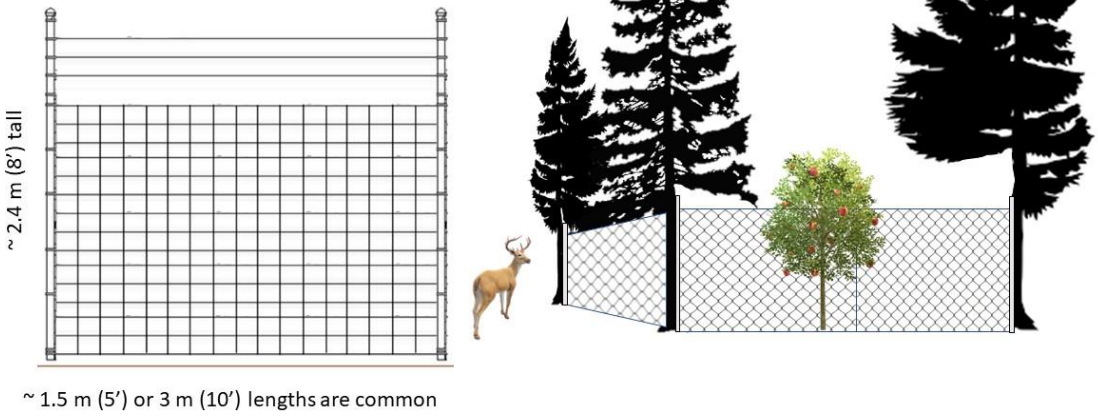


Figure 10: Example fencing schematics using metal or treated wood posts as vertical supports or attached to trees for support.

A 3: Number and Location of Exclosures

Exclosures in the Park Reserve

Sixteen locations have been identified as possible exclosure sites in the park reserve. These range from medium to high light availability and include two previously constructed exclosures that could be repaired and utilized (Figure 11). A final suite of potential locations will be determined after site inspection by the PCA Cultural Resource Management team. The Vegetation Working Group will make the final site selection from that approved suite.

Figure 11: Deer exclosure map (park reserve).

Sixteen potential sites for fenced shrub areas have been identified within the park reserve. Sites were evaluated for light availability, soil character and topography, abundance of native and invasive species in the understorey, accessibility and potential effect(s) on visitor experience. Two of the potential sites (9 and 13) are pre-existing deer exclosures that have sustained structural damage to portions of fencing and repairs are needed.

Sites surveyed include 2, 8, 9, 12 and 15 indicated by green squares.

Exclosures on Sallas Lands

The Sallas Ecological Stewardship Committee has identified six potential sites for exclosure locations (Figure 12) and is building at least two in 2021. The existing forest exclosure along Sallas Lane may also be used for additional plantings.

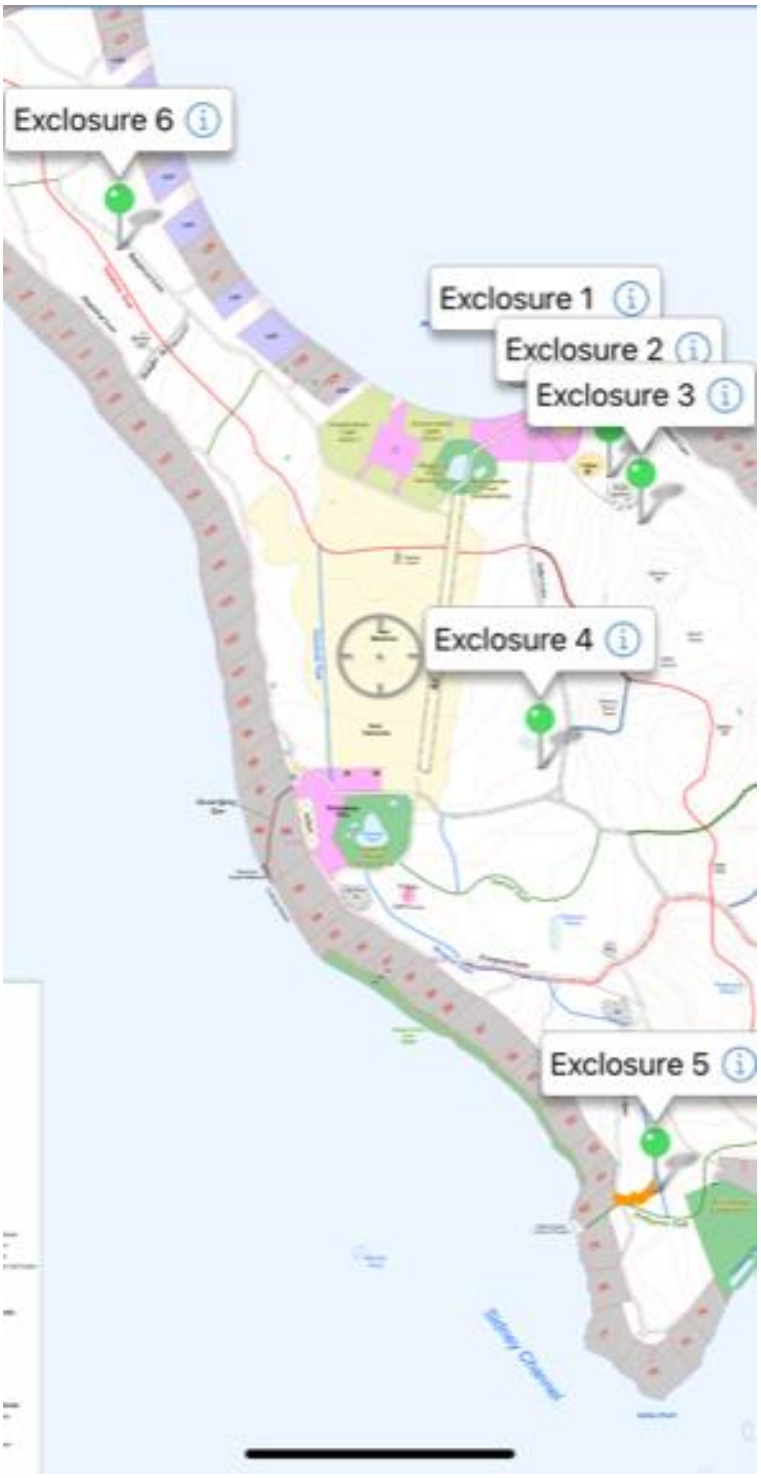


Figure 12: Deer exclosure map (Sallas lands)

A 4: Selection of Species

W̱SÁNEĆ Environmental Committee and Saanich Native Plants are being asked for advice on species selection.

The specific selection of species will be made based on:

- Native species that were or are found on Sidney Island
- Species adapted to the exclosure's ecology (e.g., soil type, sun exposure, water availability, topography)
- Plants that are locally sourced, preferably from Sidney Island or nearby locations
- Species with the greatest potential to spread beyond the exclosure in the absence of browse pressure
- Species that provide food and/or habitat for native species, including birds
- Species that provide foods, medicines or other cultural resources
- Availability of plants in the desired quantities
- Species that will thrive in future climates

Table 1 shows some potential species for planting, with their preferred habitats and cultural uses.

Table 1: Potential species for planting in exclosures

English name	Scientific name	SENĆOŦEN name	Growing conditions	Indigenous use	Indigenous knowledge
Baldhip rose	*Rosa gymnocarpa*	ḴEMIꞌIŁĆ	pt shade-shade, dry-mesic	Spiritual uses	Spiritual properties
Beaked Hazelnut	*Corylus cornuta*	ⱧEBOX IŁĆ	sun-shade, dry-moist-loamy sand	Nuts eaten	
Black twinberry	*Lonicera involucrata*		sun-shade, moist-wet		
Blackcap Raspberry	*Rubus leucodermis*	ȾḰOME,IŁĆ	sun-shade, dry-wet	Berries dried into cakes	
Evergreen Huckleberry	*Vaccinium ovatum*	YIYXEM IŁĆ	sun-shade, dry-moist	Berries eaten fresh	Last berry to harvest-can pick until Dec!
Gummy Gooseberry	*Ribes lobbii*	ḴÁMQ IŁĆ	sun-pt shade, dry-moist		
Kinnikinnick	*Arctostaphylos uva-ursi*		sun-shade, dry-moist-rocky/sandy/acidic soil		
Mock orange	*Philadelphus lewisii*		sun-pt shade, dry-moist	Arrowheads, knitting needles	
Nootka rose	*Rosa nutkana*	ḴELḴE,IŁĆ	full sun, dry-moist	Edible petals/hips	
Oceanspray	*Holodiscus discolor*	KÁȾEŁĆ	sun-pt shade, dry-moist	Hard wood- salmon stakes, arrows,etc	Indicator of sockeye harvest/time to hunt deer
Oregon grape	*Mahonia aquafolium*	SENI,IŁĆ	pt shade-shade, dry	Roots=yellow dye	Berries=remedy for shellfish poisoning
Osoberry	*Oemleria cerasiformis*	ȾEẊEN̲,IŁĆ	pt shade-shade, dry-moist	Bark=purgative, edible fruit	
Oval-leaved blueberry	*Vaccinium ovalifolium*	ŁEW,ḴIMIŁC	sun-shade, dry-moist - acidic, low nitrogen soil	Berries eaten fresh/dried into cakes	
Pacific crabapple	*Malus fusca*	ḴÁ,EW̲IŁĆ	sun-part shade, mesic-wet	Wood=tools, adze, hooks	Planting will bring back salmon
Pacific ninebark	*Physocarpus capitatus*		sun-pt shade, moist-wet, slightly acidic soil, low drought tolerance	Root tea=laxative	

English name	Scientific name	SENĆOŦEN name	Growing conditions	Indigenous use	Indigenous knowledge
Red elderberry	*Sambucus racemosa*	ȻIWEKIŁĆ	shade-pt shade, moist-wet		
Red flowering currant	*Ribes sanguineum*	W̱IW̱Q,IŁĆ	sun-partial shade, dry-moist, well drained	Mixed w/ other berries-dried into cakes	Indicator that spring has arrived
Saksatoon Berry	*Amechanchier alnifolia*	SĆI¸SEṈIŁĆ	sun-pt shade, dry-moist	Berries eaten fresh, wood arrow shafts	
Salal	*Gaultheria Shallon*	DAḴE IŁĆ	sun-shade, dry-moist	Berries dried into cakes	Branches/leafs used in pit cooks
Salmonberry	*Rubus spectabilis*	ELILE IŁĆ	pt shade-shade, moist-wet		Swainsons thrush ripens the berries with its song
Snowberry	*Symphoricarpos albus*	PEPKIYOS	sun-shade, heavy clay soils best	Bath for muscles	Do not eat- PEPKIYOS means "little revenge berry"
Soapberry	*Shepherdia canadensis*	SX̱ÁSEM	sun-pt shade-shade, dry-moist, prefers moist/rocky soils	Indian icecream	
Stink currant	*Ribes bracteosum*	SPEȻIŁC	pt shade-shade, moist-wet		
Thimbleberry	*Rubus parviflorus*	DEḰEN,IŁĆ	sun-pt shade-shade, dry-moist	Eat young shoots/berries, cakes	Leaves into bowls
Wild Black Gooseberry	*Ribes divaricatum*	Ḵ́ÁMQ IŁĆ	sun-shade	Berries boiled dried into cakes w/ salal, thorns used for tattooing	

A 5: Results of English Hawthorn Removal Trials

Management of English hawthorn on Sidney Island has been ongoing since 2008, but the English hawthorn population has been progressively expanding into open meadows. Tall hawthorn plants are prolific berry producers, so fast and effective control methods such as cutting stems near the ground is necessary to break the production cycle. However, English hawthorn shows significant resilience to aggressive pruning: shrubs are able to re-sprout from untreated stumps and root fragments, rendering traditional control methods of hand pulling or clipping ineffective. Invasive hawthorn removal trials in 2020 evaluated the effectiveness of several methods, and the findings are being applied in the proposed approach.

Sallas, Parks Canada, and many other practitioners of invasive plant control are seeking an effective method to control this species. Members of the Sallas community and Parks Canada collaboratively developed an experimental trial to compare the efficacy of physical removal methods, including cutting and quartering woody plant stems, and the application of an herbicide, in order to determine the best practices for English hawthorn control.

Berry production is strongly associated with taller hawthorn (most berry-producing stems were between 4 and 8 metres tall). This could be very important information for the future maintenance of this invasive plant on Sidney Island because great reductions in fallow deer populations will likely release hawthorn shrubs from browsing pressure. The browse pressure is currently restraining the spread of English hawthorn to some degree, as plants must continually invest energy in producing new foliage to replace browsed foliage, rather than investing energy in berry production. If browse pressure is reduced without simultaneous vegetation control, the hawthorn shrubs will likely quickly grow taller and begin producing berries. There are many short hawthorn plants in the Sallas meadow that could follow this pattern. The management challenges facing the Sallas and Park sites are distinct, as the Sallas site may experience a dramatic increase in berry production and subsequent spread of hawthorn with reduced deer browse. Some hawthorn at the Park site has grown above typical browse height and is already reproductively active. Also, note that large and reproductively active hawthorn individuals were recorded in the Sallas site.

The study found that (Figures 13 and 14):

- There is more hawthorn in the Sallas meadow than the park reserve meadow.
- It is most effective to:
    - Focus first on berry-producing plants (usually 4+ m tall), to disrupt the cycle of future reproduction.
    - In addition, target shorter, heavily-browsed shrubs to help pre-empt the rapid growth and production of berries that may occur when deer browse pressure is reduced.
    - A subsequent objective should be the mitigation of hawthorn seedlings.

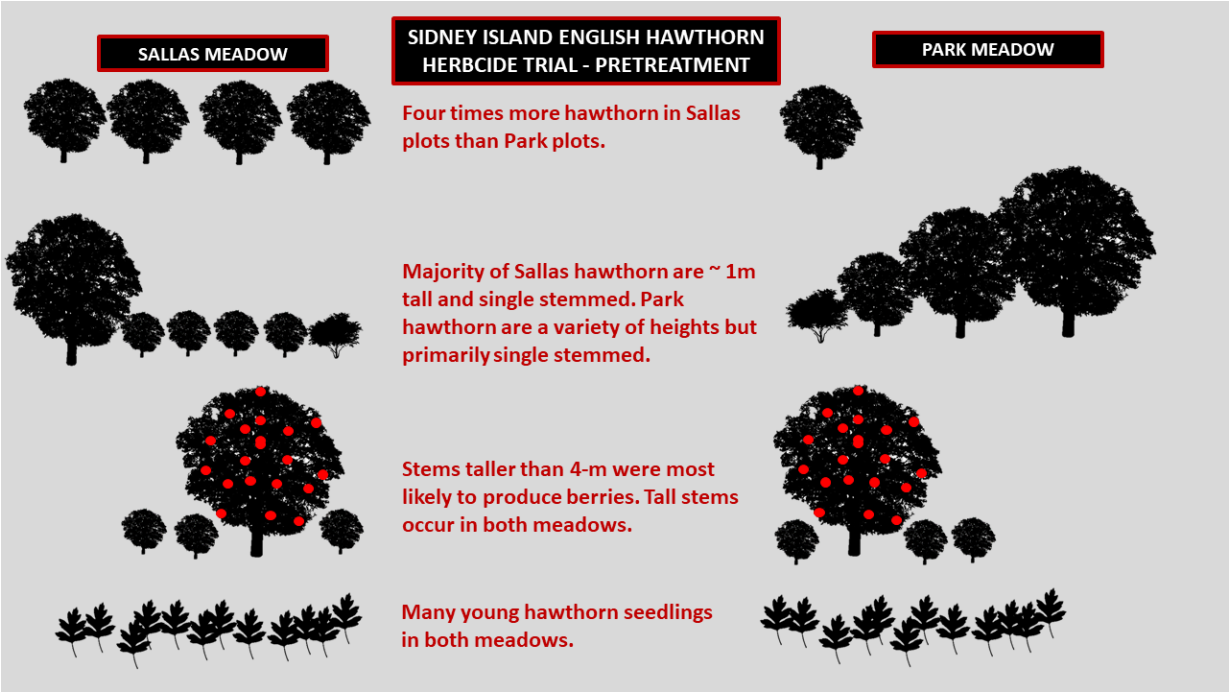


Figure 13: Key findings of pre-treatment analysis of English hawthorn on Sidney Island.

From Miller and Madsen 2020.

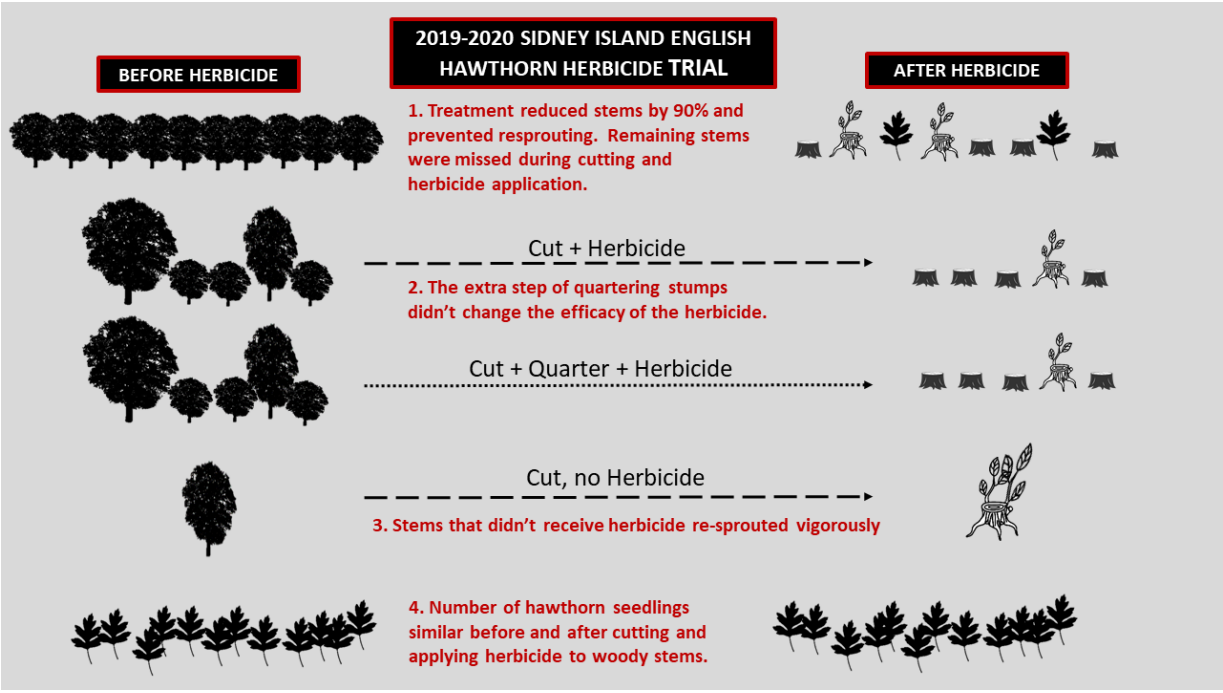


Figure 14: Sidney Island hawthorn herbicide trial.

Summary infographic of herbicide trial results, including a great reduction in hawthorn stem numbers and height, similar effectiveness of the two trialled herbicide application methods, active re-sprouting from stools missed for herbicide

application, and no significant difference in hawthorn seedling densities before and after herbicide application. From Miller and Madsen, 2020.

- Treatment with herbicides (Garlon) reduced the number of stems by ~90% and prevented resprouting. It was not 100% effective as some stems were missed during the cutting and herbicide applications.
- Hawthorn vigorously re-sprouted where herbicide was not applied to stumps
- The cut + herbicide treatment was very effective, significantly reducing the number of hawthorn stems (Mann-Whitney p-value: p-value < 0.01). Following the cut + herbicide treatment, 88.6% of stems showed no signs of re-sprouting; those that did had young and short stems.
- Some small stems were missed during the cutting and herbicide application phases of the treatment; including these stems in the analysis reduces the apparent efficacy of the herbicide trial to 43.6% reduction in the number of stems.
- The additional treatment step of quartering the hawthorn stumps had a small positive effect on the effectiveness of the herbicide, but it was not statistically significant (86.5% versus 90.9% reduction in stem quantity for CH and CQH, respectively).
- The number of regenerating hawthorn seedlings recorded before and after the herbicide application were not significantly different. This result is a positive finding from the perspective of invasive hawthorn management, as it suggests that increased light availability that resulted from eliminating larger hawthorn plants did not lead to a boom in seedling density. There was, however, a significant difference between the park reserve and Sallas plots in terms of the *reduction in number of regenerating seedlings*.
- In areas with an abundance of smaller hawthorn shrubs and dense tall grass in the meadows, the best approach is to use Garlon herbicide first, then wait for the stems to die, then cut down the dead stems. This avoids the difficulty in re-locating small hawthorn stumps in order to apply herbicide to them. The small stumps (often less than 2 inches in diameter) were frequently obscured by tall grass despite being marked with coloured spray paint. This difficulty resulted in a high proportion of the hawthorn stems encountered during resampling that had merely been missed during the cutting or herbicide application phase of the treatment.

As a result of these trials, hawthorn removal in the park reserve will focus on use of Garlon in cut and herbicide treatment for larger trees, and the basal bark method for young seedlings.

A small trial was conducted independently by Sallas owners, to determine the efficacy of removing whole hawthorn trees by excavator. Initial results show this method to be effective. It is cheaper, easier and does not rely on herbicides, and will be used when practical on Sallas side.

A 6: Scotch Broom

Best Practices for Removing Scotch Broom

Mechanical control is the best approach to managing broom. Best practices[6] are:

b. Ignore sites with significant young broom, some will crowd each other out

c. Focus on plants that are flowering (or they will add to seed bank)

d. Always treat broom before it seeds

e. Best time is when flowering but before seed set (typically May but can be earlier or later, need to check more than once)

f. For small stems (less than finger width) – pull from ground. Minimize soil disturbance by doing when ground wet, stand either side as you pull.

g. For medium stems, cut below root collar with loppers to prevent regrowth

h. For large stems, use a band or hand saw, cut as low to the ground as possible (typically older plants do not grow back)

i. Plan removal sites strategically – where will this bring best value for ecosystem recovery, where has easy access for multi-year (decades long) project, where has no seed recruitment from nearby

j. Fast-growing shade species (e.g., alder, big-leaf maple) can be densely planted so that young broom are shaded out.

k. Disposal

   i. Cut stems: small amounts can be left to decompose on site, provided they are not smothering plants beneath

   ii. Pulled plants: be careful as they can re-root

   iii. Large amounts: can move to bare rock in upper tidal area to decompose

   iv. Any plants with seed – do not move or will add to spread and seed bank (unripe seeds can ripen after cutting)

[6] Pippi Lawn, Parks Canada Agency (pers. Comm. with Vegetation Working Group 2021).

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Sidney Island Ecological Restoration Project

Part B: Fallow Deer Eradication on Sidney Island

July 2021

SIERP Deer Working Group

Contents

Figures

Tables

Acknowledgements

The SIERP Fallow Deer Eradication Plan was prepared by the Sidney Island Ecological Restoration Project (SIERP) Deer Working Group:

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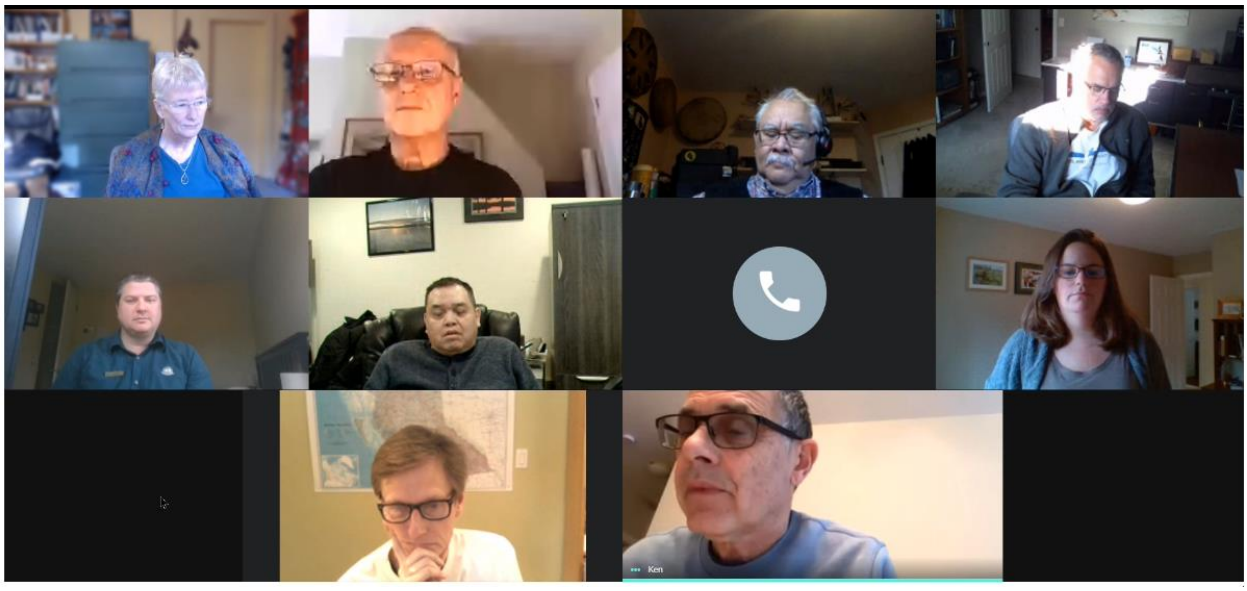

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Cover page photographs: Parks Canada Agency

1. Introduction

1.1. The SIERP Deer Working Group

The SIERP Memorandum of Understanding (MOU) set an objective to:

- *Collaboratively plan and implement eradication of fallow deer, and prevention of re-invasion.*

The Deer Working Group was tasked to provide advice to the SIERP Steering Committee, including working collaboratively to develop the Fallow Deer Eradication Plan. The Deer Working Group included representatives from Parks Canada Agency, Sallas Forest Strata, W̱SÁNEĆ Leadership Council, Pauquachin Nation, Cowichan Tribes, the Province of BC, and Coastal Conservation.[7] The diverse participation in the Working Group enabled the sharing and blending of traditional Indigenous knowledge, local knowledge, western science and eradication expertise.

Figure 15: Fallow deer on Sidney Island. Images: Parks Canada Agency.

1.2. Purpose of the Fallow Deer Eradication Plan

The Deer Working Group was asked to develop a plan for fallow deer eradication on Sidney Island, so that the partner communities could make an informed decision on whether or not to support eradication. The Working Group spent many hours learning from each other, discussing options, and gradually working towards a common agreement of what an eradication plan could look like.

This document is the result. It outlines the recommended approach that is predicted to maximize the probability of successfully eradicating fallow deer from Sidney Island, using established best practices guided by the principles of invasive species eradication from islands, with public and personnel safety and animal welfare as paramount. It is based on a shared vision from all SIERP partners, and extensive collaboration.

[7] Coastal Conservation is an organization that provides support and technical advice for the natural restoration of island ecosystems through invasive species removal. https://coastalconservation.ca/

Some of the alternatives to eradication that were considered but rejected, are shown in **Appendix A 1**. Ongoing control of deer is not an option that would be supported by the SIERP funding, as it does not meet the purpose and need of this project.[8]

2. Guidelines for the Eradication Plan

In developing the Fallow Deer Eradication Plan, the Deer Working Group agreed to several guidelines:

- Following the principles of eradication
- Using a "one-island' approach
- Using adaptive management
- Considering the wellbeing of people
- Considering the wellbeing of deer
- Following regulations, bylaws, and Indigenous processes

These are outlined further below.

2.1. Following the Principles of Eradication

Eradication of invasive species from islands is achievable; however, each eradication operation is different.

Fundamental principles have been established for successful eradication projects to maximize the probability of removing 100% of the target population (from Cromarty *et al.* 2002, Parkes *et al.* 2002). These principles of eradication set out five 'rules' that maximize the chances for a successful eradication activity (Figure 2). These principles were developed from learnings through actual eradication efforts across the globe. Eradication is a highly technical and complex process, and success is not guaranteed; however, following these internationally-recognized principles, in addition to an adaptive management approach, increases the likelihood of success.

2.2. Using a "One Island" Approach

Fallow deer are found both in the park reserve and on Sallas lands and can easily move between them. Eradication will involve removing fallow deer from all parts of the island. The eradication plan looks at the entire island as a single entity, while recognizing that there are different jurisdictional challenges in the park reserve and Sallas lands and that some techniques are adapted accordingly. This one-Island approach is needed to effectively eradicate fallow deer from Sidney Island.

[8] Further discussion is provided in Parks Canada's Detailed Impact Assessment for this project.

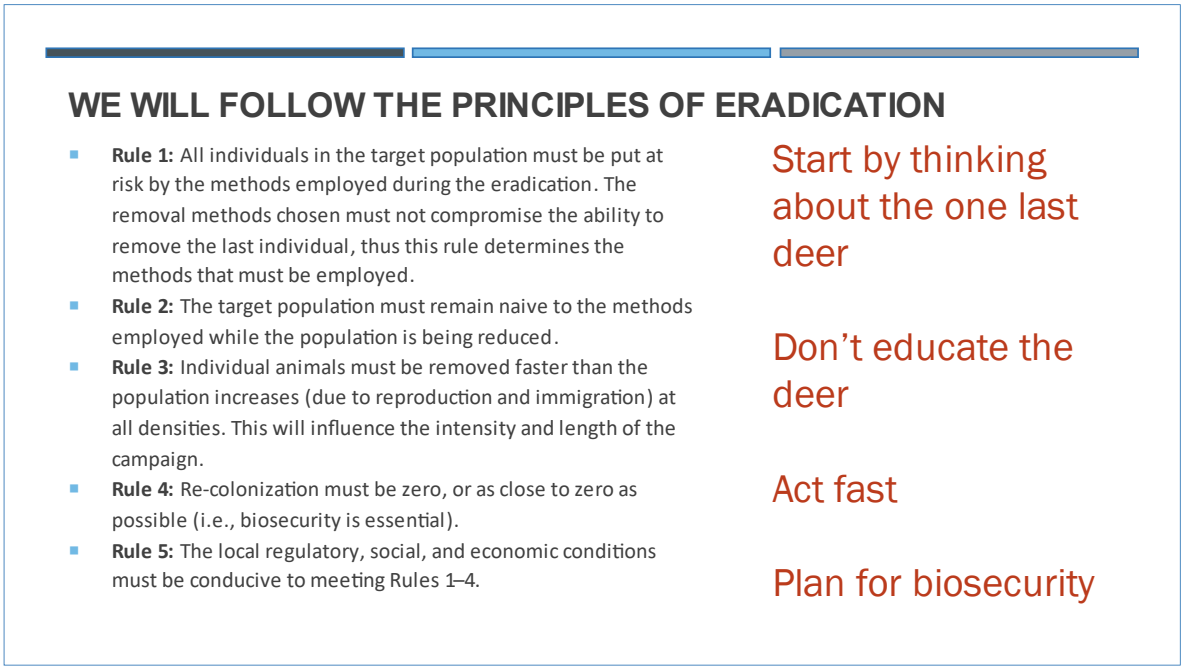


Figure 16: Principles of eradication

2.3. Adapting Methods as Deer Behaviours Change

The Deer Working Group noted that fallow deer quickly become wary and increasingly difficult to find when hunting or management activities begin. The eradication team will need multiple potential eradication methods, and an ability to quickly switch methods as deer behaviours change. The Working Group referred to this as having "many tools in the toolbox."

The proposed methods (**Section 3**) are proven techniques that have been successfully used in similar eradication operations.

2.4. Considering the Wellbeing of People

The northern part of Sidney Island (about 160 hectares) is part of the Gulf Islands National Park Reserve, managed by Parks Canada Agency (Figure 3). The park reserve is popular with visitors. During the fall/winter (November – February) the park reserve is closed to visitors to enable Indigenous hunting. During the eradication operation, the visitor closure period could be extended (e.g., Labour Day to Victoria Day), to minimize risk to visitor safety.

Indigenous hunters have the right to hunt in the park reserve. During the eradication process, partner First Nations will help to advise their members that eradication is taking place and encourage them to choose other hunting areas. Notices will be placed at landing sites to advise of activities. However, the eradication team will be aware of the potential for a hunter to be in the park reserve during the hunt season.

The much larger southern part of the island (about 700 ha) falls under the Sallas Forest Strata. There are many private lots around the coastline (Figure 3) with a large common property through the centre of the island. Some residents live on the island year-round, others come to the island on a frequent or infrequent basis.

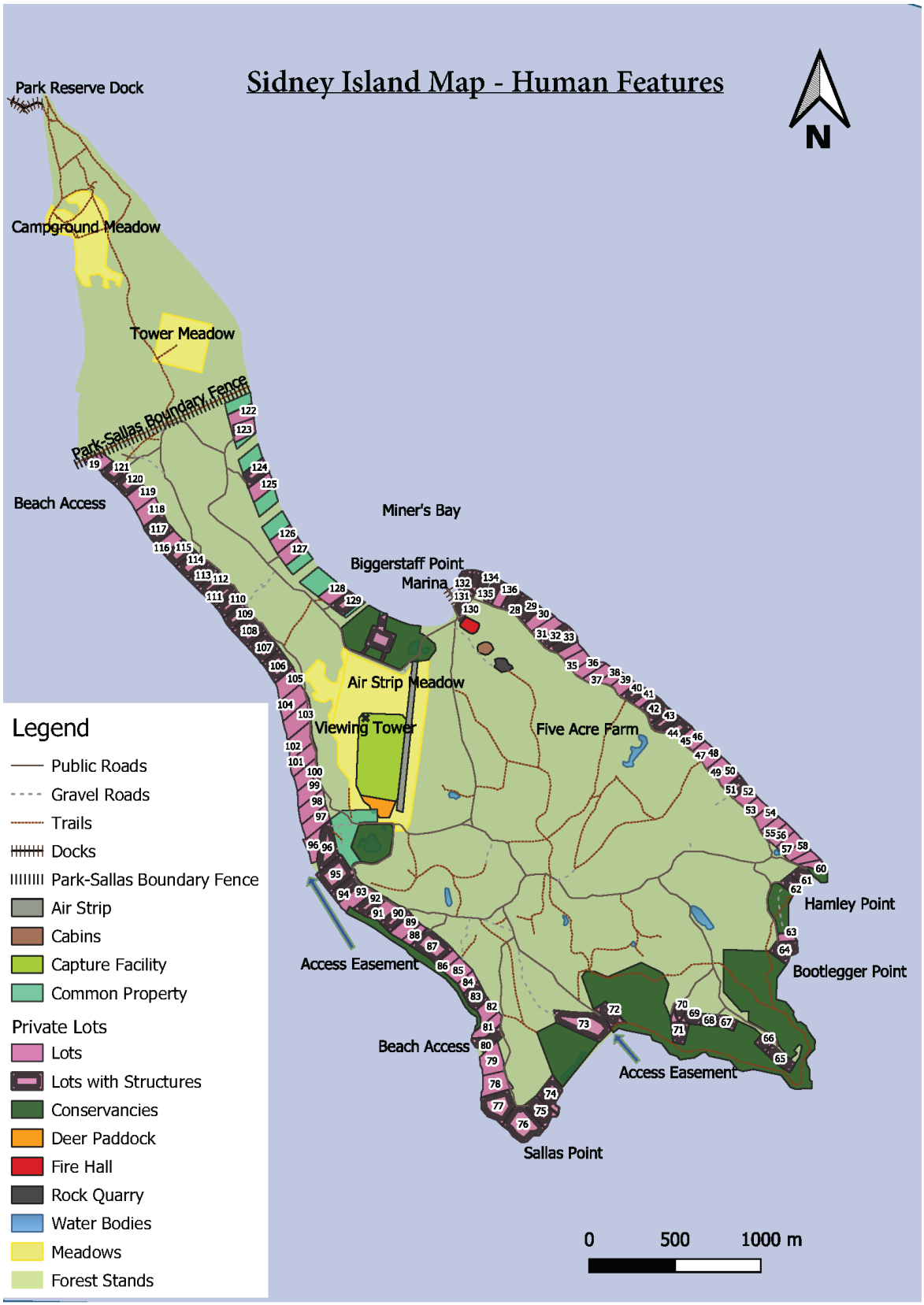


Figure 17: Map of Sidney Island showing park reserve, private lots and common property. (Updated covenant locations shown in Figure 4.) Map courtesy Sallas Forest Strata.

The Islands Trust Conservancy oversees compliance over ecological covenants on several areas of Sallas common property (Figure 4).

On all parts of the island, safety for all people will be paramount (see **Section 5.1 Safety for Indigenous Hunters** and **Section 5.2 Safety for Sidney Islanders**).

Sidney Islanders have expressed concerns about the impacts of the eradication process. In order to respect the wellbeing of residents, the selected eradication methods considered:

- The shortest time to completion (shortest period of disruption)
- Least possible disruption due to noise
- Least possible disruption to residents' ability to access their lot and move around the island (see **Section 5.4 Owner Access to Their Properties and Common Areas**)
- Ability of the owners to control the right of the eradication contractors to access their property (see **Section 5.5 Eradication Team Access to Private Property**)
- Liability, insurance and indemnification for owners (see **Section 5.6 Insurance and Indemnity**)
- The need for excellent communication with on-island residents (see **Section 5.7 Communication with Sidney Islanders**)

Note that this may involve trade-offs. For example, the shortest time to completion may involve greater disruption to access to private lots or common land, while methods that are less disruptive may need to occur over a longer time period. The more access constraints, the higher the likelihood of failure and/or a longer operation.

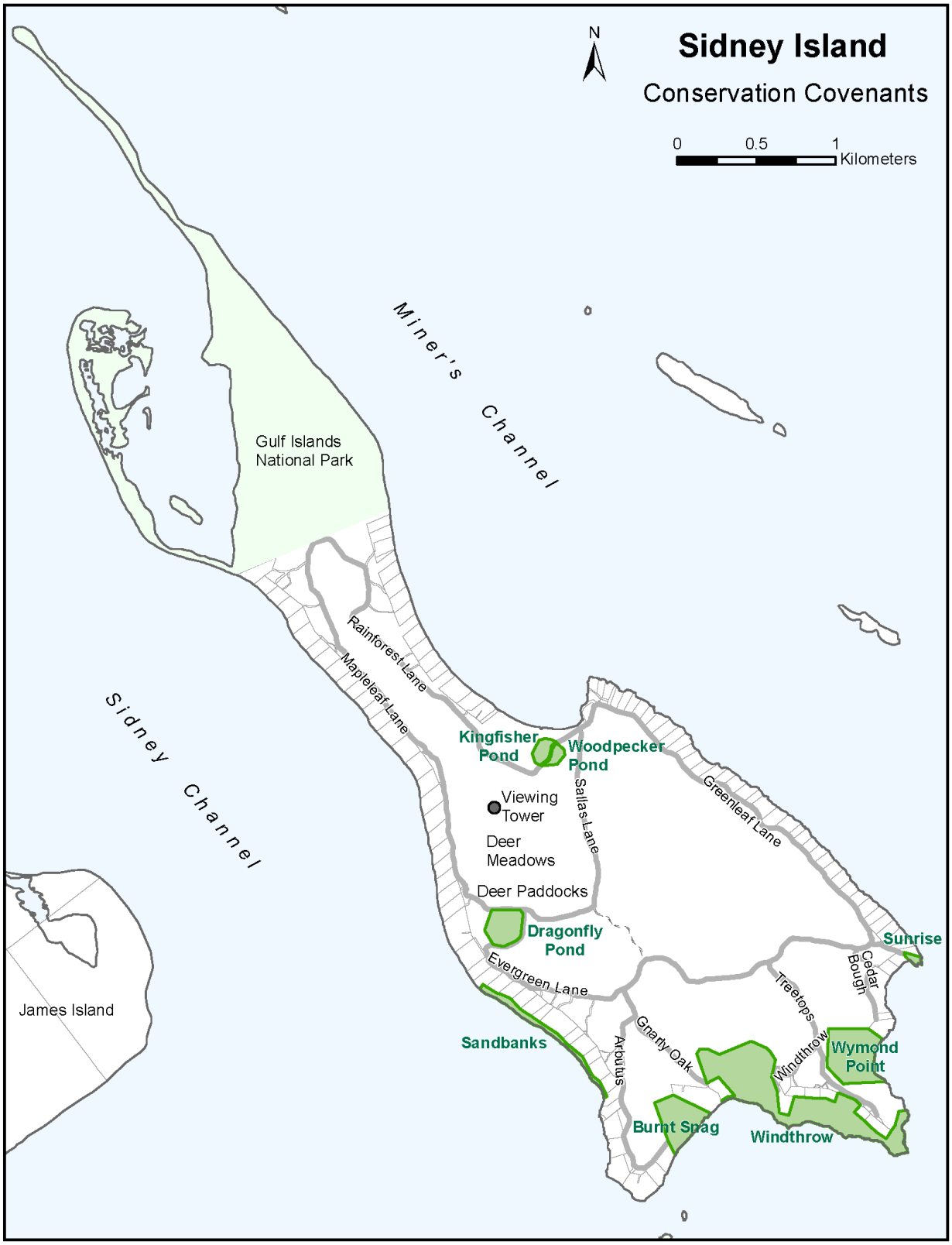


Figure 18: Sidney Island Conservation Covenants.
Map Courtesy Islands Trust Conservancy.

2.5. Considering the Wellbeing of the Deer

All project participants have identified animal welfare as a critical aspect of this project. The operation will be designed to ensure the humane and ethical treatment of all wildlife on Sidney Island.

Humane treatment refers to the level of consideration given to animal welfare during management, i.e., the level of "compassion, sympathy, or consideration for humans or animals."[9] Humane methods are those which "minimize pain and distress and are reliable, reproducible, irreversible, simple, safe, and rapid."[10]

The ethical dimensions of eradication are much more complex, as they relate to the justification and outcomes of the eradication. See the sidebar (overleaf) for a more detailed discussion of the ethics of eradication.

The decision to propose eradication was based on a consideration of all island species, and not just the fallow deer. The abundant fallow deer population has had significant impact on the native black-tailed deer population, as well as numerous species (e.g., songbirds) that relied on the (missing) understorey habitat. The interests of fallow deer were considered alongside the interests of other members of the ecosystem, including humans. When the interests of one species significantly impact the interests of a number of other species, particularly to the degree that fallow deer impact other species on Sidney Island, the moral implications of no action outweighs the moral implications of eradication. Taking this action negatively impacts one species, but positively impacts many others—including Indigenous Peoples, for whom food security and access to traditional foods and medicines is paramount. Taking no action offers no net benefits for the fallow deer, as the population would still be hunted, and facilitates ongoing negative impacts to all other species.

The eradication methods will be subject to scrutiny from multiple sources:

- The proposed eradication methods will be approved through both Parks Canada's Agency's Animal Care Committee and the Province of BC;
- Parks Canada has prepared a Draft Detailed Impact Assessment (DIA), which includes descriptions of all methods and mitigative measures to minimize negative impacts to ecological and/or cultural components of the landscape, including target species;
- The Society for the Prevention of Cruelty to Animals (SPCA) will be asked to review and comment on the proposed methods to ensure that the operation meets widely respected animal welfare requirements; and
- The SPCA will also be invited to observe different aspects of the operation in person (where safety permits).

[9] Merriam Webster online dictionary.
[10] https://www.ccac.ca/Documents/Standards/Guidelines/Euthanasia.pdf

The Ethics of Eradication

Several factors can be considered when determining the ethics of eradication:

- Do the ends justify the means? An outcome-based justification for eradication can be challenging due to an inherent level of uncertainty. There is no guarantee of eradication success or guaranteed ecosystem response post-eradication, though we can infer the ecosystem response from current evidence and similar situations. In these situations, eradication may still be justified by the Precautionary Principle, which supports "acting to avoid serious or irreversible potential harm, despite lack of scientific certainty as to the likelihood, magnitude, or causation of that harm."[11]
- Alternatively, eradication may be justified by a utilitarian view of the cost-benefit ratio of eradication. In this case, the long-term conservation benefits outweigh the short-term welfare costs when comparing the livelihood of ~300-500 individual animals to the livelihoods of untold numbers of individuals from the many species that benefit from the removal of these deer.
- We must furthermore be holistic in our assessment and look at the full weight of costs and benefits to target species, non-target species, the broader ecosystem, and human well-being. Minimizing the costs and maximizing the benefits results in the most ethical course of action, and is the only situation wherein eradication is justifiable.[12] SIERP achieves this by selecting and applying humane eradication methods to a relatively small number of animals (minimizing cost), and pairing eradication with supplementary restoration activities to maximize positive ecological and human well-being outcomes (maximizing benefits).
- We should also consider the available alternatives to eradication and select the course of action with the greatest potential benefit versus cost. Lack of action would allow the population to grow to a level that is beyond the carrying capacity of the habitat. This type of abundance has been experienced before on Sidney Island and results in a population with many individuals that are highly emaciated. Continuing to control via hunting is to maintain a herd of wild animals for the purpose of hunting them, which would result in a larger total number of individuals being killed over the long term than would be during a one-time eradication but with less robust recovery.
- Finally, we should consider whether humans have a moral responsibility or right to enact landscape-level changes such as eradications? Some might argue that "human dominance on earth, with all its attendant problems, is part of evolution and the natural rise and fall of species, so we should not interfere to correct problems, even those we have created."[13] The alternative view is that "human understanding, however limited, brings with it an obligation to try to rectify problems, however they were created. Furthermore, if actions by people caused the problem, people are responsible for rectifying it."[14] Each of these perspectives can be a valid ecosystems management framework.

There is no right or wrong answer with regards to this debate—only alternative points of view. However, it is agreed that, if eradication is undertaken, it must strive to achieve the highest level of humaneness possible and minimize impacts to non-target species and ecosystems.

[11] Cowan and Warburton, 2011.
[12] Littin et al., 2004.
[13] Ibid.
[14] Ibid.

2.5.1.Seven Principles for Ethical Wildlife Control

The Deer Working Group used the Seven Principles for Ethical Wildlife Control (Dubois *et al.* 2017), developed by an international panel of experts for guidance on culling or eradicating a species, as a framework on ethical wildlife control (Figure 5).

Figure 19: Seven Principles for Ethical Wildlife Control

Table 1 (below) shows a breakdown of how these seven principles will be applied to the eradication of Sidney Island's fallow deer.

Table 2: SIERP Response to Seven Principles for Ethical Wildlife Control

Principle	**SIERP Response**
Principle 1: Begin by modifying human practices	Public education efforts by Sallas Forest Strata and Parks Canada have reduced conflict between people and deer by outlining behaviours to avoid such as feeding or approaching deer. While conflict can be reduced, no change in human behaviour can effectively solve the problem of invasive fallow deer overbrowsing and causing extensive ecosystem degradation.
Principle 2: Justify with evidence	Substantial evidence gathered by Parks Canada and other researchers (e.g., Golumbia 2008) have confirmed the severe impact that fallow deer have on the health of Sidney Island's forest ecosystem, which now has some of the lowest levels of plant and bird biodiversity in the region (Martin *et al.* 2011, Lawn 2015)

Principle	SIERP Response
Principle 3: Ensure objectives are clear and achievable	Parks Canada conducted a feasibility assessment[15] that confirmed eradication of fallow deer from Sidney Island is technically feasible, considering animal behaviour, island geography, and preferred methods (Coastal Conservation 2012).
Principle 4: Prioritize animal welfare	Animal welfare is a critical aspect of this project. Eradication techniques will meet requirements from Parks Canada's Animal Care Committee and the Province of BC (including approval from licensed veterinarians), which involve minimizing animal stress and suffering. The project partners will also work with the Society for the Prevention of Cruelty to Animals (SPCA) to review eradication plans and ensure high animal welfare standards.
Principle 5: Maintain social acceptability	The plan to eradicate fallow deer from Sidney Island will not proceed without support from all project partners, including local First Nations and Sidney Islanders. If there is support, the project team will continue to reach out to all involved throughout the eradication process to ensure each other's values are respected.
Principle 6: Conduct systematic planning	Eradication planning is a continuation of the significant work already undertaken on the island by Sidney Islanders, the Province of BC, and Parks Canada to reduce the population of invasive fallow deer on Sidney Island. It also supports extensive research on the island confirming a link between fallow deer and the damaged forest ecosystem. Eradication provides the best opportunity for the forest ecosystems on Sidney Island to thrive. Following the removal of fallow deer from Sidney Island, the SIERP Forest Restoration Strategy will guide the control of invasive plants and support the growth of native plants. Population control of fallow deer through hunting and culls (i.e., without eradication) would result in the death of a greater number of deer overall,[16] while failing to meet the objective of ecosystem recovery. If the black-tailed deer populations rebound to a level that is affecting ecosystem health, ongoing population management (e.g., through hunting) will be required.
Principle 7: Make decisions on specifics, not labels	If fallow deer weren't an invasive species introduced in the first half of the 20th century for sport hunting, would the eradication project proceed? Yes. The SIERP project is not considering the eradication of fallow deer simply because they are an introduced species—their behaviour and abundance differ greatly from native black-tailed deer. Given that Parks Canada also undertakes the management of hyper-abundant native species through culling and site-level eradications, the decision to remove fallow deer is not founded solely in the "invasive" designation but rather on the level of impact demonstrated by the species in question. Fallow deer reach higher densities than the black-tailed deer and remove much more of a forest's understorey than native black-tailed deer. If there is any lapse in culling efforts and hunting activities on Sidney Island, fallow deer populations quickly rebound due to high reproductive rates and lack of predation. It is for these key reasons that the SIERP partners have determined that fallow deer eradication provides the best opportunity for the forest ecosystems on Sidney Island to recover and thrive.

[15] Including a site visit to Sidney Island in September 2018 and testing of aerial herding.

[16] Fallow deer reproduce very rapidly. In the past 20 years, more than 14,000 deer have been killed, but populations have always rebounded. (K. Poskitt, *pers. comm*.)

2.6. Following Regulations, Bylaws, and Indigenous Processes

Fallow deer eradication will take place in compliance with all necessary legislation, regulations, and bylaws. If an effective eradication activity is prohibited by law (e.g., discharge of firearms at night, use of certain firearms, discharge of firearms close to residences, use of noise suppressors), appropriate permits will be required to provide the necessary authorization. The review process for these permits will consider public safety as the paramount factor.

Federal Requirements

Federal regulations will be followed with permits obtained for exceptions when needed. Some of these regulations include *Canadian Firearms Act*, *Canada National Parks Act*, Transport Canada marine regulations, Criminal Code, Public Health and Safety, Domestic animal regulations, Wildlife regulations, *Species at Risk Act*, and the *Aeronautical Act*.

Provincial Requirements

Provincial regulations will be followed, with permits obtained for exceptions when needed. When an eradication activity requires actions that are prohibited under the Provincial *Wildlife Act* and associated regulations, permit exemptions must be requested. Review of that request will focus on human safety and animal welfare and may involve reviews and consultation with First Nations, the Conservation Officer Service and the RCMP.

Sallas Forest Strata

Any required strata bylaws or changes to existing strata bylaws or rules will be effected in accordance with the provisions of the Strata Property Act, which requires support of 75% of votes cast.

As discussed in **Section 5.6 Eradication Team Access to Private Property**, strata owners will have the right to control access to their strata lots and specify what eradication activities may or may not occur on their lot(s).

Indigenous Values

Eradication is not typically part of Indigenous culture, which is focused on long-term sustainability and ensuring that harvesting opportunities are available in future years and for future generations.

Hunting with good intentions is built into the W̱SÁNEĆ origin story of SMÍEŦ (deer). W̱SÁNEĆ peoples knew that if they didn't hunt SMÍEŦ, the ecosystem would suffer and there would be an imbalance on the land. The story also states that killing for the sake of killing is wrong and they must honour those whose lives they take.

Indigenous participants on the Deer Working Group have recognized and supported the value of eradication of fallow deer, in order to restore a healthy ecosystem with native plants for habitat and harvesting, and which will lead to an ideal ecosystem for a healthy population of native black-tailed deer that will allow for a continued sustenance hunt into the future.

Islands Trust Conservancy

The Islands Trust Conservancy will need to provide the Sallas Forest Strata with a waiver for any activities that contravene the conservation covenants held by the Islands Trust Conservancy (see Figure 4).

3. Recommended Eradication Methods for Sidney Island

3.1. Selecting Successful Eradication Methods

Many factors were taken into consideration when determining the methods that will maximize the probability of successfully eradicating fallow deer from Sidney Island. Historical fallow deer culls and ongoing recreational/sustenance hunting on the island have resulted in deer that are extremely wary of humans, which could make detection at low population densities challenging. This is compounded by the fact that fallow deer are naturally difficult to approach without being detected because of their highly developed senses and herding behaviour. The use of a highly trained and experienced eradication team employing eradication methods that have not been previously used, or have seen limited use on Sidney Island, can help to overcome this challenge.

The probability of eradication success can be maximized if:

- *Multiple, proven eradication methods are used*. Employing one method alone has a low probability of achieving eradication success. Each of these methods must be employed in a sequence and manner that minimizes the opportunity for any animal or group of animals to escape and become educated to the eradication methods;
- *The methods are safe, humane* (Dubois *et al.* 2017), *ethical, and comply with the relevant provincial and federal regulations or guidelines* (e.g., Canadian Council on Animal Care standards, BC Society for the Prevention of Cruelty to Animals (SPCA) Compassionate Conservation guidelines, Parks Canada Agency Animal Care Committee permit; American Veterinary Medical Association (AVMA) Guidelines on Euthanasia[17]);
- *The methods take into consideration the vegetation, topography and built infrastructure* present on Sidney Island;
- *An adaptive management approach is employed* to enable the eradication team to quickly respond to changing conditions (observed vs. expected) encountered during the operation, e.g., unanticipated deer response to the eradication methods, land access constraints, and socio-political situations. This can include the use of optional eradication methods (see **Section 3.3 Optional Eradication Methods: Adaptive Management** for additional information). Adaptive management played a critical role in Parks Canada Agency's Night Birds Returning program and the Restoring Balance project on Gwaii Haanas (Parks Canada Agency and Coastal Conservation 2016, Gill *et al.* 2018);
- *The project is completed as quickly as possible* to minimize disruptions to Sidney Islanders, First Nations hunters, and visitors to the park reserve. A short timeframe for project completion also reduces the influence of population replacement on the project, reducing, in turn, the total number of animals that ultimately must be removed from the island and increasing overall efficiency (Morrison 2008);
- *The principles of eradication are followed* (see **Section 2.1 Following the Principles of Eradication** for additional information); and
- *Eradication is conducted by eradication experts* (including professional marksmen) with the knowledge and skills to safely employ a range of proven eradication methods, applying them systematically at the

[17] https://www.avma.org/sites/default/files/2020-01/2020-Euthanasia-Final-1-17-20.pdf

appropriate population density with the overarching goal of keeping the target species naive at all population densities (e.g., Macdonald and Walker 2006). These individuals are also specifically trained to plan how the last animal will be removed well before the first is even approached. Each marksman must be willing to forgo a deer kill if the situation does not meet the following criteria:

1) There is certainty that the deer can be targeted without risk of wounding and/or escape;
2) If other deer are nearby, every animal must have a high probability of being dispatched during the same encounter; and
3) It is safe for the marksman to dispatch the deer (public and property safety).

Not only is this approach humane, but it also avoids conditioning the deer to the eradication methods employed during the project.

Multiple eradication methods employed individually and in concert will be required to successfully eradicate fallow deer from Sidney Island. The Deer Working Group considered several globally-proven best practices and methods based on efficacy, applicability to the Sidney Island environment, safety of the public and property, and regulatory and socio-political considerations. Following this assessment, two primary eradication methods are recommended for Sidney Island to maximize the probability of eradication success (see **Section 3.2 Primary Eradication Methods**):

- aerial shooting; and
- team shooting in temporary fencing zones with specially trained dogs.

In addition to these methods, several optional methods (see **Section 3.3 Optional Eradication Methods**) may be employed during the eradication depending on the effectiveness of the primary methods and deer response as the eradication progresses (adaptive management). These include spotlight/Forward Looking Infrared (FLIR) shooting, bait station shooting, drop netting, the use of the Sallas capture facility (deer herding and passive capture), and sentinel deer monitoring.

Other eradication/population control methods were reviewed but not recommended. These methods and the rationale for excluding each can be found in **Appendix B 1: Methods Considered but not Recommended**.

3.2. Primary Eradication Methods

3.2.1. Aerial Shooting

Aerial shooting from a helicopter is a new technique for Sidney Island, but it has been used for more than 40 years to control deer populations around the world. It is a safe, proven, and cost-effective method of rapidly removing ungulates from islands (Carrion *et al.* 2007, Cruz *et al.* 2009). For example, during a 2017 invasive black-tailed deer eradication on Haida Gwaii, BC, aerial shooting proved to be highly effective at rapidly reducing the deer population (accounting for approximately 44% of all deer dispatched) (Gill *et al.* 2018). Although dense forests with high crown closure were present on the project islands, the professional marksman successfully targeted deer through small natural openings in the forest canopy.

Efficient aerial shooting operations require a helicopter pilot with considerable experience in ungulate eradications and a highly skilled professional marksman using a firearm fitted with a noise suppressor to reduce noise disturbance to landowners, the public, and non-target wildlife species. Aerial shooting flights will generally take place in the morning and again before sunset, although flights may take place at other times of the day, depending on deer density and changes in deer behaviour as the project progresses (adaptive management). There will be no night shooting. If acceptable to Sidney Islanders, there could be some night flights using FLIR to help to locate deer.

Based on the expert site visit conducted in September 2018, Sidney Island is well-suited to aerial shooting given the moderate forest cover (crown closure), which presents opportunities to target deer in the larger open areas as well as smaller openings, especially in the central and southeastern portions of the island. The response of fallow deer to the helicopter during the site visit was also tested and deemed to be predictable, and the team was able to guide animals to openings that will allow them to be safely and humanely dispatched during an actual aerial shooting operation.

Location of aerial shooting activities: Park reserve, Sallas common property (including land covenants), coastline/beaches.

3.2.2.Team Shooting Temporary Fencing Zones with Trained Dogs

Temporary fencing (Figure 6) is commonly used in conjunction with aerial and ground-shooting methods during ungulate eradications to divide an island into smaller, manageable shooting zones with no ingress/egress. This increases the ability of the eradication team to detect and dispatch deer in each fenced zone and is particularly effective on larger islands. For example, fencing was recognized as the only feasible way to parcel Santa Cruz Island, California (>24,000 hectares) into manageable units prior to implementing a successful feral pig eradication (Macdonald and Walker 2006).

Figure 20: Example of temporary fencing

Sidney Island will be strategically divided into a series of temporary fencing zones (Figure 8), each approximately 20–24 hectares in size, taking advantage of any existing infrastructure such as roads, trails, or permanent fences (e.g., the Sallas capture facility) to aid in efficiency. The zones will be supplemented with temporary coast-to-coast wing fences (northeast/southwest) that will prevent deer from moving into previously cleared fencing zones. Trail cameras will be deployed on the ends of the fencing to monitor for deer movement into previously cleared zones. Temporary fencing will also be deployed on the road side of all private properties to allow the eradication team to move deer from coastal areas and the private properties to common property areas where they can be safely and humanely dispatched. *Note: Sallas residents who grant permission for eradication experts (professional marksmen) to detect and dispatch deer on their property will greatly increase operational efficiency and the probability of eradication success.*

Trained Hunting Dogs

Because of their keen sense of smell and ability to search large areas in a relatively short amount of time, trained hunting dogs working with professional marksmen/handlers have the highest probability of detecting animals at low densities compared to other detection methods (e.g., remote trail cameras) and are considered an essential tool for any deer eradication operation. Trained hunting dogs are generally utilized during the later stages of the eradication, when deer densities are low, thereby allowing individual animals to be effectively targeted. Trained hunting dogs can also be used to confirm eradication success.

Trained hunting dogs have been successfully used in numerous ungulate eradications globally, including a 2017 invasive black-tailed deer eradication on Haida Gwaii, BC (Gill *et al.* 2018). The success of this method is highly dependent on not only the abilities of the dog to detect deer but also the cohesiveness and experience of the dog/handler team. Each hunting dog is fitted with a GPS radio collar, so its location can be monitored, and their track is recorded to show where they have searched. One benefit of using hunting dogs in urban or other occupied environments is that if it is not safe to dispatch a deer that has been detected because of public or property safety concerns, the dog and professional marksman can continue tracking the deer until it is safe to dispatch it.

Two types of dogs are often used for deer eradications: indicator dogs and bailing dogs (Figure 7). Indicator dogs work in close proximity to the dog handler/professional marksman, tracking deer and identifying the location of the animal to the handler (pointing). In contrast, bailing dogs are trained to actively chase a deer, either by scent or visually, until they come into direct contact with the animal. The dog will "bail" or corner the animal and prevent it from fleeing until the dog handler/professional marksman can dispatch it. Using highly trained bailing dogs and systematically covering the island (ensuring there are no gaps in the coverage) results in a very high probability of detecting the target species, even at low population densities.

Figure 21: Three deer detection dogs and one bailing dog (collie mix on right)

Maintaining Road & Property Access

A fencing strategy will be developed for roads and properties that does not restrict access for prolonged periods of time (for example, temporary "gates" could be deployed at all road crossings).

Sequence of Events for Fenced Zoning

Starting at the southeastern end of the island, a temporary coast-to-coast barrier fence will be installed and the area southeast of the fence line will be divided into temporary fencing zones (Figure 8).[18] Deer within each fencing zone will be systematically dispatched by eradication experts (professional marksmen) and dog hunting teams working together (line drives) and independently. Once all deer within the individual temporary fencing zones located behind the temporary coast-to-coast barrier fence are dispatched (confirmed by intensive checks with the dog hunting teams), another temporary coast-to-coast barrier fence will be deployed further northwest, and the parcel of land between this barrier fence and the previous coast-to-coast barrier fence will be divided into new temporary fencing zones (Figure 8).

After a zone is cleared, the team moves onto the next zone to allow deer scent in the previous zone to dissipate before it is searched one final time with the dog teams. If no deer or fresh deer sign is detected, these zones will be dismantled and redeployed ahead of the next temporary coast-to-coast barrier fence (Figure 8).

This technique has several advantages.

- At all times, the general areas in which the eradication team is operating will be known. However, the team must be able to react to potential changes in deer behaviour, breaches of the fencing, etc. as required (adaptive management).
- When required, deer should be able to be moved off private property to a place where they can be safely and humanely dispatched (e.g., if property owners do not permit active shooting on their property).

Location of fenced zoning activities: Entire island.

[18] Fencing would begin before or during the aerial shooting period.

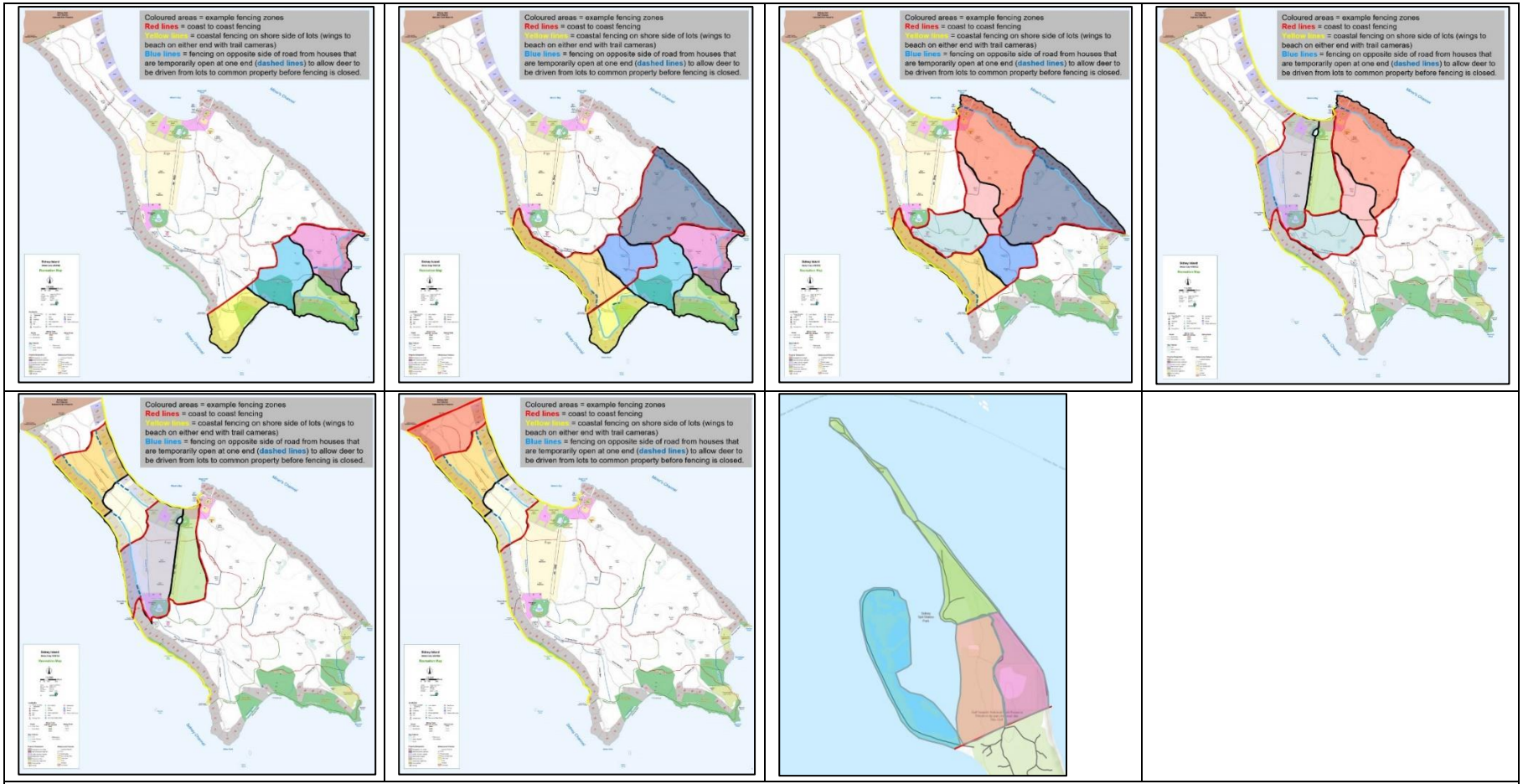


Figure 22: Example of temporary fencing zones and sequence of deployment, starting in the southeastern section of the island

NOTE: the actual size, shape, and location of each zone requires a site visit by eradication experts before finalizing.

3.3. Optional Eradication Methods (Adaptive Management)

An adaptive management approach is critical to enable the eradication team to quickly respond to changing conditions (observed vs. expected) encountered during the operation, including but not limited to unanticipated deer responses to the eradication methods, weather delays, equipment malfunctions, unforeseen land access constraints, and unanticipated socio-political situations. For the Sidney Island fallow deer eradication, several globally-proven eradication methods may be employed in the event that some deer cannot be targeted with the recommended methods. The optional methods include:

- Spotlight/FLIR (Forward Looking Infrared) shooting
- Bait station shooting (may be combined with spotlight/FLIR shooting)
- Drop netting
- Sentinel deer monitoring
- Use of the Sallas capture facility (active and passive capture)

3.3.1.Spotlight/FLIR Shooting

Deer are often more active at night and can be detected by taking advantage of the distinctive 'eye shine' that is characteristic of deer and other animals when seen in a high-powered spotlight, or by body heat signatures that can be seen when using a FLIR device (Figure 9). When properly employed, deer do not associate the spotlight or FLIR with risk and can thus be quickly dispatched by an eradication expert. FLIR and spotlight shooting was highly effective during a 2017 invasive black-tailed deer eradication on Haida Gwaii, BC (Gill *et al.* 2018). This method can be used by eradication experts on foot, in vehicles, or on boats.

Figure 23: FLIR technology can be used to locate deer during night shooting

3.3.2. Bait Station Shooting

Bait stations (Figure 10) employing the preferred fallow deer bait(s) are strategically placed in areas of known deer activity (approximately one to two stations every 50 hectares) and set up to provide the eradication expert with a clear shot at deer attracted to the bait station, while taking into consideration public and property safety (safe shooting direction) and factors that might influence shooter success (e.g., wind direction). Placement of each bait station also takes into account the method by which deer will be dispatched. For example, if spotlights/FLIR devices are used, bait stations placed near road networks could allow multiple sites to be accessed in one evening/night by a vehicle team (consisting of a driver and an eradication expert).

If the bait station method is employed, each station will be pre-baited for several weeks prior to the eradication operation. It is critical that the bait stations are replenished at the same time of day (e.g., 2–4 hours before dark if site conditions permit) using the same approach and method to further condition the animals to human scent and activity and associate humans with food, not threat (T. DeNicola *pers. comm.* 2018). The amount of bait added to each site is monitored daily to ensure that all bait is consumed within approximately two hours after dusk to encourage deer to arrive at the bait station before or near dusk. Trail cameras are used to monitor deer usage of each bait station to maximize the effectiveness of bait station shooting and adjust the amount of bait to deploy. The eradication expert is generally positioned at a bait station from approximately two hours before dark to approximately two hours after dark.

Figure 24: Example bait station

The image shows piles of whole kernel corn (red arrows) that was used as bait during a 2017 invasive black-tailed deer eradication on Haida Gwaii, BC.

3.3.3. Drop Netting

Natural openings in the forest and human-made clearings where herds of fallow deer have been observed foraging or seeking refuge could be targeted for drop netting. A large, square net is hung from poles at each corner, with larger nets requiring a fifth pole to support the centre (Figure 11). Each corner is weighted and can be released to drop the net. Small nets (~12 m in diameter) can be used to capture animals in small natural openings surrounded by forest while larger nets (~30 m in diameter) can be deployed near the edge of larger forested openings on the island. Drop nets can be remotely triggered from up to 180 metres away (T. DeNicola pers. comm. 2018).

Figure 25: Example drop net used to capture fallow deer herds (photo: N. Macdonald)

Before installing a drop net, the site is pre-baited for at least two weeks. This accelerates the acclimation of the deer to the nets and ensures that the nets are installed in areas where the deer are willing to consume bait. Continued pre-baiting for several weeks following installation, but prior to trapping, further habituates the animals to the structure and increases the likelihood of success. The bait is replenished at the same time of day using the same direction of approach to condition the animals to the presence of humans. Trail cameras or personnel using FLIR devices are used to monitor deer activity at the sites to determine when the net should be deployed.

3.3.4.Sentinel Deer Monitoring

A common reason for a failed eradication operation is the inability to detect and remove the last animals because of very low population densities. The sentinel animal method, which exploits the social nature of many ungulates including fallow deer, is a vital tool for detecting the target species at low densities and monitoring to confirm eradication or for biosecurity purposes (Taylor & Katahira 1988, Campbell 2002). A select number of surgically sterilized male and female deer are fitted with radio telemetry collars and with coloured ear tags or collars (to aid in identifying them from a distance in case of transmitter loss) before being released (K. Campbell *pers. comm.* 2018) (Figure 12). The social nature of the sentinel deer compels it to locate other fallow deer, which allows professional marksmen (ground and aerial-based) to track it to the location of the other deer. All deer in the group, except the sentinel, are dispatched and the sentinel is left to seek out more deer.

The benefit of using sentinel deer in urban or other occupied environments is that if it is not safe to dispatch deer because of public or property safety concerns, the professional marksmen can continue tracking the group until it is safe to do so.

Figure 26: Sentinel feral goat (left) and an eradication team member tracking it.

3.3.5.Sallas Capture Facility

Deer could be drawn into the existing Sallas capture facilities (Figure 13) using bait (e.g., alfalfa and/or whole kernel corn) or by actively herding animals using line drives.[19] Deer numbers in the facility will be monitored via personnel or trail cameras and the gates closed when a sufficient number of deer have been captured. Alternatively, a one-way gate (or similar) could be installed to allow deer to enter the facility, but not leave it.

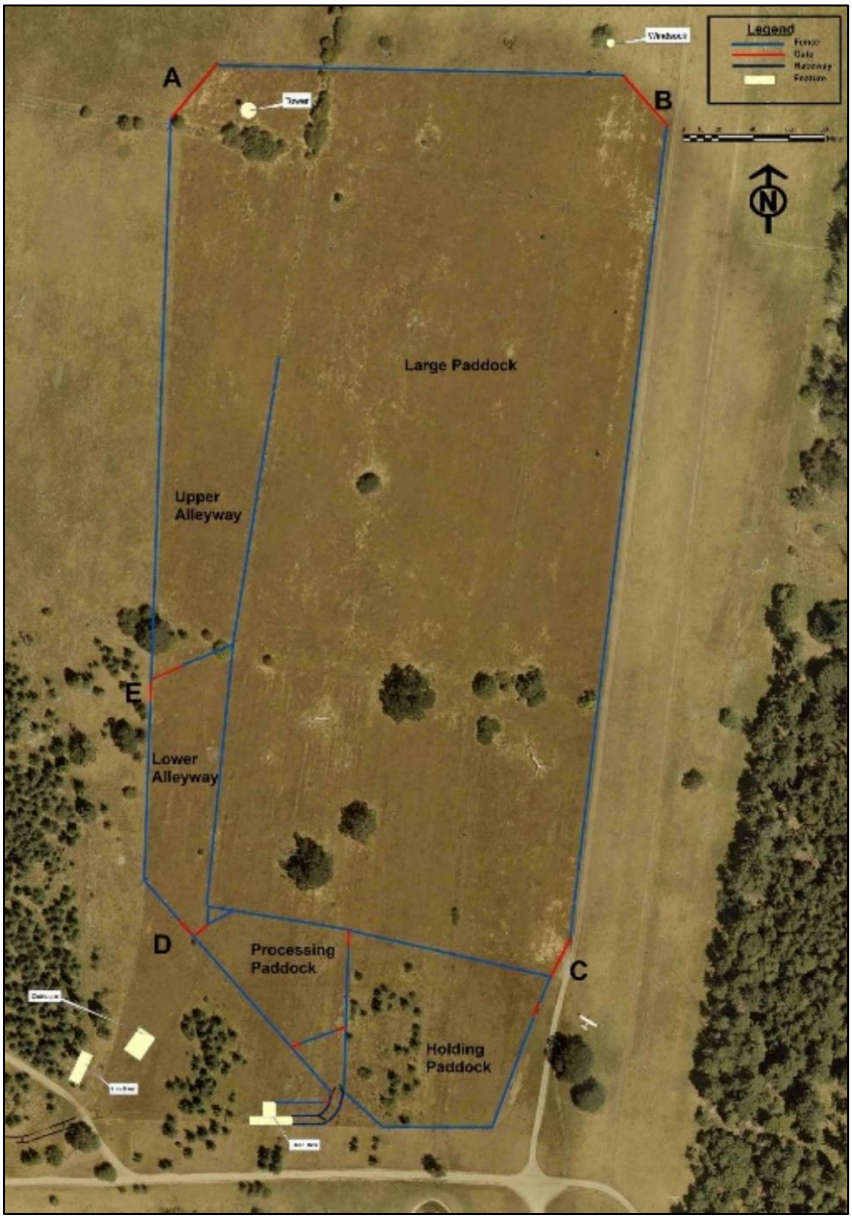


Figure 27: Existing Sallas capture facility

[19] Deer herding has been used by the Sallas Deer Management Committee to move animals into the capture facility during previous culls (K. Poskitt *pers. comm.* 2021).

3.4. Eradication Phases

Following an extensive operational planning and preparations phase, the eradication operation will be carried out using the globally-proven three-phase approach that the majority of invasive ungulate eradications follow (e.g., Macdonald and Walker 2006, Gill *et al.* 2018).

Phase 1. Rapid Population Reduction (& Preparations for Phase 2)

- Aerial shooting, targeting natural and human-made openings as well as the coastline/beaches.
- Install the first temporary coast-to-coast barrier fence with trail cameras on each end to monitor deer movement around the fence.
- Install temporary fencing zones behind the first temporary coast-to-coast barrier fence.

Phase 2. Target Remaining Deer

- Trained marksmen and dog shooting teams will work together (line drives) and independently to detect and dispatch all deer within a fencing zone before moving to the adjacent fencing zone. This process will progress zone by zone throughout the island.

Optional methods that may be employed during Phase 2 (adaptive management):

- Spotlight/FLIR shooting;
- Bait station shooting (may be combined with spotlight/FLIR shooting);
- Drop netting;
- Sentinel deer monitoring; and/or
- Use of the Sallas capture facility (active and passive capture)

Phase 3. Confirming Success

- Dog hunting teams intensively search previously cleared zones after they have 'settled' (e.g., deer scent dissipates) to confirm they are deer-free.
- Optional methods: trail camera arrays, citizen reporting, DNA analysis of fecal pellets, sentinel deer.

3.5. Biosecurity Plan

Biosecurity plans are critical components of successful eradication campaigns. To mitigate the risk of a post-eradication fallow deer reinvasion, an effective early detection, rapid response plan (EDRR) must be put into action prior to the eradication and continued indefinitely. A key element of an EDRR is the detection system, which could include game cameras, sentinel deer, and resident vigilance. The rapid response element must be designed such that it can be on standby for many years but also mobilize rapidly and effectively.

Fallow deer are present on a few other Gulf Islands including James and Mayne. A biosecurity plan will be developed with the Deer Working Group.

3.6. Estimated Timing & Duration

The duration of the operation and probability of success will be closely tied to the effectiveness of the eradication methods and the level of support from Sidney Islanders (e.g., access to private lots).

If the eradication team is permitted access to most private lots, the operation is anticipated to take one season to complete, including confirming success. The operational window will extend from the second week of September (after Labour Day) to the second week of May (before Victoria Day) to coincide with a low visitor/landowner presence on the island and a static or declining fallow deer population.

Aerial shooting is anticipated to require approximately two weeks to undertake, not including preparations (Table 2, next page). Fencing installation/teardown and active shooting within the fencing zones is anticipated to require approximately five months to complete, not including preparations (e.g., equipment staging, installing temporary road "gates" to permit owner access during the eradication operation).

It is critical to include contingency time in the project schedule to account for unforeseen circumstances such as implementation delays, weather delays, equipment issues, lower than anticipated efficacy of eradication methods, private lot access issues, and other socio-political challenges.

3.7. Testing and Trialing Eradication Methods

Every place and every eradication process is unique.

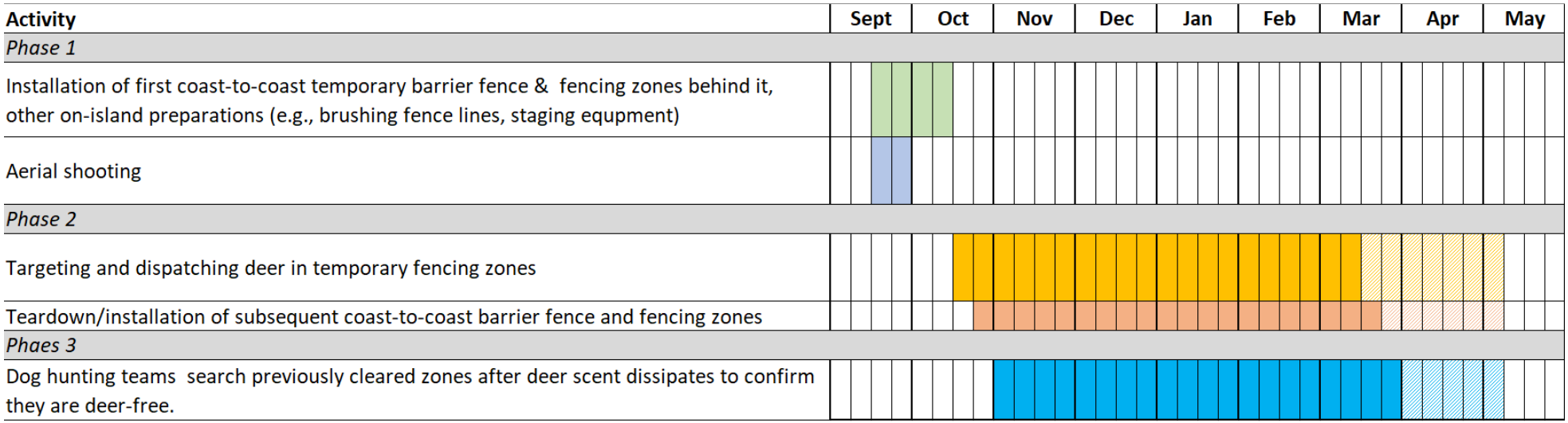
The Deer Working Group strongly recommends testing and trialing of the eradication techniques, especially for the fenced zoning method. The expected approach is that the eradication contractor will be taking an adaptive management approach to fenced zoning, learning and adapting techniques as they go.

We expect that eradication contractors will visit Sidney Island to assist in the development of the detailed operational plan, to iron out logistical requirements of the method, and to enable Sidney Islanders to better understand the proposed approach and have an opportunity to meet and talk with the contractors and discuss any issues or concerns.

Some other trials may also take place in the park reserve.

The exact timeline for trialing will depend on availability of suitable contractors. The Deer Working Group is continuing to develop trial details and will be updating the Steering Committee as these evolve.

Table 3: Draft timeline for operation
Note: lighter colours indicate contingency time



4. Managing Black-tailed Deer During the Fallow Deer Eradication Process

The SIERP MOU speaks clearly to the desire to eradicate invasive fallow deer, while ensuring that the island supports a healthy and sustainable population of native black-tailed deer on an ongoing basis. SIERP partners recognize that while there was no intent to eradicate or remove black-tailed deer during the fallow deer eradication process, the recommended eradication techniques will lead to the removal of the few existing black-tailed deer on Sidney Island.

The temporary removal of black-tailed deer from Sidney Island would be beneficial in the short term (significantly increasing the probability of successfully removing fallow deer) and longer term (providing native vegetation with a full reprieve from deer browsing to encourage ecosystem recovery).

While there are no reliable data available on black-tailed deer populations on Sidney Island, "best guestimates" are that it is very low, perhaps only ~30 animals. In comparison, the fallow deer population is "guesstimated" at ~300+ animals.

4.1. Impacts of Black-tailed Deer on the Eradication Process

The presence of native black-tailed deer on Sidney Island poses a significant challenge to the fallow deer eradication.

The fallow deer eradication process will include techniques that do not allow marksmen or hunting dogs to distinguish between fallow and black-tailed deer, or will require significant additional time and effort to avoid black-tailed deer. Examples include aerial shooting, dog hunting in the temporary fencing zones, and night shooting.

The logistical challenges of avoiding black-tailed deer kills would be most pronounced during phase 2 (target remaining deer) and phase 3 (confirm success), when the fallow deer density will be similar to, and then lower than, that of black-tailed deer. Encounters with black-tailed deer ("false positives") would be frequent and continue to increase in frequency as fallow deer numbers decline. Each deer encountered via sign or scent would need to be tracked until the professional marksman can visually confirm the species; this increases the shooting effort per deer and the total time required to remove all fallow deer from the island. The inability to distinguish between the two species using trained hunting dogs or signs of deer (i.e., tracks, pellets) would contribute to the challenge of confidently confirming that all fallow deer have been removed from the island during phase 3.

If the goal is to eradicate fallow deer while leaving the black-tailed deer population intact:

- The eradication would take significantly longer (i.e., more than one year);
- The required personnel effort would increase significantly;
- The cost of the operation would be greater;
- The likelihood of eradication failure would be significantly higher (a longer operation can increase the risk of inadvertently educating remaining animals to the removal methods); and

- It would be challenging if not impossible to conclusively declare the island free of fallow deer in the presence of a black-tailed deer population.

4.2. Restoring a Healthy Black-tailed Deer Population

The SIERP partners considered three options for facilitating a healthy black-tailed deer population following fallow deer eradication. The pros and cons of each of these are presented below. The Deer Working Group has recommended Option 3 (natural recolonization). If desired by a significant number of Sidney Islanders, translocation (Option 2) would be further discussed with Sallas Forest Strata.

All options are subject to a research permit and approval from Parks Canada's Animal Care Committee (ACC), as well as other required Provincial permits and approvals.

Option 1: Capture, Hold & Release

Use live-capture of black-tailed deer and hold them in a capture facility during eradication.

- Immobilized deer would be transported to a suitable holding facility.
- Once eradication of fallow deer is confirmed, this deer population would be released and left to recolonize the island.

This option would avoid the loss of black-tailed deer during fallow deer eradication efforts and would enable more rapid population growth by black-tailed deer. However, penning deer in a capture facility is extremely stressful for deer and could lead to capture myopathy (an often-fatal, exertion- or stress-induced muscle degenerative condition affecting captured wild animals). This option would require the penning of black-tailed deer for many months, perhaps longer. The SPCA does not support prolonged penning of deer.

There would also be significant challenges (and cost) in detecting and immobilizing black-tailed deer on Sidney Island, given their very low numbers (especially in relation to the fallow deer population). Given the stress this would impose on the deer, careful consideration must be given to the actual benefit of retaining black-tailed deer on Sidney Island compared to other options.

Option 2: Translocate Deer

If all black-tailed deer are dispatched through eradication, a new population of black-tailed deer could be translocated from nearby islands, or perhaps from another source, to recolonize Sidney Island.

- Following eradication and biosecurity sweeps, a population of black-tailed deer would be transported to Sidney Island. The aim would be to have an appropriate mix of male and females, adult, and juveniles to encourage a breeding population (the total number of translocated deer is to be determined, but should be sufficient for a breeding population).
- Translocated deer would be checked to ensure they do not carry adenovirus hemorrhagic disease (AHD).
- If deer are being sourced from nearby islands, existing clover traps from the Province could be used to passively bait and capture deer and re-locate them to Sidney Island.

Reintroduction by translocation requires substantial financial and logistical commitments, including well-trained personnel and specialized equipment to ensure human safety (handling wild animals can be a significant hazard), and humane treatment of deer. Deer are also highly sensitive to the stresses of capture and handling, which raises significant concerns regarding animal welfare/humaneness. The costs of deer translocation range from C$1,200-$1,600/deer (M. Reed, Wildlife Capture Management, Ltd. *pers. comm.* 2018).

Given the financial costs associated with translocating deer, the stress it imposes on each animal, and the uncertainty as to whether those deer will swim away from Sidney Island, careful consideration must be given to the actual benefit of actively reintroducing black-tailed deer to Sidney Island as compared to natural recolonization (option 3) and thus allowing efforts and resources to be redirected to other important restoration activities.

Option 3: Natural Recolonization (No Action)

If the black-tailed deer population is removed from Sidney Island, deer from other islands could naturally recolonize Sidney Island. This could happen within a few years, however historical evidence from the Georgia Basin and BC Coast suggests that it could take decades for a population to become re-established via recolonization. An advantage of this option is that it would allow time for the natural ecosystems to fully recover. Over many decades, the extinction and recolonization process on islands acts to maintain regional diversity in plant communities and allows populations of palatable species to recover from the overbrowsing that occurs in places where predators are absent (P. Arcese *pers. comm.* 2018).

Table 4: Summary of advantages and disadvantages for each option concerning the management of black-tailed deer

Option	Advantages	Disadvantages
1. Capture Hold Release	♦ Sidney Island population of black-tailed deer retained	♦ Adds significant time, expense and complexity to the eradication ♦ Significantly harder to confirm success ♦ Stress of penning an animal could lead to capture myopathy or injuries leading to death of deer (animal welfare concerns)
2. Translocate	♦ Population actively re-established, likely faster than natural recolonization	♦ Concern for animal welfare during transport, but stress is less than penning (option 1) ♦ Costly in financial and human resources ♦ Deer could swim back to native island
3. Natural recolonization	♦ Deer choose to recolonize on their own terms by swimming over	♦ Could take decades for recolonization to occur

Table 5: Other factors to consider when selecting the preferred black-tailed deer management action

	Animal Welfare Cost	Timeline to Population Re-establishment	Personnel Safety Risks	Animal Handling	Cost $
1. Capture Hold Release	Very High	Shortest	High	High	High
2. Translocate	High	Medium	Low	Medium	Very High
3. Natural recolonization	Low	Uncertain	Low	None	Low

Preferred Approach

Option 1 is not recommended as is would lead to high stress for the deer, and significantly reduces the chances of successful eradication, while increasing its duration and cost. This option is not supported by the SPCA or Parks Canada's Animal Care Committee.

Options 2 and 3 both facilitate the eradication process and provide the best chance for success.

Option 2 increases the chance that there will be a small black-tailed deer population soon after eradication has been completed and confirmed. Through reproduction and additional deer swimming onto the island, the black-tailed deer population will re-establish more quickly. However, translocation of deer from other islands comes at the cost of high stress to the deer that are captured and translocated, as well as additional cost to the project. Permits would be required to enable this work.

Option 3 is the simplest approach. It avoids any unnecessary stress to the deer (and risk to animal handlers) and allows for a natural re-establishment of the black-tailed deer population. However, it is unknown whether re-population with black-tailed deer will happen quickly (2–5 years), or more slowly (over decades). This option also provides the greatest opportunity for ecosystem recovery in the absence of deer browsing.

Parks Canada Agency, the Province (Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD)) and local First Nations prefer natural recolonization (Option 3) over intentional reintroduction of black-tailed deer to the island (Option 2) following the eradication for the reasons stated above. However, if a significant number of Sallas residents prefer black-tailed deer to be reintroduced to the island, Parks Canada Agency and FLNRORD will discuss this further with Sallas Forest Strata.

4.3. Managing Black-tailed Deer Following Eradication

Regardless of approach, the goal is a black-tailed deer population that is consistent with healthy forest ecosystems on the island.

The Deer Working Group are developing a Black-tailed Deer Management Strategy that will identify the circumstances in which management is necessary, and the methods recommended for managing the deer population. .

5. Considerations for Residents and Visitors

Eradication work will create disruption to both Sidney Islanders and Indigenous hunters.

Disruption to Sidney Islanders can be minimized by carrying out eradication activities during the Labour Day to Victoria Day period, when fewer people are on the island. The operation will likely span several months over fall, winter, and early spring, and could begin in fall 2022 depending on how planning and approvals progress.

5.1. Safety for Indigenous Hunters

Safety will be the top priority. Indigenous hunters have rights to hunt in the park reserve. During the eradication process, partner First Nations will help to advise their members that eradication is taking place and encourage them to choose other hunting areas. Notices will be placed at landing sites to advise of activities. However, it will be important to be aware of the potential for a hunter to be on the land during the hunt season. Parks Canada staff will continue to monitor the shoreline to be aware of any boats that have landed.

5.2. Safety for Sidney Islanders

Safety will be a top priority. Only eradication specialists (including highly trained marksmen with experience undertaking ungulate control or eradication projects in urban or other occupied environments) will be utilized.

If an eradication operation is approved, Parks Canada and the eradication contractor will collaborate with Sidney Islanders to develop a safety plan for the operation that will ensure public, property, and personnel safety while supporting the successful eradication. A draft safety plan will be shared with the Sallas community before eradication occurs, so they can provide feedback to ensure that the plan is consistent with island residents' views.

The goal of the safety plan will be to achieve:

- zero accidents
- zero near misses
- zero property damage or loss

The final safety plan will include the following.

- *A detailed set of Standard Operating Procedures* (SOPs) for the eradication operation based on input from eradication contractors and experienced Sidney Islanders. Shooting rules will incorporate the perspectives of Sidney Islanders, build upon the safety of existing hunt rules for the seasonal deer hunts managed by Sallas, and allow for a high probability of operational success. Known hazards will be identified to all members on the ground.
- *Frequently updated communications* (see **Section 5.7**).
- *Provision for a Safety Officer* to be present on island during the operation to provide daily updates on where the operation is taking place and area closures as required.

- *A formal mechanism for Sidney Islanders to report* unsafe actions or damage to property.[20] A safety concern can be reported directly to the Safety Officer to resolve in a timely manner. Sallas Forest Strata will also manage an email account dedicated to this purpose, with any concerns raised with Parks Canada. Any reports of incidents would be investigated by PCA Health and Safety committee member and a representative of Sallas Forest Strata, and if necessary, reported to Worksafe BC or other appropriate authority.

In addition, the following steps will be taken to ensure public and property safety and minimize disturbance.

- The operation will be undertaken during the fall, winter, and early spring when the number of people on the island is lowest.
- The operation will employ trained personnel that have experience eradicating or controlling deer in urban and other occupied environments.
    - Eradication experts will use noise suppressors on firearms to reduce noise disturbance.
    - Eradication experts will use highly frangible ammunition designed to disintegrate into small particles upon impact. This eliminates the potential for ricochets while ensuring humane shooting.
    - The eradication contractor will be required to carry the appropriate level of liability insurance for the operation.
- A mandatory orientation will be delivered to all involved personnel[21] to outline all aspects of the safety plan, including public and property safety, known hazards, properties where access is not permitted, etc.
- The project Safety Officer will post updates to the emergency procedures, contact lists, and notice about active shooting on the notice board in Miners Bay. Roadside information boards will provide maps and information about active shooting locations.
- Sidney Islanders who granted access to their property can also request a site visit from the Safety Officer to document and identify any site-specific areas of concern.

[20] Details to be determined if eradication is to proceed.
[21] Includes eradication contractors and their support teams, residents and First Nations involved in the eradication.

5.3. Qualified Eradication Team

Project success can be maximized by employing a team of skilled eradication experts (including professional marksmen) with considerable experience with safely and humanely implementing eradication operations on islands and in urban and other occupied environments.

The eradication contractor will have the skillset and tools to complete the eradication as described (see **Section 6.2 Selection of Eradication Team** for details regarding the hiring of contractors.)

The eradication team will likely be housed on self-contained, fully-equipped floathouses or trailers on park reserve land (i.e., they will not be hosted by owners or using hunter cabins.)

5.4. Owner Access to Their Properties & Common Areas

The eradication team will make every effort to minimize access restrictions and inconveniences to property owners during the eradication operation.

- Sidney Islanders will be free to access their private lots throughout the operation and will be informed when any operational activities are scheduled to occur on their lots, if permission has been granted for access. Owners of adjoining lots will also be informed if operational activity is taking place to ensure that owners of those lots can make decisions about being present on their lots during that active time.
- A fencing strategy will be developed for roads and properties that does not restrict access for prolonged periods of time.
- Closures will be placed on common property over short periods of time to permit eradication operations to be safely undertaken. All activities planned for the current day will be posted at the dock shelter in Miners Bay and sent by email or text to Sidney Islanders who opted to receive this frequent level of communication. Roadside information boards will provide maps and information about active shooting locations.

5.5. Eradication Team Access to Private Property

Eradication success will be much more likely, and proceed faster, if the eradication team can access all or most of the private properties.

Sidney Islanders' Options for Permitting Access to their Lands

Each Sallas owner will have three options regarding access to their private land by the eradication team:

1. *Refuse access to the eradication team*. This option, if chosen by many owners, could compromise the probability of project success and increase the time to complete the project (likely two or more years) as well as increasing the cost;
2. *Grant access to their property(ies) and allow the eradication team to dispatch deer on it, as long as it is safe to do so from a public and property perspective*. This option provides the highest probability of project success and the shortest timeline to project completion (estimated at one fall/winter/early spring season); or

3. *Grant the eradication team access to their property(ies) but not allow them to dispatch animals on it*. The team will be limited to driving deer off the property, to be dispatched elsewhere. This option provides a moderate probability of project success and timeline to completion (potentially more than one year).

Why is access to private property required?

- *Installation of temporary fencing*: During preparations for phase 2 (target remaining deer), personnel will need access to install the temporary barrier fencing. This includes coast-to-coast fencing, creating fencing zones that will encompass common property as well as private properties, and installing additional fencing on the coast-side and roadside of private properties. A fencing strategy will be developed for roads and properties that does not restrict access for prolonged periods of time.
- *Dispatching deer within the temporary fencing zones*: During phase 2 and phase 3 (confirming success) of the operation, eradication experts working with professional dog teams will dispatch all deer within a fencing zone on common property, or on properties where this is permitted by property owners. Dispatch will only take place if safe to do so from a public and property perspective.
- *Meat recovery*: the meat recovery team may need to access or cross private property in order to retrieve dispatched deer. In the case that access to the beach to retrieve carcasses is not viable using the island easements, then access will be sought from owners whose property must be crossed to enable the retrieval (if it is safe for the meat recovery team to do so). See **Section 7.2: Carcass Recovery and Meat Distribution**.

Risks of refusing property access or limiting the activities that can be undertaken on private properties

If there are private properties that have not provided permission for access to the eradication team, it will increase the risk of project failure because these properties will act as deer refugia and provide logistical challenges for eradication contractors. Deer that move onto these properties could be very challenging to remove and might require the use of additional methods to push deer onto common property (e.g., barking dogs, low-level helicopter activity or the use of drones or air horns). If the eradication team has access but not the ability to dispatch the deer on private property, it will slow the eradication as the team may end up chasing deer around the property without being able to guide them to another place to be dispatched. This in turn will increase the risk of eradication failure and/or budget/personnel fatigue.

In addition to increasing a risk of failure, preventing access to properties, or limiting the activities that can be undertaken on them will also increase the length of time to complete the project, which could lead to:

- potential personnel fatigue;
- prolonged disturbance to Sallas residents (e.g., if the eradication operation were to take two or more years to complete rather than one winter season, the temporary barrier fencing must also remain on the island for all that time); and
- the potential for the project budget to be depleted before the end of the eradication project.

5.6. Insurance and Indemnity

For the success of SIERP, indemnity and insurance for landowners and holders of registered interests in the land, such as the Islands Trust Conservancy, is essential to account for any personal or property damages that may occur during the eradication. The insurance and indemnity for landowners and holders of registered interests in the land will be addressed in a separate, supporting, legal access agreement.

Parks Canada will work with the Sallas Forest Strata and Islands Trust Conservancy to develop a separate written agreement that formalizes consent of landowners for access to the land to enable eradication efforts by contracted eradication specialists to meet the project goals. The agreement will grant indemnity and coverage for damages or losses for Sallas Forest Strata and Islands Trust Conservancy lands resulting from the project implementation. Contracted eradication specialists will require comprehensive liability insurance that is applicable to personal harm and infrastructure/land damage. The agreement will be developed alongside this eradication plan by the appropriate authorities to the satisfaction of all parties prior to any eradication efforts.

Prior to any eradication efforts or project implementation, this agreement for access, insurance and indemnification will be negotiated and in place to ensure appropriate protection to the satisfaction of all parties.

5.7. Communications with Sidney Islanders

An important aspect of safety will be ongoing communication between the eradication team and Sidney Islanders. Emails and text messages to Sidney Islanders, notices at the bulletin board in Miners Bay, and roadside information boards will be key tools used to share activity updates and overall progress during an active eradication operation. The eradication team may need to change plans on short notice, sometimes daily, when they adapt methods or change locations as deer behaviours change. It will be important for owners to know where they can find up to date information, especially when they are on the island.

Communication methods can be revised based on the preferences of owners. Below is a suggested approach to consider as a starting point.

- During the eradication operation, an initial plan and schedule will be shared with Sidney Islanders and updated every at least every two weeks (likely more often). Note that there may be a need to modify plans at short notice as part of the adaptive management process to respond to changing deer behaviours.
- There will be daily updates to all owners. All activities planned for the current day will be posted at the dock shelter in Miners Bay and emailed or texted to Sallas owners who opt to receive this frequent level of communication. Roadside information boards will provide maps and information about active shooting locations.
- The project will have a team member available to speak with by phone or email during each day of the operation to respond to any questions or concerns. Sallas Forest Strata has created a dedicated email address for Sidney Islanders to express any concerns that may arise.

- The project team will develop a media strategy with the Sallas Forest Strata to respectfully respond to any media interest. For example, if a media outlet contacted Parks Canada to report on the restoration project, Parks Canada will notify the Strata representative(s) so the community has an opportunity to engage with the reporter. Parks Canada will ensure any media outlet is aware of any closures on Parks Canada lands, while also noting that private lands and docks are not accessible on Sidney Island without an invitation from a Sallas owner.

5.8. Post-eradication clean up

Following completion of the eradication process and confirmation that deer have been successfully eradicated from Sidney Island, the final step will be to clean up materials and other items used for the process. This will include:

- Removal of fencing, posts, gates and all other materials;
- Proper disposal of remaining carcasses, guided by FLNRORD and Indigenous protocols; and
- Cleanup of the camp, which will be on Parks Canada managed lands.

6. Preparing for Eradication

If approval is given to move forward with the eradication process, there will be a considerable amount of work (and time) required before eradication can start, as outlined below. It is hoped that eradication could begin in fall 2022.

6.1. Hunting Activities

During the fall/winter of 2021-2022, there will be active Indigenous hunts in the park reserve and Sallas hunts on common property. These hunts will help to reduce the number of deer to be removed by eradication and will "put meat in freezers" for both Indigenous and Sallas communities.

6.2. Selection of Eradication Team

The eradication team will be selected to ensure that the on-the-ground personnel are highly trained, experienced and skilled.

Parks Canada will undertake a procurement process to hire the eradication contractor, supported by the SIERP partners. This must adhere to Treasury Board guidelines. The proposed process is:

- Parks Canada will prepare a Request for Expressions of Interest (with input from partners). This will seek to identify eradication contractors who are suitably qualified AND available during the proposed eradication period;
- Suitable eradication contractors will be invited to provide a detailed proposal/approach, providing information on their technical skills, experience with the proposed techniques and in a near-urban environment, etc.;
- Proposals received will be reviewed by the project partners (including First Nations and Sallas) and evaluated based on technical skills and cost. While cost will be a factor, it will only account for a portion (e.g., 20%) of the score given to that proposal;
- Parks Canada will sign a contract with the successful contractor.

6.3. Operational Plan

The successful contractor will prepare a detailed operational plan for the eradication process. This will provide a high level of detail on the eradication process. Detailed operational plans can take more than a year to develop.

6.4. Permits and Other Authorizations

The contractor will work with Parks Canada to obtain required permits and other authorizations.

6.5. Equipment and Materials

Procurement of supplies will follow Parks Canada procedures and regulations. Supplies will need to be ordered as soon as practical to ensure they are on site and available when needed. There may be a long lead time required to acquire specialized equipment such as the fencing.

7. Local Support Teams

7.1. Supporting Tasks Required

If eradication is approved, there will be a need to hire local people to support the work of the eradication team both during trials and eradication. Local First Nations and Sidney Islanders will be encouraged to apply for this work.

Many potential opportunities are involved. Some of the tasks include:

- Provide local knowledge of Island and cultural features
- Clearing trails for nets
- Installing and moving netting
- Set up deer deterrents on beaches, gates on roads, monitor beaches for sign
- Providing transportation to and from the island (as required)
- Setting up hunt camps with supplies and cooks
- Delivering meat to First Nations communities.
- Contributing to daily safety talks
- Camera work (swap memory cards and batteries)
- On site First Aid and Information officer (alongside Park staff)

7.2. Carcass Recovery and Meat Processing

Sallas Side

On the Sallas side (which is subject to provincial law), possession rights of wildlife killed lawfully under an existing hunting season are passed to the hunter as per the BC *Wildlife Act* and associated regulations.

During an eradication process, however, the Province of BC retains ownership of wildlife killed. This is because permits issued under the *Wildlife Act* are not intended to create an opportunity to acquire meat for consumption. Normally, wildlife killed under permit are required to be composted.

For this eradication process, the Province has indicated that it would be willing to consider transferring the fallow deer carcasses to local First Nations provided that:

- The collection of the carcasses in no way interferes with the eradication process, and
- The meat and processing activities align with Canadian Food Inspection Agency safety requirements.

If the *Wildlife Act* permit allows First Nations to acquire deer carcasses, the eradication team (or support teams) will attempt to recover the carcasses of deer dispatched during the eradication when practical, unless the recovery effort would negatively impact the operation or pose a safety risk to personnel.

Deer carcasses not available for consumption will be made available for scavenging animals or buried at a designated site.

Park Reserve

In the park reserve (subject to federal law), First Nations will acquire any deer killed through eradication (unless the recovery effort would negatively impact the operation or pose a safety risk to personnel).

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Appendix A 1: Methods Considered but not Recommended

Recreational & Subsistence Hunting

Recreational and subsistence hunting can be an effective method of population control; however, hunters are not utilized as marksmen during an eradication operation because they may inadvertently increase the risk of project failure by (Brown 2005, Campbell and Donlan 2005):

Employing methods that have low efficacy

Hunters using common hunting methods (e.g., stalking, tree stand or blind hunting) are not effective at reducing a target species' population (e.g., Fraser 2000). For example, a 2002 trial at the Gum Lagoon Conservation Park (9000 ha) in South Australia, using 65 hunters in a directed hunt over four days, resulted in 44 deer (18 female) shot. The number shot was estimated to be approximately equal to the annual population increase for fallow deer and one-third of the annual increase for red deer in the park. In contrast, a 4-hour helicopter cull in the same area in 2007 using one professional aerial hunter resulted in 182 deer shot, which was estimated to be more than 90 percent of the population (Invasive Species Council 2009).

Educating the target animal to the eradication method

Hunters have widely varying skills and abilities; generally, a small number of skilled hunters achieve the clear majority of kills. There is also a significant risk that hunters will educate the target animals to the hunting methods (e.g., animals escape their first encounter with a hunter because of missed shots), thereby making the animals warier and thus more difficult to detect and remove. Highly accurate shooting combined with knowledge of the target animal's behaviour, self-control, and effective decision-making tools are critical components required for a successful eradication.

Incomplete coverage of the target island

Hunters generally target specific animals (e.g., bucks) and usually only hunt during good weather and in easy access areas (i.e., avoiding complex terrain and vegetation such as steep slopes, cliffs, and dense forests) to maximize their likelihood of success per hunter effort. As the target animal population declines it is more likely that individual animals will inhabit more challenging terrain and areas with dense vegetation to avoid detection.

Inability to detect the target animal at low densities/loss of interest

Hunting effort varies with deer density; when deer detection frequencies decline, most hunters either cease hunting or move to other areas (Nugent & Mawhinney 1987). During an eradication operation, the general rule is that 90% of the hunting effort is required to remove the final 10% of the target population. The success of an eradication operation is therefore highly dependent on careful planning that considers how the final 10% of the population will be removed while ensuring that the remaining animals are not educated to the hunting methods during the removal of the initial 90%. Using hunters increases the probability of educating deer and is likely to make the later phases of the eradication more difficult and expensive.

Advantages:

- Involving select local hunters may be beneficial from a community engagement perspective and could potentially increase community support for the project.
- Involving select local hunters in supporting different aspects of the operation could reduce project costs.
- Providing opportunities for select local hunters to receive training in marksmanship and deer behaviour may further increase support for this project and could enable these individuals to act as the biosecurity response team for any fallow deer incursions from other islands and to manage the black-tailed deer population density in a safe and humane manner following the eradication.

Disadvantages:

- Hunters can inadvertently contribute to eradication failure due to the use of more traditional hunting methods (low efficacy), education of the target species, incomplete coverage of the target island, and/or inability to detect the target species at low densities.

Sterilization & Contraception

Several approaches to prevent or limit reproduction in large mammals have been explored, including surgical sterilization, contraceptive hormone implants, and immunocontraception (i.e., vaccination) (Fraker and Schwantje 2011). Surgical sterilization requires the capture of deer, a general anaesthetic, and sterile surgical methods employed by a veterinarian. It is highly invasive, expensive, and impractical on an operational basis for a wild population (from an eradication perspective, if a deer is captured it should not be released). Contraceptive hormone implants must be replaced frequently (every two years) and there are concerns about food chain effects when treated animals are consumed by people or other animals.

Immunocontraception (using vaccines to control fertility) is considered a promising approach but it has limited applicability in uncontrolled environments (e.g., deer management on islands) and many vaccines are still in the experimental phase. The most tested approach uses PZP (*porcine zona pellucida*) proteins to produce antibodies that attach to the surface of the eggs of treated females and prevent sperm from fertilizing them; PZP vaccines are female-specific (Fraker and Schwantje 2011).

In order to use female-specific vaccines to control fertility, greater than 90% of does in a population should be treated which is generally not financially or logistically feasible for large populations. Treatments must also be repeated every two to five years (e.g., Gupta and Minhas 2017). The process of reducing the population by contraception alone is not recommended because it is slow, complicated, and expensive. In its first year, a program to vaccinate 20–25 does was estimated to cost $20,000–25,000 (Fraker and Schwantje 2011). Furthermore, in addition to being cost prohibitive, any sterilized deer will continue to impact the vegetation on the project island, thereby eliminating any perceived benefit from this population control tool. At this time this approach is not considered feasible for widespread use in deer management.

Trap Neuter Release (TNR), or trap-neuter-abandon (Jessup 2004), is frequently recommended by citizens or organizations concerned about animal welfare. The method may involve live capture and relocation, or sterilization and release at the place of capture. Most TNR advocates recommend releasing the animals at the site of capture; however, this is not an option for large-scale eradication operations because the sterilized animals must be held until the entire population is caught. It is

arguably less humane to hold wild animals in captivity than to humanely euthanize them with minimal human interaction. Furthermore, the released animals would continue to impact the vegetation on the project island, thereby eliminating any perceived benefit.

Advantages:

- Non-lethal

Disadvantages:

- Immunocontraception is costly and requires repeated administration, which is labour intensive. Deer are likely to be very challenging to recapture.
- Oral contraceptive delivery methods for large-scale use are not presently available.
- TNR is extremely labour intensive and expensive.
- Capturing and sterilizing (TNR), or repeatedly administering hormone implants or vaccines pose an animal welfare risk due to the potential to cause stress and/or injury.
- Sterilized deer will continue to impact the vegetation on the project island.

Toxicants

Poisons applied to palatable browse plant species have been used to control ungulate and marsupial pests in New Zealand (e.g., Davison 1938, New Zealand Forest Service 1977, 1984, Parkes 1983, McIlroy and Saillard 1989, Warburton 1990). For example, gels containing 1080 (sodium monofluoroacetate) aerially applied or placed on leaves of palatable plant species have successfully reduced high-density deer populations in New Zealand (e.g., Macdonald 2013). Bait pellets or vegetables such as cubed carrots coated with 1080 can also be utilized (New Zealand Department of Conservation 2018).

There are social and legal issues with the use of toxicants for Invasive Alien Species (IAS) control. For example, 1080 is currently only approved for use in the provinces of Alberta and Saskatchewan to control coyotes (Health Canada 2018). Additionally, toxicants for ungulates are not species specific and thus cannot be used to target fallow deer without placing native black-tailed deer, other mammals, and birds at risk. However, if the benefits outweigh the risks, toxicant based projects can and do proceed.

Advantages:

- Cost effective from a personnel effort perspective.
- Can rapidly reduce the number of animals.
- Can be aerially distributed in remote areas.
- Effective for targeting trap-wary animals.

Disadvantages:

- There are no species-specific toxicants for deer. Toxicants for ungulates are not species specific; there is potential for non-target impacts (e.g., primary and/or secondary poisoning of native species, including black-tailed deer, other mammals, and birds).
- No toxicants are currently approved for deer control in Canada. A product registration application to the Pest Management Regulatory Agency (PMRA) would therefore be required. The legal process for registration of a toxicant can be lengthy and expensive.

- The use of toxicants for conservation projects tends to be controversial, and their use would likely cause opposition the project.
- Meat recovery is not possible.

Biological Control

Biological control agents can include natural predators of the target IAS (wolves and cougars in the case of deer), parasites, or pathogens. Despite appearing as an environmentally benign, cost-effective approach to IAS management, the long-term efficacy and environmental impacts of releasing one organism or pathogen to control another are not fully understood (e.g., impacts to non-target species).

Advantages:

- Biological control agents can establish self-perpetuating populations and distribute themselves throughout the target species' range, including areas that are inaccessible to humans, without further intervention.
- Control of the target species is permanent, with the densities of populations of the natural control agent adjusting themselves in response to changes in target species density.
- Overall, the cost of biological control is low relative to other approaches, and expenses are incurred at the beginning of a program rather than on a continuing basis.

Disadvantages:

- Biological control is irreversible. Once the biotic agent is released and becomes established, it cannot be recalled, nor can it be limited to only a portion of a target species' range or a particular island such as Sidney Island.
- Complete eradication of the target species is not feasible with biological control.
- Slow acting (may take years or decades to be effective).
- Currently, biological control is only permitted for insects and plants in Canada.

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Sidney Island Ecological Restoration Project

Part C: Results of Community Consultation

July 2021

Contents

Figures and Tables

Consultation with SIERP Communities and the Public

The community consultation period took place between May 14th – June 21st, 2021. The *Draft for Community Consultation* was sent to all SIERP partner communities and organizations. In addition, SIERP team members met with partner communities and organizations to provide additional information as requested.

At the same time, Parks Canada undertook public engagement through its Detailed Impact Assessment (DIA) process to solicit feedback from Canadians between May 17th and June 17th, 2021. The intention for both processes was to identify if any components of the proposal needed to be adjusted or expanded upon in order to provide project partners with sufficient information to inform a final decision, and to ascertain whether or not the proposal was socially acceptable overall.

Media were notified and briefed, and this resulted in significant local publicity through the Times Colonist (front-page article) and the Peninsula News Review, and international coverage in the National Parks Traveler. A full listing of media coverage is provided in **Appendix C 1**.

Through an independently facilitated process, Sidney Island community members provided ~50[22] questions or comments and several position letters. No other feedback was received from partner communities or organizations during this consultation period.

Following the media release and subsequent DIA consultation process, Parks Canada received 29[23] comments, including a mix of: emails and/or phone calls to Gulf Islands National Park Reserve; comments on online news articles; and letters to the editor received by local news outlets. Of the 29 total comments, six comments came from Sidney Island community members. Given the potentially controversial nature of this project, 29 comments represent significantly less feedback than was anticipated, and the response was overall much milder than other, similar projects undertaken by Parks Canada in recent years.

Questions and Feedback

Feedback from both processes were compiled, thematically coded, and analyzed to identify the main topics of interests. These topics are summarized below, with reference to where this information is discussed in detail in the proposal. Detailed comments are provided in **Appendix C 2** and **Appendix C 3**.

Project in context

Some respondents inquired about how the SIERP proposal aligns with other deer management and/or restoration plans in the region; others were interested in how the restoration objectives proposed through SIERP would contribute to regional, national, or even global conservation goals.

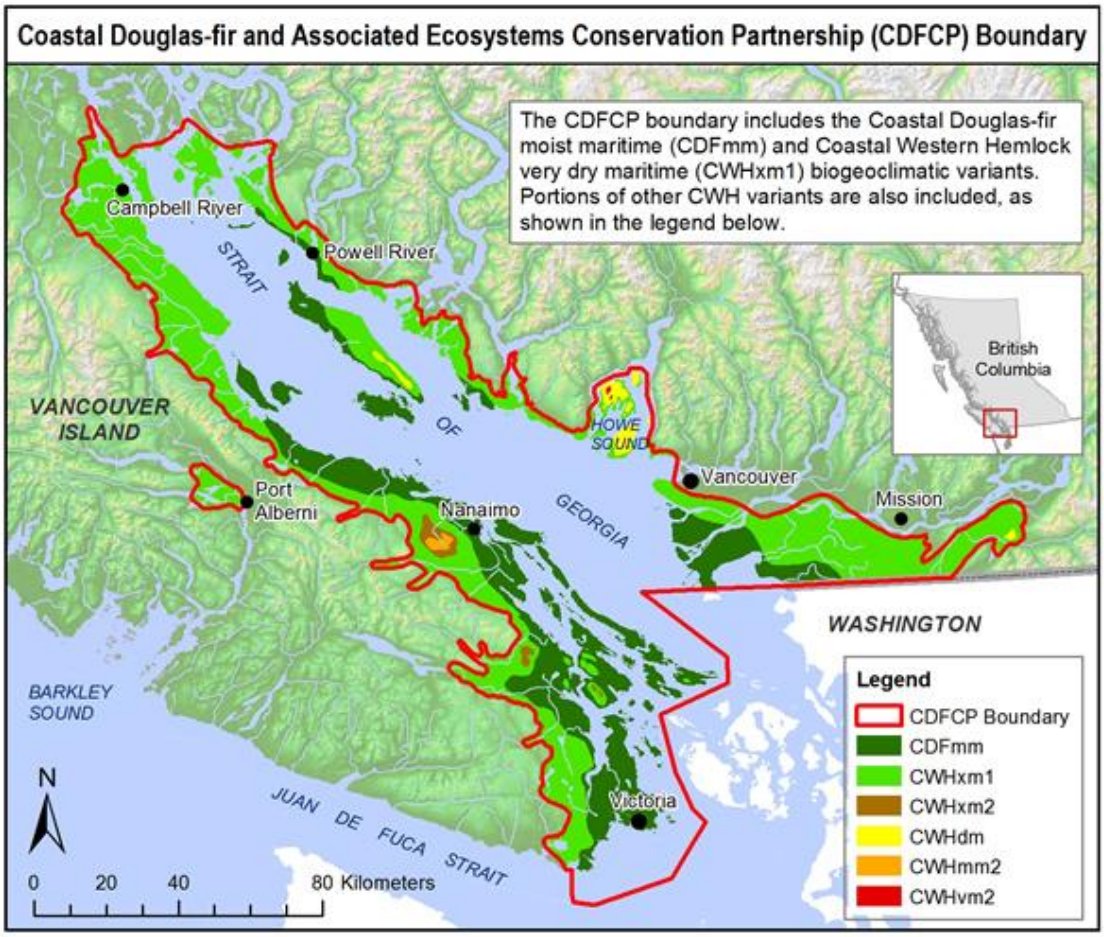
Response: Globally, islands are considered biodiversity 'hot spots.' Though they make up only 5.3% of the planet's land mass, they host 41% of world's at-risk or endangered vertebrates. Approximately 75% of

[22] See **Appendix C 2**
[23] See **Appendix C 3**

global animal extinctions have occurred on islands, and 86% of these island extinctions are linked to invasive species. Island conservation contributes significantly to global biodiversity conservation efforts. [24]

The Coastal Douglas-fir biogeoclimatic zone (CDF zone) is one of Canada's most endangered ecosystems. It is found only on a narrow strip of south-east Vancouver Island, portions of the Gulf Islands, and some pockets along the south-western coast of mainland British Columbia; the global range of this ecosystem is almost entirely within BC (dark green area on Figure 1 below). Already, approximately half of this zone has been lost due to human land use. Only 11% of land in the CDF zone is under some form of protection and approximately 80% of the land in the CDF zone is privately owned.[25]

Figure 28: Coastal Douglas-fir Biogeoclimatic Zone



Map from Coastal Douglas-fir Conservation Partnership https://www.cdfcp.ca/

[24] Sidney Island Ecological Restoration Project MOU (included in Appendix to Introduction)
[25] Coastal Douglas-fir Conservation Partnership https://www.cdfcp.ca/

Coastal Douglas-fir ecosystems (including Garry oak woodlands, meadows, wetlands, and other unique communities) have the highest diversity of plant species in BC, the highest diversity of over-wintering birds in Canada, and the highest number of at-risk species in BC. The preservation of these ecosystems is critical.[26]

Parks Canada is not currently working towards the removal or management of fallow deer on other Gulf Islands, though the Agency has been in contact with the jurisdictional authorities undertaking such work (including the CRD) and has received general support for this initiative. If this SIERP project is successful, it may serve as an example for future initiatives in the region.

Overbrowsing by deer is one of the primary threats to ecological integrity throughout the Gulf Islands and San Juan Islands. SIERP has the potential to demonstrate that multi-jurisdictional collaboration for the effective removal of invasive deer is possible, and that First Nations, residents, provincial and federal governments and other interested parties can all come together to achieve shared restoration objectives. Similar initiatives are starting or ongoing in the region, and they are watching SIERP to learn from it. An example is an initiative led by the CRD to reduce fallow deer populations on Mayne Island via collaboration with landowners and First Nations. This project has the potential to catalyze larger initiatives throughout the region.

Restoration without eradication

Respondents wanted to know if the vegetation restoration components of the proposal are contingent on the eradication of fallow deer, and/or if future collaborative restoration initiatives between Parks Canada and Sidney Islanders are contingent on the eradication of fallow deer.

Response: Parks Canada is mandated to preserve the ecological integrity of protected areas and will continue to do so within the park reserve regardless of whether or not fallow deer remain on Sidney Island.

Parks Canada has been clear that Fur to Forest funding (which includes funding for vegetation restoration on the Sallas side) will not be continued unless there is an approved plan to eradicate fallow deer. It would not be a good use of taxpayer dollars to proceed with new plantings if they are likely to be eaten by the deer.

Parks Canada welcomes opportunities to work collaboratively with communities such as those on Sidney Island on an ongoing basis, even if funding is not available.

Ecological justification for eradication

Feedback pertaining to the ecological justification for eradication suggested that there was not sufficient evidence to demonstrate that eradication is necessary in order to achieve forest restoration, or that

[26] Coastal Douglas-fir Conservation Partnership https://www.cdfcp.ca/

alternative means of wildlife control could be used to support the same restoration outcomes as eradication, without the need to remove fallow deer entirely from the island.

Included in this category are questions about the current fallow deer population and the potential carrying capacity of Sidney Island (e.g., can forest recovery take place with the presence of a small herd? How small?)

Response: While reduction of the fallow deer population has already enabled some ecosystem restoration, SIERP partners were clear that eradication is required for full restoration. Some team members have been tracking deer numbers for many years (decades) and note that the deer population quickly rebounds if culling or hunting pressures are reduced.

Current estimates of the fallow deer population are inconclusive. Local experts suggest that the fallow deer population is about 300-500 animals, with about 30-50 native black-tailed deer, but there is no way to provide an accurate count. In 2018, an island-wide bait preference trial identified only three individual black-tailed deer on camera.

Research from other islands has suggested that a black-tailed deer density of about 0.8 deer per hectare could be sustainable, though forest recovery in the presence of this number of deer would be significantly slower and less robust. Fallow deer are not native, have demonstrated their ability to significantly degrade forest ecosystems, and present a risk of population recovery and risk of invasion to other islands. For these reasons the desired density of fallow deer is zero.

Agreement to consider eradication was provided through the signed Memorandum of Understanding. The Deer Working Group were tasked with considering what eradication techniques would be most appropriate.

Additional information on the ethics of eradication has been added to ***Section B 2.5.***

Consideration of alternative means of population reduction

(See Appendix A-1 for full discussion)

Many comments pertaining to the consideration of alternative management options (e.g., translocating fallow deer to other areas; ongoing control via hunting rather than a complete eradication; non-lethal control options; no control at all) were also concerned about the moral implications of eradication. Most of this feedback indicated that eradication should be considered as a last resort, if and when other management options are not sufficient to achieve the restoration objectives outlined, and only if justified.

Response: Parks Canada policy is that alien species that negatively impact ecosystems should be removed (eradicated) as a first option. Other options are only considered if eradication is not socially or logistically feasible. In regard to fallow deer on Sidney Island, there are ethical considerations associated with all of the alternative methods, including the no-action alternative, as outlined in ***Appendix A 1****. As an example, some people may have ethical difficulties associated with maintaining a group of wild animals for the purpose of hunting them. Some may have ethical challenges associated with no action, because past experience indicates that the fallow deer population would grow beyond carrying capacity and deer will become emaciated.*

The table overleaf (from the draft DIA) summarizes the consideration of alternative actions. The draft DIA concludes: "The most significant positive impact is achieved by removing the threat all together. Additionally, eradication requires a high-but-finite upfront investment of resources, compared to the

Table 1: Consideration of Alternative Management Options (from the Parks Canada draft DIA)

Action	Impact on Forest Health	Impact on Sensitive Species	Short-term Resource Investment	Long-term Resource Investment	Other Considerations
No action	Continued degradation of forest ecosystem.	No improvement for sensitive species (e.g., at-risk flora; native black-tailed deer, who are out-competed by fallow deer; songbirds, who are understory dependent; any other animals who depend on understory vegetation for food or habitat; native plants high on the preferred-browse list); sustained suppression of some invasive plant species, which are browsed by deer when native vegetation is not available.	Low	Low	Parks Canada is mandated to take action to preserve national protected areas, and at-risk ecosystems and species. No action would contravene the PCA mandate.
Control: Hunting	Slow restoration; potentially uneven across landscape, depending on movement patterns and preferred havens; no long-term guarantee that population will be maintained a level compatible with forest health.	Slow, limited improvement for sensitive species; black-tailed deer continue to be out-competed, even when fallow deer are at lower numbers; native plant species are higher on the preferred-browse list and will continue to be browsed by deer; some ongoing suppression of invasive plants by deer browse, depending on population numbers.	Low	High, indefinite investment	Indefinite resource investment to sustain ongoing population control; population could quickly rebound, necessitating additional investment in high-volume culling or restoration.
Gradual removal: sterilization/ contraceptives	Slow/no restoration in the short term; quick, sustained restoration after ~10-12 years (fallow deer lifespan).	No improvement for sensitive species in the short term; significant potential improvement for sensitive species after 10-12 years; invasive plants may increase when no longer suppressed by deer browse.	High, ongoing investment for fallow deer lifespan (10-12 years)	Low, if the population completely dies off over time.	Feasibility of capturing and applying method to every deer on-island is challenging; additionally, contraceptives must be re-applied every 1-2 years, resulting in increased animal welfare costs.

Removal: Translocation	Fastest possible, sustained restoration.	Immediate, significant potential improvement for sensitive species; invasive plants may increase when no longer suppressed by deer browse.	High, finite investment	Low (but may result in resource investment at destination site for restoration)	Fallow deer will impact the destination ecosystem; not appropriate to introduce this species to alternative ecosystems.
Removal: Eradication	Fastest possible, sustained restoration.	Immediate, significant potential improvement for sensitive species; invasive plants may increase when no longer suppressed by deer browse.	High, finite investment	Low	Parks Canada's mandate promotes the removal of invasive species, when possible, if those species negatively impact other species or the overall ecosystem's health.

low-but-indefinite investment of resources required for sustained application of control methods. For these reasons, eradication is the preferred management option."

Other eradication methods were considered and rejected—see ***Appendix B 1: Methods Considered but not Recommended****.*

Ethics of eradication

(See Part B, Section 2.4 for discussion of consideration for the deer)

Feedback pertaining to ethical considerations fell into one of two categories.

- *'The moral implications of eradication as a management action*.' These concerns can be summarized as: "fallow deer are non-human animals who nevertheless possess a consciousness, and whose interests (e.g., interest in survival, in avoiding suffering, in propagation of the species) must be given moral weight and considered alongside human interests (e.g., interest in ecological restoration, interest in facilitating increased food security via the re-introduction of edible species)." This moral consideration was identified as 'missing' in the draft proposal document.
- *Designing and assessing an eradication as "ethical" in terms of humaneness* (e.g., of methods used). These comments identified concerns with the proposed methods; for example, some respondents described the perceived stress that animals may experience as a result of being herded by human-canine teams or being contained by fencing.

Response: The SIERP partners were clear from the outset that the operation must be designed to ensure the humane and ethical treatment of all wildlife on Sidney Island, and to follow the seven principles for ethical wildlife control. ***Part B: Section 2.4*** *has been expanded to encompass the "moral implications of eradication as a management strategy" noted in feedback.*

The proposed eradication methods will not proceed unless approved by the Parks Canada Agency's Animal Care Committee, and reviewed by the Province of BC and the SPCA to ensure that methods are humane and avoid or minimize stress to the animals. These reviews will occur once an operational plan has been developed. The SPCA has been consulted for the duration of the planning portion of this project and has not indicated opposition to any of the methods detailed in this proposal.

Ecological impacts of eradication activities

(See the Parks Canada Detailed Impact Assessment for full discussion)

Some respondents were interested in the process by which potential environmental impacts on non-target species, sensitive ecosystems, or other ecological components of the Sidney Island ecosystem, will be identified, assessed, and mitigated. Included in this assessment is the short-term and long-term impacts of fallow deer eradication on native black-tailed deer.

Response: The Parks Canada Detailed Impact Assessment process is the structured, legal process by which these types of considerations will be identified and assessed, and mitigations developed.

Resource Investment

Feedback pertaining to resource investment were primarily expressions of concern about the potential resource cost (both monetary and non-monetary, e.g., labour) to Sidney Island community members, including the potential for costs associated with property damages resulting from eradication operations, legal fees, or incomplete activities. Some respondents inquired about the exact funding investment from Parks Canada, and/or the exact costs associated with project components (e.g., how much funding is going to restoration?). Others inquired about Parks Canada's role in funding similar initiatives on other islands (e.g., Mayne).

Response: The project costs would be paid from the federal Fur to Forest project funding, which includes fallow deer management on Sidney Island.

SIERP project representatives from the Sidney Island community have already dedicated a significant number of volunteer hours on project planning and coordination. These representatives have noted that there is limited capacity to support implementation work required (e.g., provision of an on-site safety officer), and that this should be a paid position. Community members will have the opportunity to contribute to project implementation (e.g., planting and monitoring the enclosures) if they wish.

Parks Canada is working with the Sallas Forest Strata to ensure that lot owners are appropriately indemnified against any accidental damage. ***See Part B: Section 5.6.***

At this time, the exact costs of the eradication are to be determined, as trials need to be completed which will inform the degree to which specific methods will be used, which will in turn inform cost projections. The Vegetation Working Group has proposed restoration activities that are feasible under current approved budget for the project.

Vegetation restoration objectives

(See **Part A: Section 6** for full discussion)

Some respondents inquired about specific restoration objectives relating to: invasive plant management; the reintroduction of and access to cultural food and medicine plants; and how restoration activities will be monitored as determined to be successful or not successful.

Response: The challenge of invasive plants is significant, and there is neither the funding nor the person-power to remove all invasive plant species (including grasses and forbs). The Vegetation Working Group identified English hawthorn as a target species as its elimination from the island is an achievable goal over the longer term, with some control of Scotch Broom.

Indigenous partners have played an important role in helping to identify appropriate species for cultural food and medicines; these will be planted in exclosures with the intent that, once deer are no longer present, they will spread island wide. It is the intent of Parks Canada that Indigenous Peoples will have enhanced access cultural food and medicine plants within the Park Reserve as an outcome of the project.

The Vegetation Working Group is continuing to look at the best approaches to monitoring.

Opportunities for local hunters

(See **Part B: Appendix B 1** for discussion)

Several residents inquired about potential opportunities for hunters to participate in the removal of fallow deer from Sidney Island, and cited this opportunity as a potential learning and/or education and outreach experience for local hunters and community members.

Response: The Deer Working Group noted that hunting and eradication are very different activities, as fallow deer quickly learn to hide. For the effectiveness of the operation, and for the safety of island residents, it was agreed that eradication should be carried out by professional contractors with proven experience in this type of work. ***Appendix B 1*** *outlines methods considered and rejected, including the use of recreational and subsistence hunting.*

Harvesting meat

(See **Part B: Section 7.2** for full discussion)

Several local residents indicated a desire to ensure that as much meat as feasible will be harvested and shared with communities or individuals in need.

Response: The harvesting of meat is very important to project partners. Where carcasses can be safely collected, they will be processed, and all recoverable materials (e.g., meat, hides, antlers, hooves) will be given to local First Nations communities, with a priority placed on providing meat to individuals who experience food insecurity.

Safety and Security

(See **Part B: Sections 5.1** and **5.2** for full discussion)

Sidney Islanders provided feedback pertaining to safety and/or security, with respect to the potential for personal injury or property damage resulting from eradication activities. This feedback indicated a desire to more fully understand the contracting and assessment process by which contractors would be judged as suitable candidates to undertake the proposed activities, the process of overseeing eradication activities while in the field, and the legal means by which Parks Canada would be liable for any costs associated with injury or damages resulting from eradication activities. Additionally, questions were asked on the exact requirements of Sidney Islanders during eradication operations (e.g., can Sidney Island community members remain in their homes during operations?)

Response: Currently, no contracts have been tendered and no bids secured with relation to eradication activities. Sidney Island representatives, along with representatives from other interested project partners, will be involved in the development of the criteria by which contractors will be assessed, as well as the contractor selection process.

Safety has been a priority throughout the project design. A detailed safety plan will be developed and available to Sidney Islanders prior to a final go/no go decision. Part of this will involve frequent communications with Sidney Islanders during eradication operations, especially with any individuals who are on the island. The trials and the development of the operational plan will inform more detailed discussions with Sidney Islanders. The project is currently being developed with the goal of enabling

Sidney Islanders to safely be in their homes if they wish, although some may choose to be off-island while eradication activities are occurring near their homes.

Autonomy and access to private land

(See **Part B: Sections 5.4** and **5.5** for full discussion)

Many Sidney Islanders were concerned about whether or not they would retain autonomy over their private lots, with regards to allowing or not allowing eradication technicians on individual lots to undertake eradication activities. Some wanted to know when and how permission would be obtained from lot owners; others were interested in understanding how access or lack of access to lots would impact eradication feasibility.

Response: Individual lot owners will retain control over whether they wish to allow access to their lot (and whether this would be for armed or unarmed team members). Sallas Forest Strata will determine how permission will be obtained.

A proposed trial to move deer off lots and utilize fenced zoning areas will shed more light on how critical lots without access will be. Regardless, the Deer Working Group have advised that if many lot owners refuse access, this could compromise the effectiveness of eradication and add considerably to the cost and time required.

Contracting process

(See **Part B: Section 6.2** for full discussion)

Feedback pertaining to contracting often related to the procurement of eradication technicians (e.g., who will do the eradication, and how will they be selected?) and liability requirements.

Response: Parks Canada will lead an open call for qualified eradication experts. SIERP partners will be included in the selection team.

Queries pertaining to operations (personnel, trials)

A series of questions about on-the-ground operations (e.g., personnel staging areas; exact site of trials) indicated an overall desire for more details than are currently available, given the higher-level nature of this proposal. The most common questions of this nature related to the necessity of conducting trials on Sallas property versus the park reserve, but other questions include:

- Where will personnel be accommodated?
- How will personnel move around the island?

Response: Trialing is essential for a program such as this, as it helps to uncover any barriers to success and to enable the project to move forward as effectively and efficiently as possible. In this project, trialing of the fenced zoning method is the most critical aspect, including understanding the implications of learning deer from properties where only unarmed access or no access is permitted. A secondary benefit of trials is that it provides an opportunity for residents to see and understand the method in action.

The intention is that contractors will be provided with self-contained accommodation (e.g., on a barge), and move around the island with vehicles (on roads) and ATVs (on trails).

Additional details on trialing will be developed by the contractor and discussed with the Sallas Forest Strata.

Feasibility assessment (biosecurity)

Finally, feedback pertaining to the feasibility of eradication flagged concerns such as the prevention of re-invasion from nearby islands, questioned the assessment that preserving black-tailed deer during eradication operations is not feasible, and the impact of access (or lack thereof) to private lots on the overall feasibility of the proposal.

Response: It is critical to ensure a robust biosecurity plan is in place to rapidly detect and rapidly respond to re-invasion. Biosecurity measures (e.g., use of sentinel deer and wildlife cameras) will be used to watch for reinvasion of fallow deer from nearby islands. The biosecurity plan will be developed by the Deer Working Group and refined by the eradication contractors.

Methods of preserving the black-tailed deer during eradication were considered, but rejected as the necessary penning would cause great stress to the animals. Preserving black-tailed deer was not supported by the SPCA or the Province. The community consultation asked for feedback on the options for restoring a black-tailed deer population following eradication (translocate deer or allow natural repopulation). Very few comments were received, two people supported one option and two people the other. The Deer Working Group has recommended that black-tailed deer be allowed to naturally repopulate. This is reflected in changes made to ***Part B: Section 4.2.***

As noted above, the Deer Working Group have advised that if many lot owners refuse access, this could compromise the effectiveness of eradication and add considerably to the time required (and cost).

Appendix C 1: Media Coverage

Initial Coverage

- CBC online article and interview from All Points West: https://www.cbc.ca/news/canada/british-columbia/fallow-deer-cull-sidney-island-bc-1.6030887
- Times Colonist article: https://www.timescolonist.com/news/local/to-restore-sidney-island-s-ecology-a-push-to-kill-hundreds-of-fallow-deer-1.24319637
    - (Also adapted for Vancouver Sun (online), North Shore News (online), and Castanet
- Peninsula News Review: https://www.peninsulanewsreview.com/news/parks-canada-proposal-calls-for-eradication-of-fallow-deer-on-sidney-island/
    - (Also shared online through Black Press papers including Victoria News, Salmon Arm Observer, Vancouver Island Free Daily, Nelson Star)
- CTV Vancouver Island: https://vancouverisland.ctvnews.ca/parks-canada-seeks-feedback-on-proposed-invasive-deer-cull-on-sidney-island-near-victoria-1.5434576

Newer Coverage

- National Parks Traveler: https://www.nationalparkstraveler.org/2021/05/public-can-weigh-deer-eradication-plan-gulf-islands
- Peninsula News Editorial: https://www.saanichnews.com/news/parks-canada-proposal-calls-for-eradication-of-fallow-deer-on-sidney-island/

Letters to the Editor:

- Victoria News: Fallow deer important to Sidney Island
- Times Colonist: Reduce Sidney Island deer with a lottery
- Times Colonist: No deer problem on Sidney Island
- Times Colonist: Sidney Island owners eager for compromise

Appendix C 2: Feedback from the Community Consultation

Question / Comment	Thematic Coding	Response
Can we know what costs will be associated with this plan and who will be paying?	resource investment	Exact costs are to be determined. Project Fur to Forest funding is sourced from the Parks Canada Conservation and Restoration (CoRe) program.
Is there an estimate of volunteer hours by owners for this plan?	resource investment	Sidney Island representatives have already committed a significant number of volunteer hours through participation in the Steering Committee and Working Groups. This investment has been invaluable. During and after project implementation, Sidney Island community members have the option to participate in some activities as desired (e.g., monitoring fenced exclosures), but are not required to do so. The number of hours depends on the desires and interests of individuals within the community. Participation is optional.
Could you please tell us how we will monitor the vegetation and determine how successful this plan will be?	restoration objectives, determining success	The Vegetation Working Group, with support from technical experts, are in the process of developing a vegetation monitoring plan. See **Section A-8** for more details.
What about thistles and nettles: are they considered invasive and to be controlled?	restoration objectives, invasive plants	This project has finite capacity and resources to dedicate to the removal of invasive species. English hawthorn was identified as the priority invasive species. See **Sections A-7.4** to **A-7.6** for more details.
Will the final plan show a budgetary contribution from Parks, a specific number regarding vegetation?	resource investment	Budget for vegetation restoration is dependent on the cost of other elements of the project, such as the fallow deer eradication. If eradication is more expensive than expected, less money is available for restoration. SIERP, with funding from Parks Canada, has committed to several vegetation restoration activities identified by the vegetation working group, including activities on Sallas common lands that include the planting of native plants in deer exclosures and control of invasive hawthorn.
Coastal Douglas fir forest and Garry oak meadows are limited in area and under pressure. Of the remaining undeveloped areas how significant is SI in this picture?	project context (ecological)	The Coastal Douglas-fir Biogeoclimatic Zone covers only 0.3% of BC (~256,800 hectares).[27] Approximately half of this area is developed. Only 8% of this area is currently protected.[28] Sidney Island, at 866 hectares, makes up ~0.7% of the undeveloped CDF area, with the added benefit of being a complete functioning ecosystem (i.e., not fractured by significant development).

[27] Coastal Douglas-fir Conservation Partnership https://www.cdfcp.ca/
[28] Ibid.

Question / Comment	Thematic Coding	Response
Can someone from PCA explain why the same approach for hawthorn removal (excavation) cannot be used on the Parks side?	invasive plants, hawthorn	Due to the cultural richness of Sidney Island, ground-disturbing activities in the park reserve are heavily regulated and limited only to necessary activities to minimize impacts to sub-surface cultural resources. As there are alternative methods to remove English hawthorn that are proven to work well (see **Appendix A 5**), Parks Canada will not support the use of excavators in the park reserve.
Isn't Arbutus and Garry Oak suffering in other areas, not just isolated to Sidney Island?	project context (ecological)	Garry oak and Arbutus are found through the CDF zone, and are subject to many pressures including from development and resource extraction. Approximately half of the CDF has already been permanently altered by human activities. Only ~8% of the total CDF area is designated for protected under current provincial and federal regulations.[29]
Is the plan execution contingent on the eradication of the fallow deer?	project parameters	Parks Canada has been clear that Fur to Forest funding (which includes funding for vegetation restoration on the Sallas side) will not be continued unless there is an approved plan to eradicate fallow deer. It would not be a good use of taxpayer dollars to proceed with new plantings if they are likely to be eaten by the deer.
Is there funding from Parks allocated to other Gulf Islands?	resource investment, project context	The Parks Canada Fur to Forest project (the CoRe project that SIERP is funded through) includes the development of a hyper-abundant wildlife plan for black-tailed deer on all islands within the park reserve. There is no other funding going towards fallow deer management on other Gulf Islands.
Why not simply get the plan completed with testing in the park as needed so that we finally have a complete plan before we consider it? What are we voting on given that the plan is no where near complete (named contractor(s) selected, indemnity, insurance, timing, etc.)?	legal concerns, trialling, access to Sallas land	Trials have been conducted in the park reserve in recent years. One of the purposes of trialing methods on Sallas property is to assess the efficacy in and around residential infrastructure, which does not exist in the park reserve. See **Section B-3.6** for more details. The project is working together with contractors and Steering Committee representatives to provide answers to issues that are important to inform the decisions of project partners including Sidney Islanders. For example, the indemnity issue is being resolved. A procurement process is being initiated to identify the eradication contractor, and the contractor will initiate operational planning to provide detailed information about the timing and location of specific methodologies. The Deer Working Group is continuing to work towards a black-tailed deer management plan. Sidney Islanders should convey the key remaining questions to their Steering Committee reps so that they can be addressed.

[29] Ibid.

Question / Comment	Thematic Coding	Response
When will you survey Sidney Islanders with regard to consenting to hunting on their lots?	access to Sallas land	The determination of when Sidney Islanders will be surveyed regarding consent to provide armed access to private lots will be the result of conversation between the Sallas Forest Strata Council and project representatives. This information will be useful to inform operational planning. Access to lots may consist of a) armed access, b) unarmed access to move deer off the lot, or c) no access. If a significant number of owners do not allow any access, that will negatively impact the probability of success and the duration of the operation.
Will the details of the contractors indemnity coverage be available before the JULY 15/21 vote?	legal concerns, contracting	At this time, Sidney Island residents are no longer being asked to vote on a plan on July 15th.
How many lots refusing to allow hunting would endanger the project?	access to Sallas land	It is impossible to determine a specific number, as it depends on where the lots are, whether those lots serve as a deer refuge, the specific geographic features of each lot, etc. We do know that each refusal compromises the plan's efficacy to a slight degree. See **Sections B-5.4** and **B-5.5** for more details.
Could fallow deer swim to SI from James? If so, what is the intention to control after eradication?	biosecurity, restoration objectives	It is presumed that fallow deer initially arrived on Sidney Island by swimming from James Island several decades after they were introduced there. The probability of reoccurrence is unknown, but would seem to be low given the amount of time it took the first time, and the lack of fallow deer on D'Arcy Island. Any eradication requires a robust biosecurity plan to rapidly detect and respond to re-invasion, should it occur. The biosecurity plan is an element of the project design that will be developed by the eradication contractor.
Does PC have a mandate to do ecological restoration on private property?	PCA mandate	Parks Canada has a mandate to work collaboratively with neighbours, including private landowners, to achieve landscape-level restoration goals
Permitting requirements? Permitting oversight?	permitting, legal concerns, social/political acceptance	See **Section B-2.6** for details about required permits and authorizations.
Will BCSPCA approve the project before the Vote? With respect there is no clear evidence Parks is following those ethical guidelines.	social/political acceptance, ethics	The BC SPCA has been apprised of the project for the duration of development and has not indicated opposition to the project's objectives or proposed methodology. The BC SPCA will review the detailed operational plan once it is developed before taking a final position. Additionally, this project is developed under the guidance of the Parks Canada Animal Care Committee. See **Section B-2.5** for more details.
Have you done aerial hunting near residences?	safety concerns	Aerial shooting has been safely performed near residences in other instances. See **Sections B-5.2** and **B-5.3** for more information about contractor qualifications. Sidney Island representatives will be involved in the contracting process, including the selection of contractors (see **Section B-6.2**).

Question / Comment	Thematic Coding	Response
Have you ever done an eradication on a small populated island?	safety concerns	Eradication has been safely completed on small, populated islands in other instances. See **Sections B-5.2** and **B-5.3** for more information about contractor qualifications. Sidney Island representatives will be involved in the contracting process, including the selection of contractors (see **Section B-6.2**).
We had extensive modelling and analysis of the deer population in 2009 in order to get the fallow deer under control. Can that information be used to inform where we are today and in the future?	project context, use of existing resources	The project has benefitted significantly from previous work relating to the monitoring and control of fallow deer on Sidney Island, including population monitoring.
Can trials be executed in the park instead of on Sallas land?	trialling tactics, access to Sallas land	Trials have been conducted in the park reserve in recent years. One of the purposes of trialing methods on Sallas property is to assess the efficacy in and around residential infrastructure, which does not exist in the park reserve. See **Section B-3.6** for more details
Could you do most of the operational planning etc. in the Park?	trialling tactics, access to Sallas land	See above.
Who will handle kilometres of fencing and the machinery to set them up?	contracting, resource investment	Contracts will be awarded for supporting tasks, including the setting up of fencing. See **Section B-7** for more details.
Do we know what the population size of fallow deer is?	deer population, project context	It is difficult to assess the population size accurately. Current estimates from local experts indicate that anywhere from 300-500 deer is likely, though that number could be higher.
Has any consideration been given to the disruption to other species, such as eagles, with helicopters flying around shooting at deer? Or, the impact of fencing?	eco impacts (wildlife)	The Parks Canada Detailed Impact Assessment process is the regulatory process through which Parks Canada assess the potential environmental impacts of all project activities. This report identifies potential impacts and the necessary mitigations to minimize or avoid those impacts, including the identification of the regulations that dictate necessary mitigations (e.g., the *Migratory Bird Convention Act*).
Late in the draft, there is mention of the team living on a barge while this is ongoing. Where will that be placed and how will it deal with marine regulations, such as no pumping out?	personnel, eco impacts	If floating accommodations are used, they will be moored on the park reserve portion of the island. All regulatory requirements with regards to minimize environmental impacts, including the handling of potential contaminants, will be identified in the Parks Canada Detailed Impact Assessment report. The proposed barge is self-contained, i.e., no pumping out.
PC aims to maintain and expand regional collaboration to better monitor, understand and address landscape-level issues. So, working across jurisdictions is commonplace, as is operational funding to support it. It is not project specific. Can you please comment?	PCA mandate, resource investment, project context	SIERP is one example of Parks Canada facilitating multi-stakeholder cross-boundary initiatives to achieve conservation at scale. This is a stated pillar of the federal Nature Legacy program. The success or failure of SIERP will influence the likelihood of other similar projects in the region being initiated.
confirm if owners choose not to have anyone on their property this will only delay the goal of eradication?	access to Sallas land, feasibility	Each inaccessible lot compromises the plan's efficacy to a degree. See **Section B 5.5** for more details.

Question / Comment	Thematic Coding	Response
Can we confirm that eradication will end all hunting on SI?	hunting	The long-term vision for Sidney Island includes a population of native black-tailed deer which would support both Indigenous and residential hunting. See **Section B-4** for more information about black-tailed deer management.
Based on the analysis that has been done, do you think the recreational hunt was able to keep the deer population stable?	hunting, deer population, deer control	Sallas has done a fantastic job reducing deer populations using a combination of recreational hunting, cull hunting, and capture-culls. Any reduction in hunting pressure in the future will result in a rebound of the fallow deer population, erasing the gains that have been made to date.
Do we know how the removal of the black tail deer will impact the ecosystem?	eco impacts (wildlife)	We can look to nearby islands with no deer presence (e.g., Portland Island) to help inform our understanding of how the ecosystem will respond to the absence of deer. Additionally, it has been noted by Indigenous knowledge holders and academics that the deer population was not historically stable on any of the Gulf Islands; instead, deer would migrate between islands over a series of years.
If the SIERP project does not proceed, are you stating that PC will not engage with Sallas for any future restoration activities to enhance the ecological integrity of "one island"? Wouldn't that be contrary to PC's landscape connectivity and broader ecosystem restoration mandate?	resource investment, partnerships, restoration objectives, PCA mandate	Parks Canada will continue to collaborate with Sidney Islanders on ecological restoration when feasible. However, funding for the restoration activities identified in this plan is contingent on the removal of fallow deer. Additionally, future restoration efforts on Sidney Island may be hindered by the ongoing presence of fallow deer.
Eel grass under your barges?	eco impacts (marine veg)	The Parks Canada Detailed Impact Assessment process is the regulatory process through which Parks Canada assess the potential environmental impacts of all project activities. This report identifies potential impacts and the necessary mitigations to minimize or avoid those impacts, including the identification of the regulations that dictate necessary mitigations (e.g., the *Migratory Bird Convention Act*).
Will a contractor doing the fencing and other heavy work be a sub-contractor of the un-named main contractor or a contractor directly to Parks? How will they be managed? Are they bonded? How will they get around?	contracting, personnel, operations	Supporting activities will be awarded separate contracts. See **Section B-7** for more details.
Perhaps Parks could just share their standard contract for works, including insurance and indemnity requirements for contractors and their subs	contracting, legal concerns	See **Section B-6.2** for more information about the contracting process as it relates to this project.
Is coastal conservation the contractor of record? Is that established?	contracting, conflict of interest	Contracts have not yet been awarded for the eradication operation, or any of the supporting tasks.

Question / Comment	Thematic Coding	Response
The Draft mentions plants and herbs being able to grow back for First Nations medical and healing use, but I'm not sure how they will access Sidney Island to acquire these plants. This really needs to be addressed or at least clarified.	access to Sallas lands, restoration objectives, jurisdictional autonomy	Indigenous Peoples have the right to harvest within the park reserve. The fenced exclosures in the park reserve will act as potential harvest sites for community members from local First Nations. Local nations are in the process of expanding their vessel fleets and can work with Parks Canada to provide access to the park reserve. There is no expectation of access to Sallas lands.
There is no mention of any costs that the Strata or the Lot owners on Sidney Island may be liable for. This is critical for owners to make a decision. Potential costs should be identified and broken down so that any legal liability is listed separately from other costs. It appears that Parks Canada has $1.0 million for this project. What happens when they over spend? Are Parks Canada covering any Strata legal costs.	resource investment, legal concerns	Parks Canada cannot issue a blanket statement indicating that Sallas Forest Strata legal costs will be covered. That said, there is no expectation from SIERP or Parks Canada that individual lot owners will contribute financially to the project. If, after review of the access agreement, owners anticipate costs as a result of the project, those specific concerns should be communicated to the Steering Committee to facilitate dialogue and resolution of the issue. Final estimated costs for the eradication will be determined as a result of operational planning, and contingency will be incorporated into the budget. If the project costs more than expected, the project will need to request additional funding.
When measuring feasibility of a project what is acceptable to Parks for collateral damage species removal (BTD)?	feasibility, eco impacts, BTD	Conversations with subject-matter experts as well as the BC SPCA informed the decision to incidentally dispatch black-tailed deer rather than attempt to retain them. See **Section B-4.1** for more information.
When Parks originally presented the project and methodology with Coastal Conservations and that feasibility study was completed why was the black tail deer removal not discussed? At that point wasn't it reasonable to know that night hunting or nets or chopper sharp shooters or dogs would not be able to differentiate the deer?	feasibility, eco impacts, BTD	Early in project planning it was not clear whether other methods (daytime shooting) could compensate for a lack of differentiation between the two deer species. Nor had there been discussions with the Province as to whether removal of black-tailed deer would be permitted. First Nations had also not been consulted on the topic. Many elements of the project have been uncovered throughout the planning process, this being one example.
When will we see the insurance and indemnification details? We all know that organizing any sort of work (repair or otherwise) on SI is expensive and difficult - contractors need to come to the island to estimate, the work takes longer, and planning errors increase costs. Any damage to my property needs to be corrected, including the required project management costs - I'm not in this to manage work I didn't ask for to repair someone else's error.	legal concerns, resource investment	The access agreement that includes the details of indemnification will be available to owners prior to their decision.
When, how long, how disruptive, who?	operations, personnel, contracting	This level of detail will be provided as much as feasible in the operational plan, to be developed by the eradication contractor.

Question / Comment	Thematic Coding	Response
Can SIERP demonstrate we are in an emergency? Why does the document refuse to acknowledge the fact that restoration can and is occurring with a small well managed herd.	project context (ecological)	Some level of restoration is possible in the presence of small population of deer. However, this level of restoration will be slower and less robust. Additionally, there is a risk of dispersal to other islands, and it is unlikely that deer can be managed indefinitely, without a lull in hunting effort resulting in population rebound. Eradication is an opportunity to definitively remove the threat of fallow deer browse and facilitate the fastest, most robust restoration. See **Section A-3** for more details about the assessment of critical threats to the Sidney Island forest ecosystem.
Will you please review your document to ensure a more accurate description of the ethical issues are presented? Why does the document refuse to acknowledge the fact that restoration can and is occurring with a small well managed herd.	ethicsproject context (ecological), restoration objectives	See Sections **B-2.5** for a revised description of ethical concerns.
Is Parks Canada providing funding to other Gulf Islands without conditions? If there are conditions, what are they? What is Parks Canada's position regarding the fallow deer on Mayne Island? Will you please review your document to ensure a more accurate description of the ethical issues are presented?	resource investment, jurisdictional autonomy, project context, ethics	Parks Canada is not currently funding any other fallow deer management programs in the Gulf Islands, and has no connection to the management of fallow deer on Mayne Island.

Appendix C 3: Feedback from the Parks Canada detailed impact assessment public engagement process.

Question / Comment	Thematic Coding
Save the deer. If they are to survive and thrive, they should be let loose on the mainland.	Preserve the deer
So let me get this straight. The deer are going to first be terrorized by dogs and helicopters then rounded up into pens where a mass shooting will slaughter them on mass. I have no words.	Preserve the deer
Inquiring about hunting fallow deer on Sidney Island.	hunting opportunities
Deer can swim. How do you think they got to the island in the first place? They will return. Certainly cull the old and sick, one at a time, if necessary but exterminate the lot of them? This is a declaration of war against the residents' competition for the land. Who will be there to defend them? What's the betting access to the 'spectacle' will be blocked? Even if the press manage to film the mass extermination, you can bet all the perpetrators will be wearing hats and masks; licence plates will be unreadable. I have a suspicion that my provincial taxes will contribute to this in some way. Hard to sleep contemplating this.	reinvasion, ethics, government accountability
It's hard to see how, as the quoted commenters say, the resident deer of Sidney Island can have "eaten everything" and "destroyed the island so nothing can survive there", yet their numbers are growing. If they'd eaten everything they would have starved by now. The proposed cull (a.k.a. massacre) would be "gruesome" indeed. Maybe the stakeholders should build a tennis court to herd the deer into and slaughter them as a municipality did up-island with Canada Geese. (Shooting them like fawns-in-a-barrel.) It seems the reason these animals can be subjected to extreme cruelties is that they're "not native". Parks Canada says it will look for "consensus" among relevant landowners, but there is a section of the public which never consents to animal cruelty. "Restoration" of the island landscape with addition of surveillance cameras as on Saturna, is hardly "natural", it's human-engineered ideologically-correct gardening. Generations have enjoyed ferrying over to Sidney Island for days-out, and found it delightful as is. It's not some other gulf island, it is itself, with its own history and present character. Please leave it alone, bureaucrats.	project context (ecological), ethics, restoration objectives,
Please see comment below on Times Colonist report about Sidney Island deer cull. I'm wondering how the meat from these slaughtered deer could be edible given that during the proposed cull in Oak Bay it was established that adrenalin and other stress chemicals released by the animals' pre-death trauma made the meat dangerous to eat. It ends up in the landfill. I wonder also why the Urban Wildlife Society's successful population reduction by contraception among Oak Bay deer is not being used at Sidney Island, before a cruel massacre (and why the SPCA -- a society for preventing cruelty -- would countenance something as cruel as this cull would obviously be).	meat
I think your plan to kill the deer on Sidney Island is despicable.	oppose the proposal
What is the most destructive invasive species on this planet? Look in a mirror.	oppose the proposal, ethics

I would like to state my support for the eradication of the population of invasive fallow deer on Sidney Island, as listed on your website: https://aeic-iaac.gc.ca/050/evaluations/proj/81629?version=6724&culture=en-CA. I do not, however, support the majority of the proposed eradication activities, which would be costly and would cause major distress to the deer populations as they are being culled. I instead suggest the invitation of local hunters and hunters of BC to hunt in specific areas at specific times on the island to reduce the population, first. This would ensure the animals are not "wasted" but instead appreciated and consumed by the hunters and their families. A lottery system would work well for the allocation of dates and locations for these hunters, and it would dramatically reduce the amount of resources required to find, kill, and dispose of the deer. It would also be an excellent opportunity for public education on conservation-based hunting practices and support those who prefer to hunt and forage for their food in a sustainable way.	hunting opportunities
I am shocked to learn that you are considering the killing of all fallow deer on Sidney Island to stem the erosion of local flora and fauna. These deer, I understand, were introduced to the area back in the early 1900's as potential game for hunting and are now considered a pest and against the interests of First Nations people. The methodology for eliminating them, to round them up using dogs into penned enclosures and then shooting them sounds anything but humane to me. The plan to shoot escapees from the air via helicopters is fraught with the possible agonizing demise of these creatures and needs serious re-evaluation. The word 'humane' is tossed around frequently these days to somehow sanitize an otherwise abhorrent process, but I would suggest that our track record for managing environmental problems has not been good, as climate change, human encroachment on wild-life habitat and many other issues has made abundantly clear. Now we find ourselves backed into another nasty corner and this is the best plan that Parks Canada can come up with? Why not allow the deer to remain unhindered on Sidney Island? I am sure native medicinal plants and foods can be found elsewhere for First Nations people and the limitations of the area will contain population growth without full scale slaughter. A case of live and let live, that would be humane.	ethics
Is it possible to integrate the deer to another region? If this is not possible and the deer are disease free, I'd like to see the deer meat butchered, frozen and donated to local food banks.	translocation, meat
Voicemail: curious about opportunities for locals to hunt fallow deer	hunting opportunities
Can I have permission to bow hunt with 2 other friends the fallow deer on Sydney Island BC. We are experienced hunters and we would be able to boat over for a day from the mainland. I saw the CBC fallow deer cull and I am really hoping for the opportunity for a fallow deer or few since there are no bag limits on them.	hunting opportunities

I'm concerned and disappointed to learn of the proposed slaughter of fallow deer on Sidney Island. I understand the desire to return the island to its more natural state, however, the proposed plan would be horrific and cruel. These deer are sentient beings who have not intentionally harmed anyone; they're just doing what deer do. I realize the options seem limited, but I respectfully request that Parks Canada and the other parties involved dig deeper to see if there is any other method that could possibly work. I understand from Dr. Sara Dubois that because the deer are hunted, a contraception program cannot be implemented. Could there be a moratorium on hunting the deer and a contraception plan be used? The deer landed on the island through no fault of their own. It would be a valuable lesson for children to see that government organizations such as Parks Canada work to find ethical and humane methods to protect all living creatures, and not opt to slaughter ones we find inconvenient.	ethics, alternatives
I am strongly opposed to this plan, yet I'd like to clarify at the outset that I understand the concerns and frustrations of residents who live on Sidney Island. I am aware that these deer are not native to the area, that they were introduced by settlers and pioneers in the early 1900s. I acknowledge and respect the frustrations of residents regarding the impacts of the deer population on the local flora and fauna. I do understand that. ALL THE SAME, the idea of rounding up all these animals and shooting them to death sounds abominable to me. Indeed, the method of culling, as described in a recent CBC news article (https://www.cbc.ca/news/canada/british-columbia/fallow-deer-cull-sidney-island-bc-1.6030887) is hard for me to process: "Pelkey said the plan is to have dogs herd the deer into large net pens and then have trained marksmen shoot to kill. He said helicopters could also be employed with marksmen in them to catch any strays the dogs miss." At a time when humans everywhere are being urged to consider our damaged relationship with nature, a mass killing and veritable bloodbath like this strikes me as morally grotesque. My concerns, however, extend beyond the methods being considered for this particular culling. I object to the culling itself. I consider the arguments put forth to justify it highly problematic. These deer are beautiful animals, yet they're branded as destructive on account of being non-native. They're guilty simply for being there. As is often the case, the cause of the problem can be traced to human activity, yet these deer now have to pay the price. (Just as wolves have had to pay the price of being culled to protect caribou -- whose declining numbers are a result of human incursions into their habitat.) They're described in the most negative ways -- as "wreaking havoc" on and "devastating" the local ecosystem. I can't help but get the sense that they are maligned and branded with the stigma of "invasive" colonialism. According to the CBC article, elders on the island overcame their initial objections based on the fact that these animals are "invasive":	ethics

[CONTINUED] "Pelkey said some Tsawout elders had initial concerns about the culling because it is counter to their cultural ways of hunting to wipe out an entire population. Once it was explained the animals are invasive, Pelkey said these elders agreed to support the effort to get rid of them." "Invasive species" seems to be the current buzzword these days. As I said earlier, I understand what it's all about but I think the concept can get messy. I wholeheartedly support the practice of reintroducing endangered species to areas once native to them, but the idea of eliminating non-native species -- like fallow deer on Sidney Island -- is another matter. I myself don't believe humans should have the right to do this. The idea of exterminating a species in an area like this to attempt to undo the mess humans have made seems very problematic to me, morally speaking. But if you go to the government of Canada's website (https://aeic-iaac.gc.ca/050/evaluations/proj/81629?version=6724&culture=en-CA) -- moral considerations don't seem to be an issue at all: it's more about whether or not the culling will have negative environmental impacts: "Parks Canada intends to make a determination regarding whether the carrying out of the project is likely to cause significant adverse environmental effects." Is this all that matters -- whether the eradication of the deer will have "significant adverse environmental effects"? Maybe we need to rein in the notion of invasive species -- which, like any notion, can get out of hand when pushed to purist extremes. I've read articles that would appear to denigrate my own cat for being part of an invasive species. In a way he is, as cats were brought "here" by humans from the Middle East and Europe. But the idea of an animal being considered "invasive" can easily become problematic when the solution involves "culling" them to restore an earlier state of ecological balance. Humans start to play god again.....(and of course humans can be considered the most invasive species of them all.) Yes, this is a controversial, debatable issue. But I don't get the sense it is debated to the extent that it should be. Where are the public philosophers, the ethicists? Is this merely a matter of "cost-benefit analysis?" Is it right to exterminate a species because it has become inconvenient to humans? As I noted at the start of this letter, I understand the frustration of the residents of Sidney Island; at the same time, proponents of this plan seem in my view a bit too untroubled by the idea of exterminating an entire population of deer. Won't they be haunted by the absence of these animals afterwards? I know I'd be. I urge members of the Fur to Forest Team to continue facilitating the dialogue, debate, and discussion, this sensitive issue merits.	ethics

Re: Eradicating invasive fallow deer from Sidney Island to facilitate forest restoration – Public comments invited from May 17 to June 17, 2021 The proposal to herd and shoot European fallow deer from a helicopter on Sidney Island is just obscene in my opinion. If Parks Canada and the Gulf Islands Trust truly cared about resuscitating Sidney Island's natural ecosystem, then mitigating the impact of humans and shoreline development should be a much higher priority than genociding deer. Pretending that deer do more damage than us is willfully dishonest and blatantly biased. What's the real agenda then? Humans have impacted every inch of the planet. To say that European fallow deer are "invasive" is laughable and ignoring the history of European invasion in this region over the last two centuries. Decline and degradation of Gulf Island ecosystems is solely due to this human invasion, not fallow deer. Of course, the indigenous populations were a low impact and interwoven part of a stable ecosystem prior to contact, so they're not at fault. Using this term "invasive" is blatant framing of the issue in order to achieve your pre-decided outcome. Ecology science and thoughtful environmental ethics discussions seem to have no part of this decision, as usual. I'm sure animal rights activists are appalled at this bloody announcement, and the thought of all the knuckle-dragging mouth-breathers lining up for a free helicopter ride to shoot fish in a barrel, so to speak. I myself couldn't believe it when I read it. Where are the humane alternative ideas from Parks Canada? Of course, island ecosystems are fragile and more prone to extinctions, especially due to the impact of unchecked invasives. Yet these deer could easily be relocated to a non-island habitat. And why is Sidney Island slated for its entire waterfront to be developed if the Islands Trust cares so much about this island? What about the impact of septic systems and roads and trampling of weekend warriors? The Garry oak and Douglas fir ecosystems of Vancouver Island and the Gulf Islands are nearly extinct. Government has been criminally negligent at protecting the little remaining from human impact and seems a meek pawn of moneyed interests. Deer are a minor issue in this conflict and only a bullying mindset would blame the deer in this issue. I say the only moral thing to do is relocate these deer, heavily tax and regulate any and all human activities that threaten at-risk areas (and to pay for deer relocation), and enact policies to decrease human sprawl in order to aim for a Half-Earth protected goal. That's where Parks Canada should be focusing its efforts. I suggest the deer be relocated somewhere with existing predators other than humans to keep their population in check, which would also benefit decimated predator populations. I can't believe Parks Canada is still mired in such outdated thinking on these issues and considers this proposed bloodsport a respectable idea. Shameful and completely disheartening about the current state of humanity.	ethics, project context
I oppose the massacre of all animals. Like racoons, coyotes, bears, and other wild animals -- can you not reallocate these deer to a different part of BC? Our province is so big .. and these deers are born in BC and they part of our local environment. It's inhumane and it's considered genocide kill 1000 deers! Please find plan B.	ethics, translocation

As someone who has spent tens of thousands of hours studying, bonding with, living amongst and protecting and saving wild deer, I am writing to ask you to immediately stop any further development in the planned cull of fallow deer on Sidney Island. I hear the argument about protecting the flora of the island but the bottom line and logic is that deer are living beings that have bonds and families and we share approximately 80% of our DNA with them. Protecting them is a higher priority than any plant. To massacre hundreds of deer cannot be reasoned even by botanists. It's morally wrong and unethical. The argument is that they are not native - that is weak - extremely weak. Are the wealthy Caucasian residents on the island who care more about their gardens than the local flora native to the Island? No! Are the 95% of non-native Canadians native to Canada?? By that argument, should they be culled? Are humans not the most invasive species to walk the earth? Those animals have been there for close to a hundred years, I am sorry but they ARE native now. I encourage you to do the right thing. I nor you will not rest with an island stained with blood. There's no humane way to cull, the very act is genocide. Even if you were to tranquilize and euthanize the deer one at a time, it would still be genocide. Is environmentalism just about recycling and replacing plastic straws at Starbucks with cardboard ones? Get with the program! Humans have murdered and displaced animals for too long. This cull is not one in the right direction. Sidney Island is home to the fallow deer now, they have a right to stay there and not be murdered. Deer are not only capable of love and affection and bonding with their species but also with humans. I am living proof of that. I have more than 100,000 photos and videos, direct proof of this bond. I ask you to do the right thing, remove humans from their pedestal and leave the fallow deer alone. I won't let humans destroy deer again. For years I lived in the Okanagan with deer and dealt with hostility and harassment from selfish neighbors who hated the deer because they nibbled on their plants. The neighbors would throw rocks at the deer and one would even shoot the deer with a pellet gun bloodying them and the BC Conservation and RCMP did NOTHING to stop them, time and time again. Everyone turned a blind eye. I WILL not stand by idle to let the deer suffer and even worse fate. Do the right thing.	ethics
Reduce Sidney Island deer with a lottery I propose that the cull of fallow deer on Sidney Island take place with a lottery system. The number of those taking part in the cull should be under a dozen each day, operating seven days a week. It is assumed that the hunters would meet the quota of three animals easily. I was fortunate to be one of those who took part in hunting these introduced animals in the late 1970s when Jack Todd owned much of the island. Jack invited friends and family each fall to take three animals. Each hunter was instructed to take two does then a buck, thus cutting reproduction. The number of participants was low enough to eliminate the chance of an accidental shooting. Jack's ¬management plan worked well and the population was rather stable.	hunting opportunities
I read the CTV article (https://www.iheartradio.ca/cfax-1070/news/parks-canada-seeks-feedback-on-proposed-invasive-deer-cull-on-sidney-island-near-victoria-1.15232246) about your project with great interest. If I understand well, Sidney Island is overpopulated with European fallow deer and needs to set back the habitation balance. As a bow hunter, I would like to join your team for crop/ecosystem protection purposes. These are the advantages; I could bring to the project: • I would like to join as a volunteer (NOT as a paid/contracted partner). • I hunt with bows (recurve and crossbow), not with noisy and dangerous firearms. • I am a member of both VFGPA and BCWF. • I have all hunting licenses including the Gulf Islands Special License, as well. • I am 100% insured regarding all hunting liabilities. • I am just retired, so I can spend extended hours on the project. • I offer the game harvest (venison) to the Sidney Island Indian Reserve community and the town residences/low income people of Sidney. (I'll keep the trophies, though.)	hunting opportunities

The recent article in the Peninsula News Review on Sidney Island's fallow deer population had a number of errors. Sidney Island is basically a tree farm of Douglas and grand fir. Uncontrolled deer population before 2005 caused further reduction of biodiversity. From 2005 until present the deer population has been reduced by 90 per cent to its current number of approximately 300 (after spring fawning) and will require an annual 100 animal harvest to keep a stable balance. Fallow deer were not introduced to Sidney Island, they were brought over from England to James Island for sport hunting, and in the 1960s swam over to Sidney Island. Because there was no standing water (lakes or ponds) blacktail deer were never part of the ecosystem but were supposedly introduced. Although they are an indigenous species on the west coast, they were not on Sidney Island, so were not part of indigenous hunting. Our island does not have a deer problem, both Oak Bay, Mayne Island and many other communities do. Fallow deer are a valuable and a desired source of animal protein; food security is important to us. We have a vibrant hunting community and every year we get new hunters, young and old, joining us. If we eradicate our fallow deer we will lose our hunting community and, within a decade, have a blacktail deer problem. Sidney Island is unlike any other Gulf Island or coastal community and is in an enviable position with 1,500 acres of common property to safely manage both species of deer. We have always had many birds of prey, but after our 15 years of deer management we now have a plethora of songbirds and bees and a resurgence of once-thought wiped-out plant species.	restoration objectives, project context (ecological)
my understanding is that restoration is well in hand-are we killing off the deer to appease the influential residents? wouldn't fencing be a cheaper option as well ethical population control of the deer?	ethics, resource investment
As a resident of Sallas Forest Strata since 2006, I experienced the ecological impact of the fallow deer (a hyperabundance, at that time) and also to the owner-volunteer effort between 2008-18 to reduce the fallow deer herd to protect the ecology of the island. The volunteer time for the 2008-2018 reduction (which was physical and unpleasant work) and the financial requirements were very high and I really doubt that this reduction, if necessary, would/could be conducted again. Our owner numbers have grown and many are unfamiliar with its ecological history nor are interested as the island has recovered somewhat due to the fallow deer reduction. Because of the effort to reduce fallow deer, the ecology has recovered somewhat. However, we have no assurance that a rebound in the population of fallow deer will not happen. Having read some of the science literature on invasive species, I firmly believe that eradication of the fallow deer on Sidney Island would be a boon to the ecology of the island. This action needs to be supported by action to also reduce the invasive species of plants and trees that would proliferate. In particular, broom and hawthorn are the worst culprits in taking over the soil space of the island. In summary, I regard the eradication of the fallow deer herd on Sidney Island to be a very positive action to support the regeneration of the natural ecology. Thank you for this opportunity to express my views.	restoration objectives

Ironic then that billion dollar pipeline projects in BC are stopped due to the potential risk to a humming bird, yet the slaughter of hundreds of deer and wolves for the avowed purpose of intervening to "save" yet another species of plant or animal is "business as usual." These culls - past , present and future are yet another example of our belief that we must forever intervene, in our limitless wisdom and boundless cruelty. The sheer panic induced in these animals being slaughtered en masse in a pen by "marksmen" ought to be enough to cause us to find a solution less appalling. Clearly, no need for "marksmen" in this fish in a barrel solution. If the slaughter proceeds as planned, it ought to be recorded to ensure that it never happens again.	ethics
I believe that if the deer are planned to be culled, a professional, independent, ethical opinion be sought. Regardless of the outcome, I am for having these fallow deer humanely treated. I do not believe shooting of them, at once, or over a course of months, is humane treatment. I am concerned that it is viewed as the most financially affordable option. In my guess, this financial affordability will not take into account the very negative publicity Parks Canada will receive for supporting the treatment of any group of animals in this manner. Although these living creatures are not endemic, they are wildlife, they are the living beings who presently call the island home, and as such we may benefit by treating them respectfully. I know there are several humane ways to approach this issue of the expanding numbers of deer, including not doing anything. I wonder if we have a tendency to try to preserve these "natural" park places because we humans have destroyed so much of the environment that we inhabit in our day to day lives. The ongoing human-based habitat destruction occurring on much of Vancouver Island, particularly southern Vancouver Island, is certainly apparent and newsworthy lately. I have enjoyed visiting many of Parks Canada's spaces. Sidney Island is one that I frequent. I personally enjoy going to the island to see these deer. They are part of the charm of the place. I realize they are destroying the "natural" habitat, but this "natural" is a human definition. WE have destroyed most of the original pre human habitat on Vancouver Island at least once, by clearcutting forests, and in other areas likely permanently through human urban development. It seems bordering delusional that we would kill 500 deer for doing what they do when they find a home.	ethics

Summer 2021 Project Update

For project partners and key external stakeholders

Background:

Intense over-browsing from invasive fallow deer is impacting forest health on Sidney Island, resulting in reduced biodiversity and the interruption of natural ecosystem processes. A multi-jurisdictional collaboration of seven project partners (*Parks Canada, the Province of BC, Islands Trust Conservancy, Sallas Forest Strata Corporation, the W̱SÁNEĆ Leadership Council, Pauquachin First Nation, and Cowichan Tribes*) is working to co-develop and implement a plan for the facilitation of forest recovery via the removal of fallow deer and re-establishment of native and cultural understory vegetation.

Milestones:

- Since August 2020, two technical working groups, under guidance from the project Steering Committee, have collaboratively developed a proposal for the removal of invasive fallow deer, the re-establishment of native and cultural plant species, and the management of key invasive plant species. This draft proposal was presented to partnering communities and organisations for consideration in April 2021.
- After several rounds of review and revision, including community engagement, public consultation, and working directly with representatives of each of the project partners, a final proposal was prepared in July 2021.
- The project was highlighted by local and regional media outlets in May and June 2021, and represented by media spokespeople from Parks Canada, Sallas Forest Strata Corporation, and the W̱SÁNEĆ Leadership Council. The project received minimal opposition from the general public, despite the potential for significant controversy.
- A nine-week speaker series was hosted on behalf of the Sidney Island Ecological Restoration Project in April and May 2021. Local experts and knowledge holders spoke about a series of ecological and cultural topics related to the restoration of Sidney Island's forest ecosystem. Recordings of these sessions are available at: https://bit.ly/SIERP-series (or search Sidney Island Ecological Restoration Project on YouTube)

Ongoing activities:

- Parks Canada is undertaking a Detailed Impact Assessment (DIA) to assess the potential for impacts from eradication activities to the ecological and cultural features of Sidney Island. The draft report is currently being prepared and will be made available to members of the public, local First Nations, and project partners for a 30-day review period, anticipated in early Fall.
- Project partners are currently reviewing the final proposal, and have until the end of August 2021 to express support for moving into the trials and detailed operational planning phase.
- After successfully trialing removal techniques in 2020, Parks Canada and Sallas Forest Strata Corporation are working collaboratively to remove invasive English hawthorn where it is encroaching on native meadows.

Next steps:

- Trials are currently being planned for January and February 2022, that will inform the tactics and tools used for eradication.
- Parks Canada has initiated the procurement process to contract eradication specialists to develop a detailed safety plan and detailed operational plan through Winter and Spring 2021-22. The contracting and development process will include opportunities for review and guidance from select project partners.
- The intended start date of eradication is fall 2022.
- 10 sites for the installation of fenced exclosures have been identified. These are being built and planted in late Summer and early Fall 2021, and will be a significant step towards the long-term recovery of native forest understory vegetation.

Indigenous hunting:

- The park reserve portion of Sidney Island will once again be closed to the public starting November 1st, to facilitate Indigenous hunting. Parks Canada is working to facilitate a hunting schedule to minimise safety risks, as well as transportation to and from the island, when feasible.

For more information:

General project inquiries:
Mike Janssen, Project Manager: michael.janssen@canada.ca, or 250-418-5746

For inquiries related to the Detailed Impact Assessment, public or community consultation, or stakeholder engagement:
Stephanie Coulson, Partnering and Engagement Officer: stephanie.coulson@canada.ca, or 250-661-5227

For inquiries related to hunting in the park reserve:
Ben Tooby, Hunt Coordinator and Safety Officer: ben.tooby@canada.ca, or 250-507-6653

ISLANDS TRUST CONSERVANCY

REQUEST FOR DECISION

To:	ITC Board	**For the Meeting of:**	August 24, 2021
From:	Staff	**Date Prepared:**	August 19, 2021

SUBJECT: Revised Property Management Fund Guidelines

RECOMMENDATION: That the ITC Board approve the Property Management Fund Guidelines as revised.

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1 PURPOSE: To incorporate edits from the Legislative Services Manager into guidelines for the newly established Property Management Fund.

2 BACKGROUND:

As part of the acquisition of the Sandy Beach Nature Reserve, the ITC Board received a contribution from the applicant of $12,000 and passed the following resolution:

> **ITC-2020-023**
> **It was MOVED and SECONDED** that the Islands Trust Conservancy (ITC) Board direct staff to:
> 1) use $10,000 of the contribution provided as part of the Sandy Beach Nature Reserve transfer to create a Property Management Fund with the purpose of providing for long term management of ITC Nature Reserves;
> 2) use the remaining $2,000 of the contribution provided as part of the Sandy Beach Nature Reserve transfer to revise and finalize the conservation covenant and baseline report for the Sandy Beach Nature Reserve; and,
> 3) direct any remaining funds to the newly created Property Management Fund.

At its March 2021 meeting, the ITC Board reviewed Property Management Fund Guidelines and passed the following resolution:

> **ITC-2021-014**
> **It was MOVED and SECONDED** that the ITC Board approve the Property Management Fund Guidelines as amended and request that staff refer them for review to the Legislative Services Manager.

ITC staff have referred the guidelines to the Legislative Services Manager and have made the following edits:

1. Re-formatted the guidelines to be more compatible with Islands Trust templates, including section numbering.
2. Minor edits as attached.

The Legislative Services Manager also noted that it is unusual for guidelines and policies to invite feedback from partners and the public as noted in section 8. The ITC Board may wish to consider removal of this section of the guidelines.

3 IMPLICATIONS OF RECOMMENDATION:

ORGANIZATIONAL: None.

FINANCIAL: None.

POLICY: None.

IMPLEMENTATION/COMMUNICATIONS: Staff will add the Property Management Fund to the website and other communications related media so that donors are informed that the Fund is an option for receipt of donations.

FIRST NATIONS: The fund may be used for archaeological studies and to contract cultural knowledge holders to visit ITC nature reserves. Funds will help ITC to move towards implementation of the principles of UNDRIP and the Trust and Reconciliation Commission Calls to Action.

CLIMATE CHANGE: Improved access to property management funds may increase carbon storage and sequestration on ITC Nature Reserves and assist ITC staff to improve climate change adaptation and mitigation strategies for Nature Reserves.

OTHER: The ITC is currently negotiating land transactions that will result in additional funds for the Property Management Fund. A $603 (US$500) donation was received into the fund in July 2021, indicating a willingness from donors to support the fund.

4 RELEVANT POLICY(S):

1.3 Islands Trust Conservancy Board Roles and Responsibilities
1.7 Fundraising and Donation Policy
2.1 Board Approval of Projects and Transactions
2.2 Assessing Conservation Proposals

5 ATTACHMENT(S): Property Management Fund Guidelines (revised)

RESPONSE OPTIONS

Recommendation: That the ITC Board approve the Property Management Fund Guidelines as revised.

Alternative: That the ITC Board approve the revised Property Management Fund Guidelines with the following amendment:

- Removal of section 8.

Prepared By: Kate Emmings, Manager, Islands Trust Conservancy

Policy:	Guideline
Approved By:	Islands Trust Conservancy Board
Approval Date:	
Resolution No.:	
Amendment Date(s):	N/A
Policy Holder:	Islands Trust Conservancy

Property Management Fund Guidelines

Purpose

The Property Management Fund's purpose is to provide funding for the long-term management lands owned or managed by the Islands Trust Conservancy (ITC).

Background

The ITC has an on-going obligation to its donors, as well as to the landowners and residents of the Islands Trust Area and British Columbia generally, to steward land it manages. As with other land conservancies, the ITC needs secure and lasting sources of dedicated funds sufficient to cover the property management costs.

The ITC Board established the Property Management Fund in 2021 in response to receiving a cash donation from a development application that required a land transfer. The ITC Board elected to use the financial contribution to start a fund for the ongoing management of ITC nature reserves. These Guidelines set out how the Board will manage and use funds that are donated or otherwise received to support management of ITC nature reserves.

Use of Monies held in the Property Management Fund

1. Cash contributions given to the ITC to provide funding for the management of nature reserves will be deposited into the Property Management Fund. The ITC Board may also elect to allocate unrestricted donations and cash contributions to the Property Management Fund by resolution.

2. The Board will use the money held in this Fund only to cover costs associated with the following purposes:

    - Maintenance, enhancement, restoration and improvement of the natural features, habitats, ecosystems and amenities of ITC nature reserves;
    - Maintenance and establishment of recreational features within ITC nature reserves as determined through management planning;
    - Signage needed to properly manage ITC nature reserves;

- Risk mitigation to ensure the safety of the public and workers;
- Legal services, arbitration processes and mediation processes required to properly manage nature reserves and to address issues of trespass;
- Reports and expert guidance required to manage the land, including archaeological and biological reports and assistance from First Nations Cultural Knowledge Holders.

3. The Board will not use the funds held in the Property Management Fund for costs associated with land acquisition.

Allocation of Funds to Specific Nature Reserves

4. Where a donor requests that donated funds be used to support the management of a specific nature reserve, the Board will identify and keep a separate accounting of those funds for the management of the specified nature reserve in accordance with these Guidelines. Funds obtained through development applications will not be allocated to a particular property, but will be made available to manage any and all nature reserves managed by the ITC.

5. Generally, the Board will use monies that are allocated to a specific nature reserve only for purposes relating to the management of that nature reserve. However, the Board may in its discretion use all or a portion of such funds for the management of other nature reserves managed by the Board. While such decisions are in the Board's sole discretion, reasons it may decide to reallocate such funds include where:

    - the Board ceases to manage a specific nature reserve;
    - the Board determines that there is sufficient money to use a portion for another covenant management use without detracting from the original allocated use; or
    - where the donor agrees with the proposed alternate use.

Maintaining the Fund

6. The Islands Trust Conservancy will solicit donations to the Property Management Fund on an on-going basis through its land securement program, its website, Islands Trust Conservancy newsletters and eNews, social media and other regular communications.

Reviewing and Revising These Guidelines

7. These Property Management Fund Guidelines will be reviewed and revised as needed.
8. Partner agencies and the public are welcome to provide feedback to the Board on these Guidelines and can direct comments in writing to the Board Chair.