Communications Strategy

Eradication of Fallow Deer on Sidney Island

Phase One: Consultation with Sidney Island landowners and First Nations

Overview:

Parks Canada has secured funding under the Conservation and Restoration Fund (CoRe) to eradicate invasive fallow deer on Sidney Island both on private and park reserve lands. Eradication, in conjunction with other conservation and restoration activities, is intended to resolve the problem of over-browsing by invasive fallow deer and allow the forest ecosystem to recover.

This communications plan addresses the first phase of communications which involves consulting with Sidney Island landowners in the lead up to a community vote, as well as First Nations.

Considerations:

- For the island-wide project to move forward, Parks Canada requires the support of the Sallas Forest Strata Corporation - a strata-run housing subdivision that owns the southern two-thirds of Sidney Island. The community will vote on the eradication proposal in the summer of 2018.
- The community is seeking 50% support at the 2018 vote to officially support Parks Canada's eradication proposal. Gulf Islands National Park Reserve hopes to achieve a much higher approval rate.
- Public response to date has been generally supportive of fallow deer culls on Sidney Island, including positive coverage in the Victoria Times-Colonist, Vancouver Sun and Chek TV. However, eradication would be a more sensitive topic and could generate public concern, especially in regions such as Victoria where wildlife culls are highly controversial.
- Communities in Victoria are struggling with an overpopulation of black-tailed deer. Members of the public may be skeptical that eradicating fallow deer would simply lead to an overpopulation of black-tailed deer, which also live on Sidney Island.
- News of the eradication proposal could reach a wider audience in the fall of 2017 as a contract to develop an operational eradication plan will be posted publicly on the Buy and Sell site.

Audiences:

Sidney Island Landowners: The Sallas community on Sidney Island has invested in fallow deer management for more than 30 years and most landowners appreciate the environmental benefits of reducing deer over-grazing. The community has been working with Parks Canada to cull deer since 2008, which has helped to build a strong and respectful relationship. However, since eradication is a permanent step, the proposal requires more thorough consideration by landowners.

When Parks Canada presented the eradication proposal at the community's 2017 Annual General Meeting, there were no concerns raised by those in attendance. However, the community's strata council members have passed along objections from community members, such as those who enjoy hunting the fallow deer and others who take pleasure in fallow deer sightings.

Victoria-Area Residents: In the past decade, two proposed wildlife culls for overabundant species have generated significant controversy in the Victoria region: rabbits at the University of Victoria and black-tailed deer in Oak Bay. Both of these issues led to public protests and province-wide media coverage. In these cases, local governments down-sized culling plans and turned to more palatable options such as sterilization and relocation. However, as noted earlier, deer culls on Sidney Island have not elicited this type of response in the past.

Environmental Non-Governmental Organizations: No ENGOs have objected to the Sidney Island deer culls in the past, but such groups could take an interest in deer eradication. The anti-cull organization DeerSafe Victoria may take an interest in the Sidney Island eradication proposal but would be unlikely to

be swayed by any degree of consultation. However, the BC Society for the Prevention of Cruelty to Animals (SPCA), which objected to a Victoria area deer cull in Oak Bay in 2015, did not oppose a Gwaii Haanas National Park Reserve deer eradication operation (ongoing) as it adhered to their principles for ethical culling. Gulf Islands National Park Reserve staff will work directly with organizations such as the BC SPCA so that any concerns are heard and potentially incorporated into eradication planning.

Indigenous Groups: Gulf Islands National Park Reserve works with 19 different Indigenous groups. Many of these Nations are already involved in the culling of fallow deer on Sidney Island during an annual winter closure and other operations. Indigenous groups have expressed support for eradication at this point but will need to be actively engaged in project planning to ensure it aligns with their values and needs. Through eradication planning, we will identify economic, social, and cultural opportunities such as employment and youth culture camps for Indigenous communities. We will also facilitate the gathering of cultural materials such as meat, pelts, and antlers for interested Indigenous communities.

Approach:

During Phase One of the communications plan, Gulf Islands National Park Reserve plans to take a low-key, reactive approach to communicating about the proposal with broader audiences to avoid generating outside scrutiny around the community's vote. Questions and Answers will be developed in preparation for unsolicited media interest.

However, since input from third-party experts is important to Sidney Island landowners and essential to building an eradication plan that is widely embraced, we are currently seeking input from relevant academic researchers, as well as organizations such as the BC SPCA who may not only shape our operational plans but also present relevant research to the community.

Broader audiences will be engaged following the 2018 vote, if the community vote outcome is positive. At such time, various communications approaches would be considered for Phase Two of the communications plan.

For Phase One, Parks Canada will continue to involve Indigenous communities in eradication planning through existing First Nations consultation committees. There will also be meetings with recognized hunting experts within local Indigenous communities to determine how First Nations want to be involved in project management and operations. These discussions will also help ensure traditional knowledge and skills are incorporated whenever possible.

Parks Canada will continue to work directly with Sidney Island landowners to build the required support for the eradication vote. Resource Conservation Manager Nathan Cardinal has begun to consistently serve as the Parks Canada representative, meeting and speaking with landowners to foster trust and openness. When a project manager is hired in late 2017, this additional person will also hold a direct relationship with landowners.

Below are the key communications tactics planned or already underway for community consultation with Sidney Island landowners. More details will be confirmed once a project manager is in place.

- Gulf Islands National Park Reserve plans to contract a third-party operated website accessible only to Sidney Island landowners to serve as an online community engagement platform. The website would communicate information to Sidney Island landowners regarding proposed restoration and eradication efforts, while also sharing upcoming events and key contactsThe website would provide an opportunity for Sidney Island landowners to share their comments and ask questions through a moderated online interactive platform. Parks Canada's own website does not have the capability of creating private discussion pages for select groups. A Statement of Work has been developed for this tool based on similar websites used to enhance consultation by Parks Canada.

- This fall and winter, Gulf Islands National Park Reserve plans to organize workshops for community members with third-party speakers on topics that interest landowners, such as eradication options and ecosystem restoration. These workshops would be held off-island in areas where Sidney Island landowners tend to spend the cooler months, including the Town of Sidney and Victoria. Presentations from these workshops could also be broadcast live on the dedicated website for landowners to join remotely. As noted earlier, trusted representatives at neighbouring academic institutions and the BC SPCA would be appropriate guest speakers to consider. Once an eradication expert is contracted to develop an operational plan, a contractor could also attend one of the workshops to go over eradication possibilities and hear community concerns.
- Resource Conservation Manager Nathan Cardinal has already begun taking part in in-person meetings with Sidney Island landowners to discuss the eradication proposal. So far, several of these meetings have taken place with Sidney Island's strata council and environmental stewardship committee. Nathan has also be involved in community events such as the 2017 Annual General Meeting for strata members and a community potluck in August. Nathan will continue to arrange these meetings and take part in community events as they occur. Members of the community have also be invited to contact him directly to discuss their questions or concerns, generating several phone calls. Contact information for both Nathan and the project manager - once hired - will be prominently displayed on the dedicated website and in all printed materials to further facilitate these conversations.
- Gulf Islands National Park Reserve will develop written updates on the project to be sent seasonally by email to landowners about the status of the eradication plan as it evolves. These will include Questions and Answers.
- Gulf Islands National Park Reserve will arrange a field trip for interested landowners to nearby islands that are not impacted by deer overgrazing such as Eagle Islet, Portland Island and Yellow Island. These will serve as examples of what Parks Canada hopes to achieve through the eradication project and subsequent restoration activities.

Key Messages:

- Parks Canada is currently exploring the potential for fallow deer eradication with stakeholders and First Nations in an effort to restore forest ecosystems on Sidney Island. No final decisions have been made at this time.
- Parks Canada is a leader in conservation. Removing invasive fallow deer from Sidney Island is the single most effective step Parks Canada can take to improve the ecological health of Sidney Island.
- Visitor safety is a top priority for Parks Canada. Any eradication measures would be designed not only to ensure the humane treatment of wildlife, but also to minimize risk and inconvenience to local landowners and visitors.
- Eradication planning is a continuation of the significant work already undertaken on the island by private residents, the Province of BC, and Parks Canada to reduce the population of invasive fallow deer on Sidney Island.

Secondary Messages:

- Ensuring the overall health of Gulf Islands National Park Reserve's forest ecosystem is a priority for Parks Canada. Fallow deer are an invasive species on Sidney Island. Research from Sidney Island, as well as from adjacent Islands, has shown that fallow deer populations have significantly damaged the understory forest vegetation through overgrazing, and have negatively affected the native birds and endangered plant species essential to the local ecosystem.

- The substantial investment by Sidney Island landowners over the last 30 years, together with Parks Canada's deer management efforts to reduce the invasive population, including facilitating traditional harvesting by local Coast Salish First Nations over the last decade, has resulted in substantial gains, but has not been sufficient to restore the forest ecosystem on Sidney Island.
- Parks Canada considered a number of options to manage invasive fallow deer and restore the island ecosystem, including leaving deer to self-regulate; implementing large-scale birth control; and undertaking capture and harvest activities. Research – along with our own efforts to enact seasonal culls - revealed that eradication would have the greatest long-term benefit without significant ongoing investment.
- Animal welfare is important for Parks Canada. Any deer reduction activities will be conducted humanely in accordance with recognized standards.

Evaluation: The success of this communications approach will measured by the May 2018 vote by Sidney Island landowners. It will also be based on the feedback of Indigenous communities. While the communications plan does not involve a media announcement at this stage, if media interest does arise, the tone of the coverage and effectiveness of prewritten Q and As will also be assessed.

Parks Canada Parcs Canada

ANNEX A – STATEMENT OF WORK

RESTORING FOREST HEALTH THROUGH ERADICATION OF INVASIVE FALLOW DEER FROM SIDNEY ISLAND, BC – DEVELOPMENT OF ERADICATION OPERATION PLAN

1. Background

Results from Parks Canada's ecological integrity monitoring program at Gulf Islands National Park Reserve (GINPR) as well as local research (e.g. Arcese et al. 2014) estimate deer density for islands in the Southern Gulf Islands to be well beyond what can be considered a healthy ecological level. Specifically, invasive non-native deer have dramatically impacted forest ecosystem health in Gulf Islands National Park Reserve (GINPR) (Martin et al., 2011). Invasive deer impact plant richness, diversity, and cover (Stockton et al., 2005; Martin et al. 2011; Arcese et al. 2014) as well as other species dependent on forest ecosystems including invertebrates (Allombert et al., 2005a) and songbirds (Allombert et al. 2005b; Martin et al. 2011; Chollet and Martin 2013). Within the southern Gulf Islands, invasive fallow deer have been confirmed on Sidney Island and neighbouring James Island, as well as Mayne Island and Saturna Island.

Within GINPR, forest ecosystems on Sidney Island have been severely degraded by overgrazing and trampling due to invasive fallow deer (*Dama dama*) (Gonzales et al., 2014). Fallow deer have been present on the island since the early 20th Century (Moody et al 1994; Pearse 2014) and their population has risen dramatically. Fallow deer may also outcompete native deer: experts with the US Geological Survey estimate that for every 2 non-native deer, 1 native deer is lost in California (PRNS 2008). Management efforts to reduce fallow deer populations on Sidney Island have occurred since 1981. Between 1981 and 2011 nearly 12,000 deer had been removed from the island (Golumbia 2010). Despite intensive efforts on the part of private landowners, the Province of BC, and Parks Canada, deer populations on Sidney Island continue to be well above what is considered ecologically sustainable. Various options have been considered to improve forest ecosystem health. Eradication of fallow deer from Sidney Island was reviewed and assessed as a feasible option (Coastal Conservation and Native Range 2012).

Parks Canada is embarking on a multi-year project to restore forest ecosystem health within GINPR. Management actions will focus on 3 objectives: 1) removing invasive fallow deer from Sidney Island, focusing on eradication planning and development of a biosecurity program to prevent reinvasion of fallow deer to Sidney Island; 2) management of hyperabundant black-tailed deer populations in GINPR with a focus on operational sustainability and effectiveness: and 3) restoration of native forest vegetation including invasive vegetation management, species at risk and culturally important species. To address objective 1), Parks Canada is currently looking to develop an eradication operation plan for fallow deer on Sidney Island.

Located approximately 4 km from the Town of Sidney, the island is roughly 900ha in size, of which 172ha is under the jurisdiction of Parks Canada and the remainder is managed by the Sallas Strata Council ("Sallas"). Parks Canada maintains a popular campsite and day use area, public dock, and private mooring buoys accessible to visitors during the summer months. The land managed by the Strata Council consists of 111 strata lots totalling approximately 116ha as well as 590ha of commonly managed lands. 8 conservation covenants totalling 53ha exist on Sallas Lands and are held by the Islands Trust. Services provided by Sallas include: a road and trail network, a private dock and boat ramp, and an air field. Sidney Island exists below a popular flight path for Victoria International Airport and is located approximately 7km from the airport itself.

Successful eradication of fallow deer will likely require a variety of techniques, consideration of the semi-urban environment, and consideration of the perspectives and rights of residents and First Nations.

2. Objective

The objective of the work is to provide scientific and technical advice to Parks Canada Agency to identify a range of suitable, evidence-based eradication methods and to develop a detailed plan for operations to eradicate fallow deer ("'Eradication Operation Plan") under two scenarios: i) eradication of fallow deer from the whole of Sidney Island, and ii) eradication of fallow deer from the area of Sidney Island under jurisdiction of Parks Canada. This will include all necessary plans to proceed to a fallow deer eradication operation on Sidney Island. Given that Sidney Island is partially privately owned and falls within the traditional territory of several Coast Salish Nations, the plan must consider and reflect the perspectives and rights of both Sidney Island residents and Coast Salish Nations.

3. Scope of Work

The scope of work includes the provision of technical advice for fallow deer eradication through the development of a fallow deer eradication operation plan. Specifically, this includes:

a) A Scoping Document that identifies key opportunities and challenges and outlines techniques for eradication of fallow deer from Sidney Island for i) the whole of Sidney Island, and ii) the area of Sidney Island under jurisdiction of Parks Canada (see *Appendix 1 – Scoping Document: Proposed Table of Contents*).

b) A detailed Eradication Operation Plan to guide future fallow deer eradication operations on Sidney Island under the 2 scenarios identified in section 3.a above (see *Appendix 2 – Eradication Operation Plan for Fallow Deer on Sidney Island: Proposed Table of Contents*). Development of the Eradication Operation Plan will also include the following milestones:
   i) Partnerships – in cooperation with Parks Canada staff, obtain support in the form of partnering agreements or other instruments (e.g. letter of support) from identified partners and stakeholders with interest and/or responsibility for fallow deer on Sidney Island, including (but not limited to): Government of BC (Forest, Lands, and Natural Resource Operations), Sallas Strata Council, Islands Trust, and the Society for the Prevention of Cruelty to Animals (SPCA).
   ii) First Nations Engagement - Provide supporting information to Parks Canada for consultation with local First Nations on the fallow deer eradication plan for Sidney Island, including attendance to at least 2 meetings with each of Parks Canada's Aboriginal consultative committees at GINPR (currently 2 committees).
   iii) Permitting – in cooperation with Parks Canada staff, determine necessary permitting requirements additional to internal Parks Canada permits, which may include: necessary provincial permits; exemptions for recommended eradication techniques; animal care and welfare; and exemptions for low-level helicopter flights and shooting within airspace of Victoria airport.
   iv) Site visit – at least 2 site visits to Sidney Island to aid in development of the Eradication Operation Plan, and at least 2 meetings with Sallas residents and other stakeholders.
   v) Operation Plan – complete operation plan including recommended techniques and methods, identified permit requirements, roles & responsibilities, detailed schedules, and costs estimates, as well as resourcing and logistical requirements. Plan will identify potential risks and outline strategies for managing risks. Plan will also include recommendations for future biosecurity needs to prevent recolonizaton of fallow deer, and recommendations regarding future management native black-tailed deer (see Appendix 2 for a proposed table of contents).

4. Constraints

Government policy constraints apply to this work including its compliance with Parks Canada Agency legislation, policies and directives such as the *Canada National Parks Act* and regulations, Hyperabundant Wildlife Population Management Directive, Integrated Pest Management Directive, Parks Canada Directive on Impact Assessment, *Species at Risk Act* and other related policies. In addition, eradication operations will extend to Provincial Lands and therefore need to be in compliance Provincial Acts and regulations including, but not limited to, the *Environmental Assessment Act* and the *Wildlife Act*.

5. Resources

A number of relevant studies and plans exists to inform this work including: the Eradication of Fallow Deer Feasibility Study prepared for GINPR; ecological integrity (EI) monitoring work undertaken by Parks Canada on Sidney Island; restoration work undertaken for Sidney Island (specifically for Eagle Islet); academic research regarding deer impacts undertaken in the southern Gulf Islands (including on Sidney Island), specifically work undertaken by Peter Arcese, Tara Martin, and information regarding previous deer management programs. These will be shared with the Contractor to support development of the deliverables.

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6. Deliverables

The Contractor must:

(a) Provide a Scoping Document for Sidney Island Fallow Deer Eradication as outlined in the Scope of Work (see *Appendix 1 – Scoping Document: Proposed Table of Contents*);

(b) Provide an Eradication Operation Plan for Fallow Deer on Sidney Island as outlined in the Scope of Work (see *Appendix 2 – Eradication Operation Plan for Fallow Deer on Sidney Island: Proposed Table of Contents*);

(c) Provide a detailed list of Required Permits and Exemptions required to undertake fallow deer eradication as proposed in the Eradication Operation Plan, along with any draft forms, recommendations, and contacts to aid in the completion of the permits and exemptions.

The Deliverables as listed above are to be provided in electronic (Microsoft Office) format.

7. Contractor Responsibilities

The Contractor must:

(a) Work closely with Parks Canada in development and completion of the Eradication Operation Plan. The contractor will coordinate regular project team meetings to ensure regular communication on the project. Meetings can be in-person or via teleconference or similar means, and should occur at minimum once per month, but may be more frequent depending on requirements.

(b) Gather accurate and up-to-date information in order to produce a realistic and effective Eradication Operation Plan, drawing on a combination of their own technical expertise as well as through the consultation and convening of technical experts, stakeholders, residents, and local knowledge holders who have experience in methods of deer eradication, control and management, and literature review, and/or who would be directly affected by any eradication operations to take place on Sidney Island. Specifically, at a minimum, the contractor is required to attend the following meetings and site visits:

- i) At least 2 meetings with each of Parks Canada's Aboriginal consultative committees (currently 2 committees – minimum total of 4 meetings)
- ii) At least 2 site visits to Sidney Island to aid in the development of the Eradication Operation Plan
- iii) At least 2 meetings with Sallas residents and other stakeholders

During the meetings, the contractor is to provide information regarding the elements of the Eradication Operation plan and answer questions posed as well as solicit feedback on the plan to aid in development of the plan. The contractor can also involve others and convene additional meetings as determined necessary in order to produce a realistic and effective Eradication Operation Plan;

(c) Produce draft and final documents of both a Scoping Document and Eradication Operation Plan. A minimum of 1 draft will be produced for each document. Draft documents will be reviewed Parks Canada Agency as well as First Nations, Sallas Residents, and stakeholders (as determined by Parks Canada) to solicit feedback. The contractor will be responsible for revising draft documents based on provided feedback to produce a final version of both a Scoping Document and an Eradication Operation Plan.

8. Parks Canada Responsibilities

Parks Canada Agency shall:

(a) Work closely with the Contractor to provide guidance on development of the key planning documents outlined in this Statement of Work (SOW), including the identification and development of non-Parks Canada permits and exemptions. Parks Canada will coordinate the applications, submission and permitting process for such additional permits. Parks Canada will co-write the following sections of the Eradication Operation Plan with the contractor to ensure fit with the operational requirements of GINPR: Project Management / Roles & Responsibilities; Operational Timeline; Logistical Requirements; Personnel Requirements; Deer Population Monitoring; Logistics; and Budget.

(b) Coordinate meetings with partners, stakeholders, and First Nations, with input and review from the contractor. Parks Canada will attempt to group meetings to manage cost and time requirements of the contractor.

(c) Conduct reviews of draft documents produced by the contractor and provide draft documents to partners and stakeholders for their review. Parks Canada will then collate and provide all comments to the contractor, and pass on outstanding comments to the contractor for review and consideration in final versions. Subsequent from and separate to this contract, Parks Cana will coordinate an independent external review of the Eradication Operation Plan.

(d) Provide logistical support for travel to/ from project site by marine vessel from Sidney, BC. This logistical support will also include all maintenance of vessels, fuel, and required safety equipment for transportation;

(e) Provide to Parks Canada personnel to coordinate and assist with the successful completion of this contract. This includes a dedicated project manager to assist with coordination and review of this contract; Parks Canada staff to assist with logistics and provide review of documentation; Parks Canada staff to assist in gathering information ;

(f) Participate in start-up and regular project meetings as well as visit and meetings with relevant stakeholders as appropriate.

9. Schedule

All work is to be completed by October 31, 2018. A draft version of Eradication Operation Plan is to be provided to Parks Canada by August 10, 2018. Further detailed schedules are to be developed by Parks Canada and the Contractor during initial meetings.

10. Intellectual Property

The Parks Canada Agency has determined that any intellectual property arising from the performance of the Work under the Contract will vest in Canada, on the following grounds: The main purpose of the deliverables contracted for is to generate knowledge and information for public dissemination. The full policy is available on the Treasury Board Secretariat website at the following address: http://www.tbs-sct.gc.ca under Policies in the Contracting Policy Section. The terms of PCA's ownership of intellectual property are set out in the Standard Acquisition Clauses and Conditions Manual issued by Public Works and Government Services Canada at the following address: https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/4/4007/3.

11. Travel

The Contractor and any sub-contractors are expected to travel at their own expense to/ from Sidney, BC for the site visits, and for other meetings as appropriate.

12. Security Requirements

The Contractor personnel and any sub-contractors personnel must each hold a valid Reliability Status Security Clearance.

13. Official Languages

The language required for communication verbally and in writing is English. All progress and final reports, including deliverables outlined must be in English.

Figure 1.0 – Sidney Island

References

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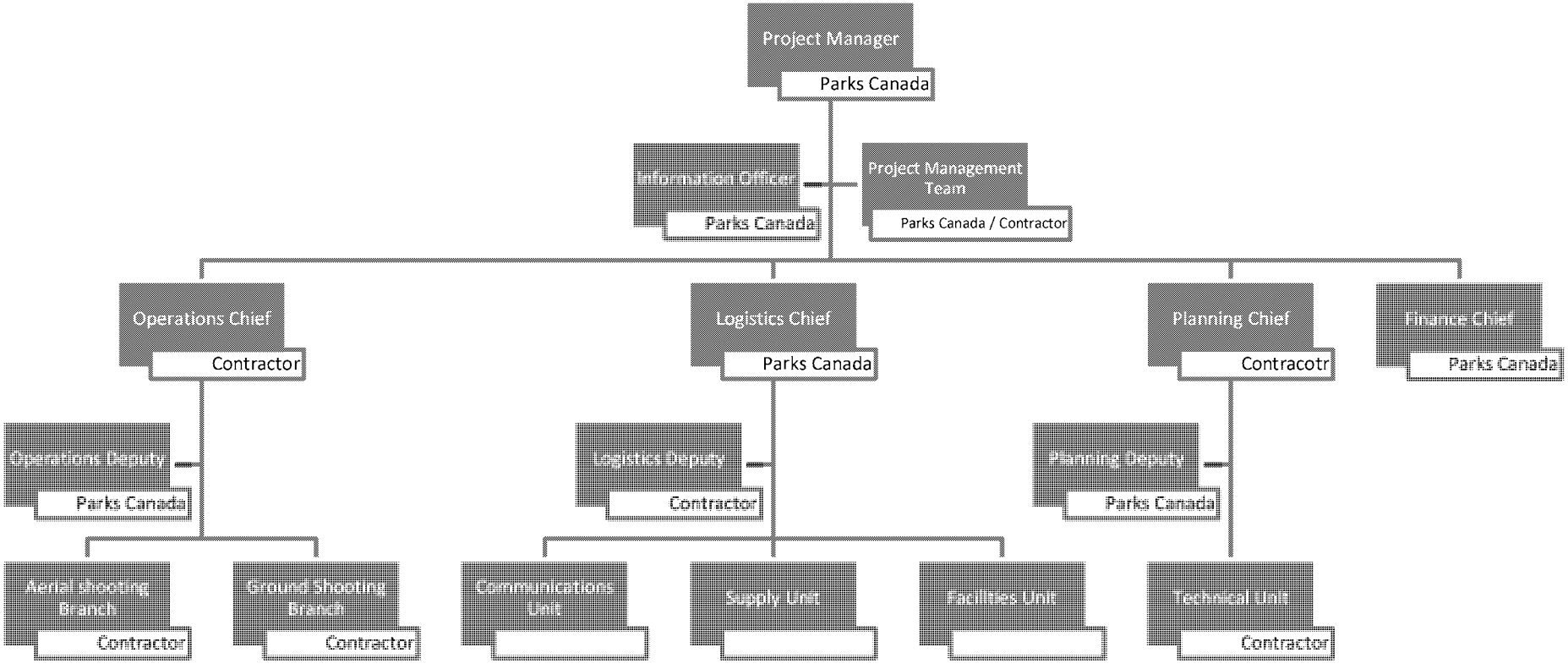
Appendix 1 – Scoping Document: Proposed Table of Contents

1. Background
2. Goal and Objectives
3. Options for Fallow Deer Eradication including Advantages & Disadvantages & Risk
   - 3.1. Shoreline Shooting
   - 3.2. Ground Shooting
   - 3.3. Barrier Fencing
   - 3.4. Capture Pens
   - 3.5. Hunting Dogs
   - 3.6. Aerial Shooting
   - 3.7. Ground Baiting
   - 3.8. Lures
   - 3.9. Sterilization, Contraception, and Immunocontraception
   - 3.10. Other Methods
4. Key Logistical Consideration
   - 4.1. Access
   - 4.2. Victoria Airport Airspace
   - 4.3. Remote Cameras and Radio Transmitters
5. Key First Nation and Resident Considerations
6. Recommended population census techniques for fallow deer
7. Recommended Eradication Methods
   - 7.1. Recommended eradication methods for the whole of Sidney Island
   - 7.2. Recommended eradication methods for portions of Sidney Island under Parks Canada jurisdiction
   - 7.3. Recommended actions to support successful eradication efforts
   - 7.4. Recommended trials to confirm efficacy of proposed options
   - 7.5. Recommended complementary actions to manage black-tailed deer
8. Budget (based on recommended methods)
9. Regulatory Considerations
   - 9.1. Compliance with non-Parks Canada Regulation

Appendix 2 – Eradication Operation Plan for Fallow Deer on Sidney Island: Proposed Table of Contents

1. Background
2. Goal and Objectives
3. Background
4. Site description
5. Project Management
   - 5.1. Roles and Responsibilities (See Appendix 3)
   - 5.2. Team Communications
6. Partners and stakeholders
   - 6.1. Jurisdictional Overlap
   - 6.2. Required permits and/or agreements
7. Eradication Operation
   - 7.1. Recommended Deer Control Phases and Methods
     - 7.1.1. Recommended Phases, Timing, and Methods for whole of Sidney Island;
     - 7.1.2. Recommended Phases, Timing, and Methods for the portion of Sidney Island under jurisdiction of Parks Canada
   - 7.2. Mitigative Measures
     - 7.2.1. Animal welfare and non-target animals
     - 7.2.2. Visitor Safety
     - 7.2.3. Occupational health and safety
     - 7.2.4. Ecological & Cultural impacts
   - 7.3. Meat Recovery / Processing and carcass disposal
   - 7.4. Required Permits and Exemption
   - 7.5. Operational Timeline
   - 7.6. Logistical requirements
     - 7.6.1. Facilities
     - 7.6.2. Transportation
     - 7.6.3. Communication
     - 7.6.4. Equipment
     - 7.6.5. Staging and phasing of equipment
   - 7.7. Personnel Requirements
     - 7.7.1. General Staff / Overhead team
     - 7.7.2. Operational teams
     - 7.7.3. Staging
     - 7.7.4. Scheduling and Rotation
   - 7.8. Risk Management
     - 7.8.1. Contingencies
8. Recommended actions to support successful fallow deer eradication
   - 8.1. Managing existing hunting opportunities
   - 8.2. Determining efficacy of proposed methods
   - 8.3. Determining accurate and precise population measures
9. Deer Population Monitoring
   - 9.1. Pre-eradication monitoring
   - 9.2. Operational effectiveness monitoring
   - 9.3. Post-eradication monitoring
10. Prevention of fallow deer recolonization
    - 10.1. Considerations for managing native black-tailed deer
11. Logistics
12. Budget

Appendix 3: Eradication Operation Plan for Fallow Deer on Sidney Island: Proposed Organizational Chart

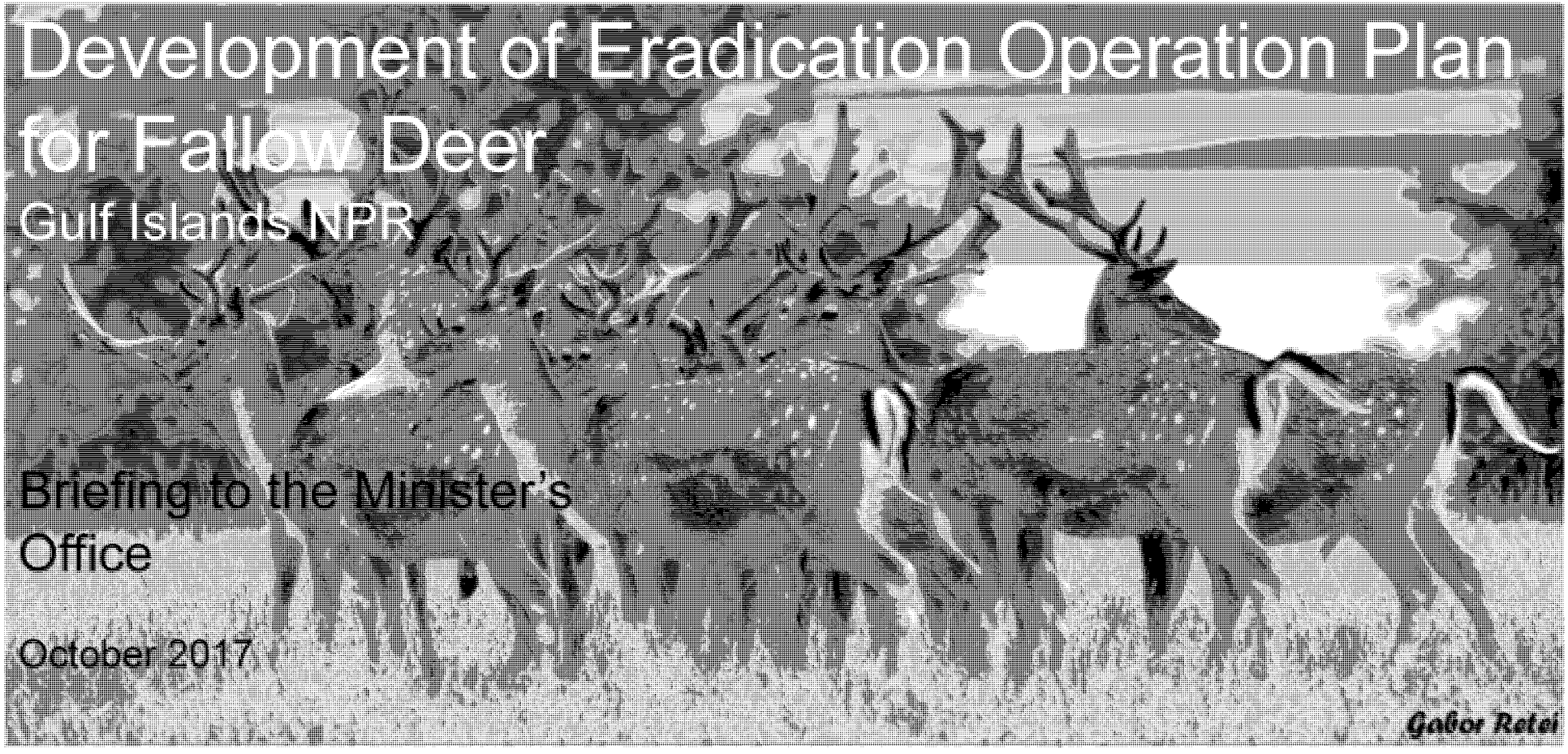


Parks Canada Parcs Canada

Canada

Development of Eradication Operation Plan for Fallow Deer

Gulf Islands NPR



Briefing to the Minister's Office

October 2017

Gabor Retei

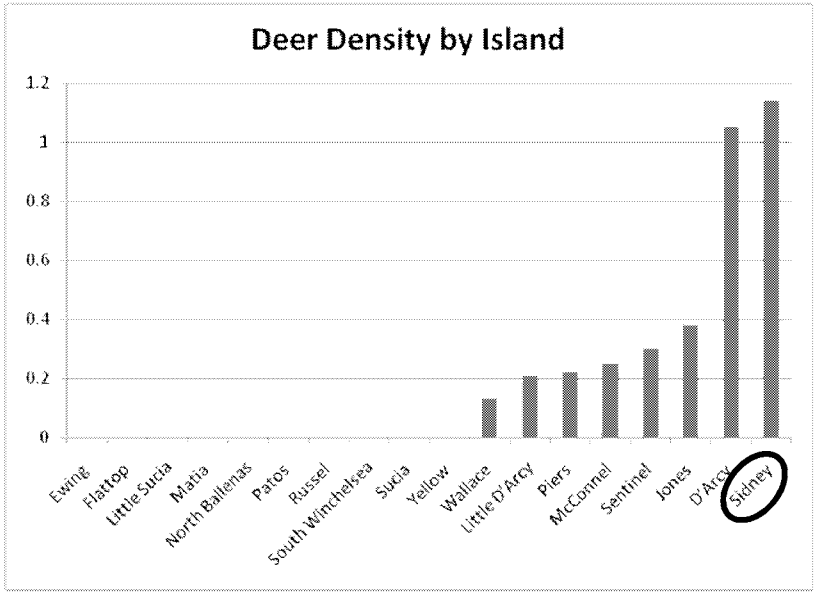
Briefing Objectives

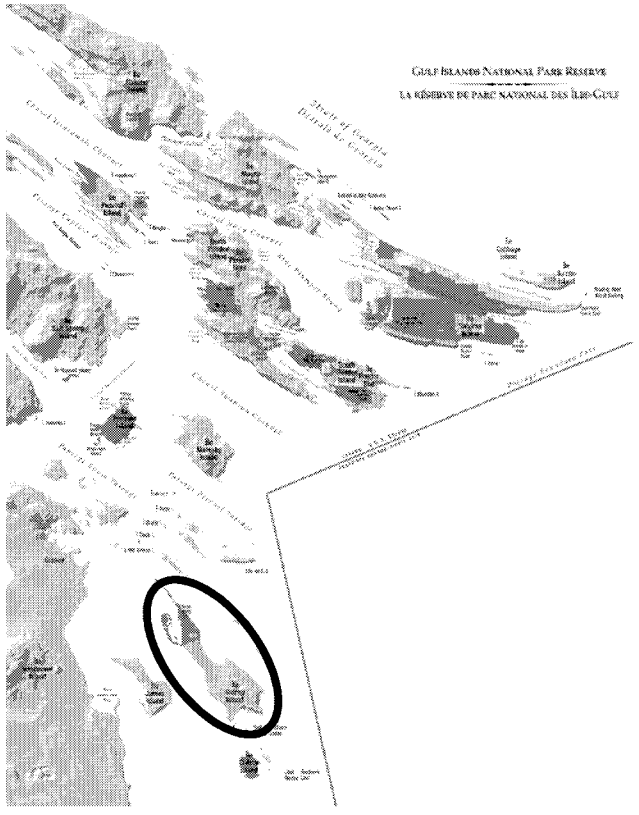
To inform the Minister that Gulf Islands National Park Reserve (GINPR) will be publicly posting a Request for Proposals to produce an eradication operation plan that will support decision-making to manage invasive fallow deer on Sidney island.

Culling and eradication in other national parks have generate significant media interest

Context

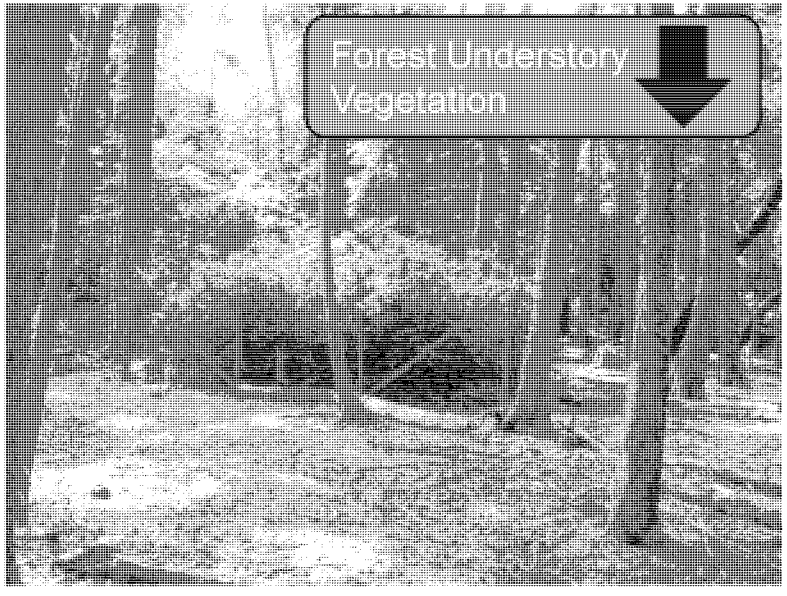
- Fallow deer are the single biggest threat to ecological integrity (EI)
- Introduced in the early 20th century, population increased dramatically

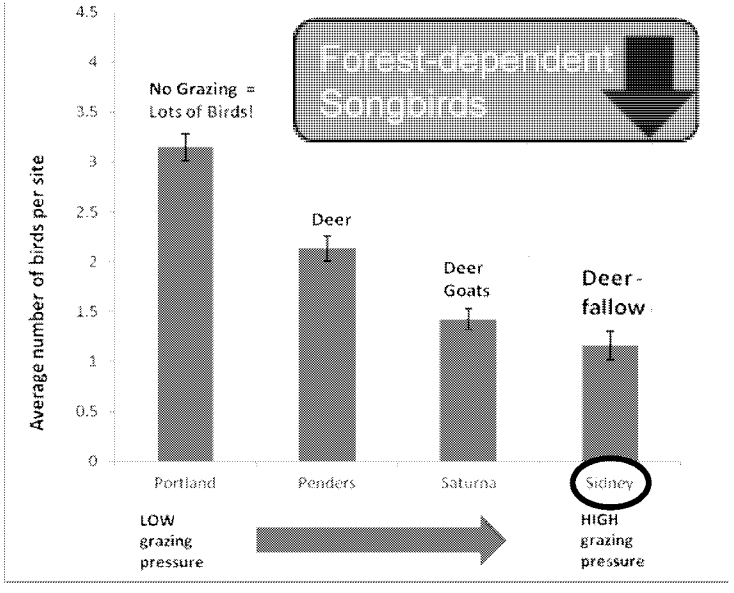




Ecological Impacts

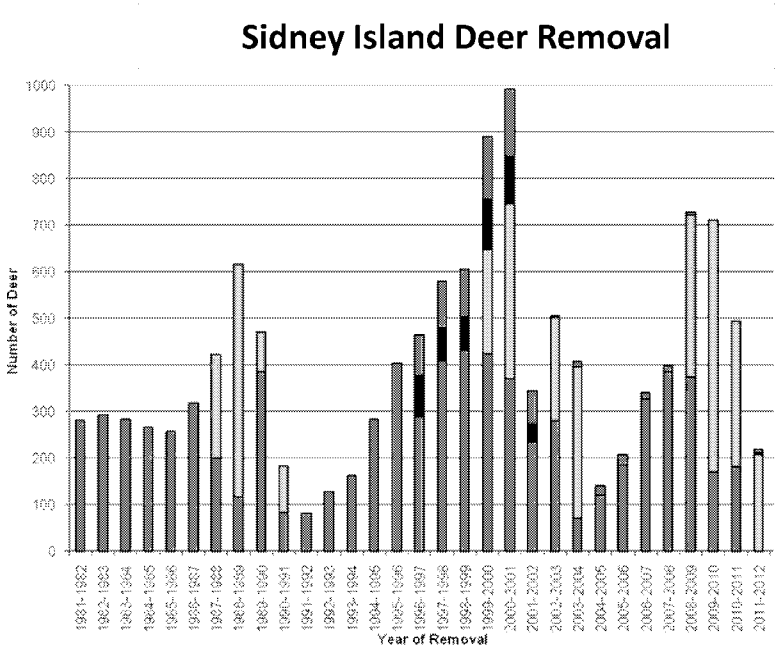
- At high densities, invasive fallow deer browse the entire forest understory, destroying critical habitat for forest-dependent songbirds
- Research and EI monitoring reveal Sidney Island has lowest levels of forest cover and diversity, and songbird abundance and richness





Previous Management Actions

- Since 1981, numerous management actions have been undertaken, including large-scale culls and First Nations traditional hunts
- Over 14,000 deer removed, but population still 400% over island's carrying capacity
- 2013 study concluded that eradication is feasible and preferred option over population control
  - *Aligns with Agency policy & direction*
  - *Cost-effective*
  - *Ecologically effective*



Consultations

- Began actively planning for forest restoration in 2016. Project supported by Conservation and Restoration program funding in April 2017

- Consultations are on-going with 10 First Nations and 1 strata council representing 80 landowners on Sidney Island
  - First Nations are aware, engaged, and supportive.

- Support of landowners not yet confirmed. They will vote in summer 2018.
  - Parks Canada currently working with landowners to provide information to support decision-making

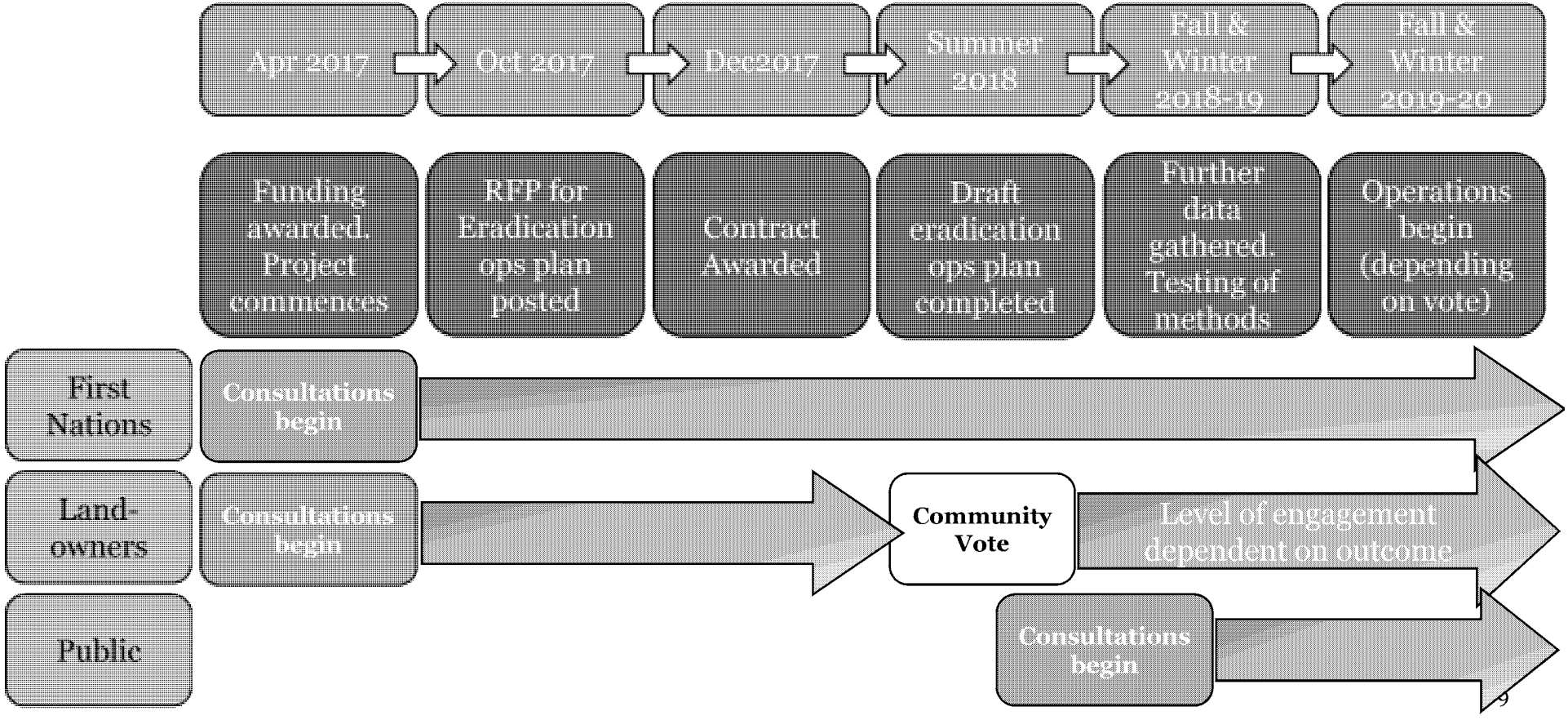
Considerations

- Landowners requested development of eradication plan prior to vote to inform decision-making and gain better understanding of impact
- Outcome of vote will be respected. Regardless of vote, Parks Canada will move forward on restoration
  - Eradication plan will include options for efforts limited to park properties
- Currently seeking contractor to develop an eradication operation plan
  - Are required to consult with landowners to ensure plan reflects community values
  - Will ensure that effective techniques respecting visitor safety, animal welfare, and meat disposal are identified

Considerations

- Past efforts to cull deer in Greater Victoria have generated significant public concern and criticism from animal welfare groups
  - Currently working with organizations such as SPCA to ensure ethical approach and to anticipate and proactively address public reaction
- Currently holding off consultations with broader public until after landowner vote.
- A communications strategy has been developed to support the initiative

Timeline & Next Steps



Proposal for:

Restoring Forest Health through Removal of Invasive Fallow Deer from Sidney Island, BC

SECTION 1: TECHNICAL BID

Solicitation Number: 5P420-17-5313/A

Submitted to:
Parks Canada Agency
Contracting Operations
635-8 Avenue S.W. Suite 1300
Calgary, AB, T2P 3M3

Submitted by:

COASTAL CONSERVATION

Contact:
Chris Gill, MSc, RPBio
Program Director
Email: chris@coastalconservation.ca
Phone: 250-253-0298

Contractor's Representative

The Contractor's Representative for the Contract is:

Representative's Name: Chris Gill

Title: Program Director

Vendor/ Firm Name: Coastal Conservation, Inc.

Mailing Address: 775 Abbington Lane

City: Tappen

Province/ Territory: British Columbia

Postal Code: V0E 2X3

Telephone No.: (250) 253-0298

Fax No.: (250) 833-1117

Email Address: chris@coastalconservation.ca

Procurement Business Number (PBN) or Goods and Services Tax (GST) Number: 846766715RT0001

Name & Title of Person Authorized to Sign on Behalf of Vendor/Firm

Name: Chris Gill Title: Program Director

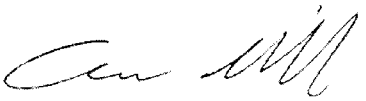
Signature:  Date: February 15, 2018

Table of Contents

Mandatory & Point Rated Technical Criteria Cross-reference

Table 1 provides section references and/or example projects that demonstrate how Coastal Conservation, Inc. meets the mandatory technical criteria identified in Annex E, Section 3, of the Request for Proposal.

Table 1. Mandatory technical criteria

Mandatory Technical Criteria	Section Reference or Example Projects
3.1 The bidder must provide three relevant project examples, including a brief summary of each project no more than two (2) pages in length in demonstration of their experience.	Section 6.2 Example projects: 6.2.1 Night Birds Returning Program Phase 1 & 2; 6.2.2 Restoring Balance Project; 6.2.3 Santa Cruz Island Feral Pig Eradication
3.2 The Bidder must have a minimum of 5 years' experience in eradication of IAS from island ecosystems from introduced wildlife species.	Section 6.1 - About Us: Technical Expertise & Qualifications; Section 6.2 - Example Projects
3.3 The Bidder must have a minimum of 5 years' experience in data collection, analysis and summarizing of technical information.	Section 6.1 - About Us: Technical Expertise & Qualifications; Section 6.2 - Example Projects
3.4 The bidder must have a minimum of 5 years' experience working with stakeholders and/or Indigenous groups on IAS eradication projects from island ecosystems.	Section 6.1 - About Us: Technical Expertise & Qualifications; Section 6.2 - Example Projects

Table 2 was developed to assist reviewers with the evaluation of this proposal against the point rated technical criteria included in Annex E, Section 4, of the Request for Proposal.

Table 2. Point rated technical criteria and section references.

Item	Evaluation Criteria	Point Criteria	Section Reference
4.1 Understanding of Requirement and Work Plan			
4.1.1	***Understanding of Scope and Objectives***		
	Bid clearly demonstrates an understanding of the scope and objectives of the work required to complete all tasks and deliverables identified in the RFP by including but not limited to the following: • Proposed Work Plan; • Approach; and • Methodology	1. Demonstrates a clear, accurate and in-depth understanding of the requirement 2. Demonstrates a very good appreciation of the work 3. Details provided are original, specific and innovative	-**1.1** Introduction -**1.2** Contract Objectives and Scope of Work -**2** Proposed Work Plan, Approach & Methodology: Ecological & Social Considerations (4.1.2) **2.1** Project Background - **4.2** Proposed Eradication Operation Phases, Methods, & Timeline - **4.4** Eradication Timing - **4.5.** Logistical Considerations - **5.5** Regulatory Policy & Compliance

4.1.2	***Proposed Work Plan, Approach and Methodology: ecological and social considerations***		
	In their proposal the bidder should demonstrate understanding ecological and social considerations and a proposed methodology to address these areas. The proposed methodology should: • outline sufficient detail to demonstrate a clear understanding of ecological restoration principles; • present, scientifically sound and logistically reasonable methods of Invasive Alien Species (IAS) eradication and control of ungulate species from island ecosystems; • an understanding of community, stakeholder, and First Nation rights and perspectives	1. Demonstrates a superior understanding of ecological principles, logistical challenges, stakeholder perspectives, unique challenges of island ecosystems, and methods for ungulate eradication and control 2. Demonstrates a creative and innovative approach and methodology, coherent with in-depth and specific details provided. no deficiencies exist 3. Demonstrates appreciation of anticipated challenges and risk mitigation with keen insight regarding methods and principles and creative options for resolution	**Section 2** Proposed Work Plan, Approach and Methodology: Ecological and Social Considerations - **2.1** Project Background - **2.1.4** – Stakeholder perspectives - **2.2** Eradication Theory and Techniques, including proven and unproven methods to eradicate deer - **2.3** Ecosystem Recovery Monitoring **Section 3.1.1** Socio-political challenges **Section 5**: Partner Collaboration
4.1.3	***Proposed Work Plan, Approach and Methodology: risk management***		
	In their proposal the bidder should demonstrate understanding risk management and an approach for risk management to mitigate such risks. The proposed risk management approach should: • propose an approach based on sound principles and methods for risk management; • include risk management for non-native species and ecosystem components; • identify logistical and environmental risks, and other project risks	1. Demonstrates a creative and innovative approach to managing risk with in-depth and specific details provided; no deficiencies exist 2. The approach to risk identification and management is well structured and coherent, great details are provided 3. Demonstrates a clear and in-depth understanding and appreciation of risks with detailed options for resolution, including creative options for mitigation and management	**Section 3** Proposed Work Plan, Approach and Methodology: Risk Management - **3.1** Potential Challenges Associated with Fallow Deer Removal - **3.2** Island Biosecurity

4.1.4	***Proposed Work Plan, Approach and Methodology: operational considerations***		
	In their proposal the bidder should demonstrate understanding of operational considerations and a proposed approach to address these. The proposed operational considerations should include: • an appropriate work plan, • timelines for completion of the work. • outline appropriate resources and their capabilities • logistical considerations • risk mitigation	1. Clear, in-depth work plan with specific details provided, no deficiencies exist 2. Level of effort and availability of logistics and resources was well detailed and outlined for all of the tasks 3. Appropriate timelines and clear understanding and appreciation of anticipated problems with creative options for resolution 4. Demonstrates in-depth understanding of logistical and resource requirements, capabilities, and limitations	Section **4** Proposed Work Plan, Approach and Methodology: Operational Considerations - **4.1** Site Visit, Meetings & Reviews - **4.2** Eradication Operation Phases & Methods - **4.3** Proposed Baseline Research and Trials - **4.4** Eradication Timing - **4.5** Logistical Considerations (personnel needs, data collection and reporting, meat recovery) **Section 3** Proposed Work Plan, Approach and Methodology: Risk Management - **3.1** Potential Challenges Associated with Fallow Deer Removal - **3.2** Island Biosecurity
4.1.5	***Proposed Work Plan, Approach and Methodology: partner collaboration***		
	In their proposal the bidder should demonstrate understanding of partner collaboration and a proposed approach to address these. The Bidder should demonstrate: • a commitment to work in close consultation and collaboration with the Parks Canada Agency (PCA) during project planning and in field operations. • an understanding of applicable federal and provincial regulations, directives and policies for natural and cultural resource management.	1. Demonstrates a clear, accurate and in-depth understanding of the regulatory and policy requirements and commitment. No deficiencies exist. 2. Excellent detail demonstrating effective performance measures and capability in partner collaboration to meet the complete requirement. 3. Details regarding collaboration with PCA provided are original, specific and innovative.	**Section 5**: Partner Collaboration **Section 6.2**: Example Projects

4.2 Project Team Experience			
4.2.1	Bidder should demonstrate their experience in eradication of IAS from island ecosystems from introduced wildlife species. The bidder must provide three relevant project examples, including a brief summary of each project no more than two (2) pages in length in demonstration of their experience. The examples provided should: • be of similar scope and scale of this project. • demonstrate successful track record of ungulate eradication and control of IAS from island ecosystems. NOTE: For the purpose of this evaluation the definition of successful track record is 75% or more of ungulate eradications projects, if failed, for reasons resulting outside of the control of the contractor.	5 years' experience or more in eradication of IAS from island ecosystems, solely with introduced ungulate populations.	**Section 6.1**: About Us: Technical Expertise & Qualifications **Section 6.2**: Example Projects
4.2.2	Bidder experience in data collection, analysis and summarizing of technical information.	More than 5 years of experience in data collection, analysis and summarizing of technical information that specifically includes introduced ungulate populations	**Section 6.1**: About Us: Technical Expertise & Qualifications
4.2.3	Bidder experience working with stakeholders and/or Indigenous groups on IAS eradication projects from island ecosystems.	More than 5 years of experience working with stakeholders and/or Indigenous groups on IAS eradication projects from island ecosystems that includes introduced ungulate populations.	**Section 6.1**: About Us: Technical Expertise & Qualifications

1 Scope and Objectives (4.1.1)

1.1 Introduction

Introduced invasive vertebrates, including herbivores, are one of the most significant threats to insular ecosystems globally and have impacted islands for more than a century, leading to numerous plant extinctions and negative effects on native wildlife (Wallace 1892, Melville 1979, Ebenhard 1988, Donlan, Tershy, & Croll 2002, Courchamp, Chapuis, & Pascal 2003). Altered species composition is a common attribute of mammalian herbivore–plant interactions in many island ecosystems and frequently occurs with the introduction of non-native herbivores (Donlan, Tershy, & Croll 2002). An overabundance of foraging non-native herbivores can reduce seedling density and sapling growth, preventing natural tree regeneration; reduce understory vegetation leading to the alteration of plant community composition and dominance of less preferred, more browse tolerant species; and spread introduced invasive plant species.

Plant biomass, species richness, and insect diversity are all interconnected; thus, the direct alteration of one will indirectly affect the others. The detrimental effects of an invasive herbivore on native plant life and communities in turn instigate cascading effects on soils, invertebrates, birds, and mammals (Donlan, Tershy, & Croll 2002, Courchamp, Chapuis, & Pascal 2003, Allombert, Stockton, & Martin, 2005, Allombert, Gaston, & Martin 2005, Campbell & Donlan 2005, Stockton et al. 2005, Gaston, Stockton, & Smith 2006, Manuwal & Sweitzer 2007, Martin, Arcese, & Scheerder 2011). Consequently, changes to species compositions leads to altered ecosystem states, eventually affecting entire ecosystem processes (e.g., nutrient cycling; Donlan, Tershy, & Croll 2002).

Despite the dramatic changes that occur, shifts in plant species and communities on islands can be reversed through the complete eradication of introduced herbivores (the complete removal of the target species population from the project island; Donlan, Tershy, & Croll 2002, Veitch, Clout, & Towns 2011).

This proposal outlines the approach and strategy that Coastal Conservation will employ to support Parks Canada Agency's (PCA) efforts to successfully eradicate introduced fallow deer (*Dama dama*) from all or part of Sidney Island, British Columbia, if this option is subsequently supported by PCA, Sidney Island landowners, and First Nations.

In the sections that follow, a proposed work plan, approach, and methodology are presented that address the project objectives while acknowledging the ecological, socio-political, and logistical challenges presented by an eradication of this nature. Innovative strategies are presented to ensure success while employing proven, scientifically sound, and logistically reasonable ungulate eradication methods; engaging with and including stakeholders and First Nations; and anticipating and mitigating associated risks.

1.2 Contract Objectives and Scope of Work

The long-term conservation outcome/goal of this project is to permanently eliminate grazing pressure from introduced invasive fallow deer on Sidney Island. The elimination of grazing pressure will enable the natural regeneration of native and endemic herb, shrub, and tree layers. Regeneration of the forest will, in turn, create a "bottom up" effect by increasing habitat quality and quantity for invertebrate, land

birds, seabirds, and native mammal populations, resulting in the return of a naturally functioning ecosystem.

The scope of work includes the provision of scientific and technical advice for the possible eradication of fallow deer to restore the ecological health of Sidney Island. This will include:

a) developing a Scoping Document that includes background information; goals & objectives; possible methods for fallow deer eradication including advantages, disadvantages, and risks for each; recommended methods for eradicating deer from the whole of Sidney Island, as well as methods for the portion of Sidney Island under Parks Canada jurisdiction; proposed trials to confirm efficacy of recommended techniques; key logistical considerations for implementing an eradication operation; First Nations and community considerations; fallow deer census techniques; recommended pre-implementation trials and experiments; recommended approaches to manage the native black-tailed deer (*Odocoileus hemionus columbianus*) population; estimated budget based on methods recommended for full and partial eradication; and regulatory considerations. This proposal and the Sidney Island Feasibility Plan (Coastal Conservation and Native Range 2012) that was developed for GINPR can be used as a starting point for this document. Please refer to **Appendix 1. Sidney Island Feasibility Plan** for additional information. Recommended pre-implementation trials and experiments have been outlined in this proposal (please refer to **Section 4.3 Proposed Baseline Research & Trials**).

b) developing a detailed operational plan to guide a full or partial eradication of fallow deer eradication on Sidney Island if this option is subsequently supported by Parks Canada, landowners, and First Nations. The plan would include the following major headings, as per Solicitation Number 5P420-17-5313/A: background, goals and objectives, site description, project management, partners & stakeholders, possible removal operations, recommended actions to support successful fallow deer eradication, deer population monitoring, prevention of fallow deer recolonization, logistics, and detailed budget. Coastal Conservation has developed several operational plans for the removal of IAS from island ecosystems including the eradication of invasive deer. Please refer to **Section 6.2.1 and 6.2.2 Example Projects**, Night Birds Returning Program Phase 1 & Phase 2 and Restoring Balance project.

c) assisting with the development of partnerships or letters of support from key organizations and stakeholders with interest and/or responsibility for fallow deer on Sidney Island, including (but not limited to): Government of BC (Forest, Lands, and Natural Resource Operations), Sallas Forest Strata Corporation, Islands Trust, and the BC SPCA. Coastal Conservation has previously met with each of these organizations regarding fallow deer management on Sidney Island. Please refer to **Section 2.1.4 Stakeholder Perspectives Regarding Fallow Deer Management on Sidney Island** for additional information.

d) assisting PCA with First Nations engagement, including attending at least two meetings with each of Parks Canada's Aboriginal consultative committees at GINPR (currently 2 committees). Chris Gill, Program Director for Coastal Conservation, has more than ten years of experience working closely with numerous First Nations organizations on wildlife projects in British Columbia including the Haida Nation during the 2011-2013 Night Birds Returning program and 2017 Gwaii Haanas Restoring Balance project (please refer to **Section 6.2 Example Projects** for additional information). This experience will be an asset during First Nations engagement during the project.

e) in cooperation with PCA staff, determining necessary permitting requirements additional to internal PCA permits, which may include: necessary provincial permits; exemptions for recommended eradication techniques; animal care and welfare; and exemptions for low-level helicopter flights within airspace of Victoria airport. Since 2010, Coastal Conservation has assisted government agencies, including PCA, with identifying and obtaining permits, certifications, and exemptions required to carry out IAS eradications. Please refer to **Section 6.2.1 and 6.2.2 Example Projects**, Night Birds Returning program phase 1 & 2, Restoring Balance project for additional information.

f) undertaking two site visits (one day each) to Sidney Island to aid in development of the operational plan. *NOTE: if it is amenable to PCA, rather than two separate site visits, as detailed in the Request for Proposal, we recommend that an eradication expert meeting is combined with a site visit (please refer to* ***Section 4.1.1 Strategic Technical Planning Meetings & Site Visits*** *for additional information).* Please note that the site visit does not include undertaking the recommended pre-eradication trials and experiments that are outlined in **Section 4.3 Proposed Baseline Research & Trials.**

g) participating in three planned workshops with Sallas residents and other stakeholders: one workshop in March 2018 in Vancouver, BC; one workshop in March 2018 in Sidney, BC; and one workshop in July 2018 on Sidney Island. Coastal Conservation has previously met with Sallas residents on several occasions and with other stakeholders regarding hyperabundant fallow deer on Sidney Island including but not limited to representatives from Islands Trust, BC SPCA, and the BC Government. Coastal Conservation is experienced with working on multi-disciplinary teams and island eradication projects. This includes the successful implementation of large scale eradication projects that have been highly controversial with high social and political conflict, including overcoming legal challenges and attempts at project sabotage, and supporting government partners in very contentious public meetings. Our staff have received training Conservation Conflict Transformation skills (CCT) and processes and have successfully applied these skills on many projects. Please refer to **Section 6.1 About Us: Technical Expertise & Qualifications** for additional information.

Based on Coastal Conservation's long history of successful project collaboration with PCA (2010 to present for projects in Gwaii Haanas and the Sidney Island fallow deer project) and our significant experience with planning and implementing all aspects of large-scale and complex island eradication operations for a variety of invasive species including deer, we believe that our organization and its partners are extremely well suited to maximizing the probability of successfully planning a fallow deer eradication operation on Sidney Island.

2 Proposed Work Plan, Approach & Methodology: Ecological & Social Considerations (4.1.2)

2.1 Project Background

2.1.1 Project Site Description

2.1.1.1 Physical Environment

Sidney Island is situated in the Southern Gulf Islands just east of the Saanich Peninsula (Vancouver Island, Figure 1). The island is made up primarily of marine sands and clays and is an artifact of glacial outwash materials deposited in the area approximately 12,000 years ago. The vegetation is comprised of second growth coastal Douglas fir forests fringed by Garry oak and arbutus woodlands and coastal bluffs. With the exception of several small dugout ponds, there is no significant source of surface water on the island. Considerable clearing and pasture seeding has occurred in the past, resulting in large open meadow areas interspersed throughout the island. The coastline is dominated by sand beach with a rocky shoreline south of Miner's Bay on the eastern and southern shores. There is a large lagoon and spit complex to the northwest known locally as Sidney Spit.

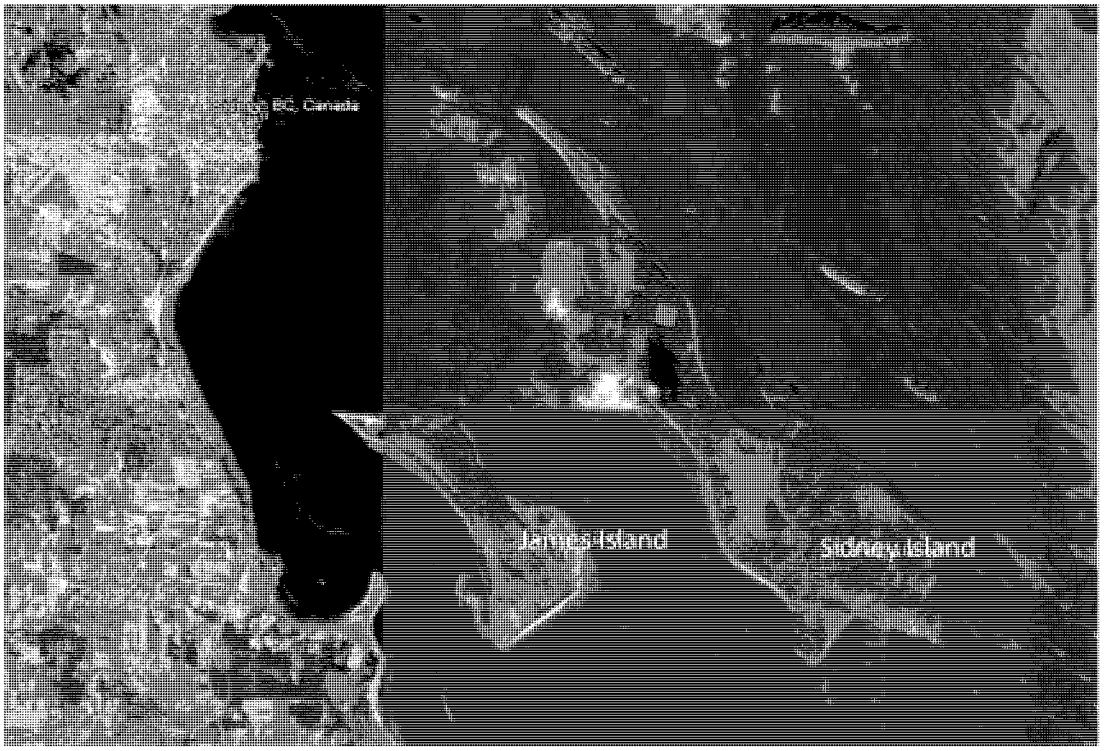


Figure 1. Sidney Island, British Columbia, is located east of the Saanich Peninsula on Vancouver Island and adjacent to James Island.

2.1.1.2 Human Environment

Pre-contact, Coast Salish First Nation communities established camp settlements as well as sacred cultural sites and used areas of Sidney Island for hunting, fishing, harvesting seafood and plants (Golumbia, Mercer, & Hobson, 2011). Following European contact, the Hudson Bay Company operated the island as a farm, and in the early 1900s, Sidney Island was used as a private hunting club. Brick works

operations occurred on the north end of the island into the 1930s, around the same time that fallow deer were introduced, and the southern part was managed as a sheep farm until the late 1960s (Golumbia 2008, Golumbia, Mercer, & Hobson 2011).

Today, Sidney Island is managed under two jurisdictions. Gulf Islands National Park Reserve (GINPR), located at the northern end of the island, comprises approximately 120 ha (14%) of the island. The remaining 715 ha is owned by private residents through the Sallas Forest Strata Corporation (herein referred to as "Sallas").

2.1.2 Impacts of Fallow Deer on Sidney Island

In the 1930s, fallow deer were intentionally introduced to Sidney Island, British Columbia (Golumbia 2010). This non-native, hyperabundant species is a grazer, eating predominately grasses during most of the year and increasing intake of forbs during times of low forage availability. As a result, a many rare native species and ecosystems on Sidney Island are being threatened (Golumbia 2008, Golumbia, Mercer, & Hobson 2011). Foraging pressure from introduced deer can cause a chain reaction of deleterious effects on ecosystems through habit loss and decreased food availability for birds and terrestrial invertebrates, thus causing a decrease in species diversity and abundance (Golumbia 2010). Degradation and alteration of habitat impacting native species on Sidney Island is directly related to fallow deer browsing; mitigating and/or eliminating the effects of these invasive deer is critical to the recovery of biodiversity and ecological integrity on Sidney Island (Golumbia 2008). Please refer to **Appendix 1: Sidney Island Feasibility Plan** developed by Coastal Conservation for GINPR, for specific information regarding fallow deer impacts on Sidney Island.

2.1.3 Previous Fallow Deer Management Activities on Sidney Island

Both PCA and Sallas share a vested interest in managing fallow deer populations on Sidney Island. Sallas has conducted deer management activities since 1981 including: recreational and commercial guided hunting, live trapping and off-island relocation, and capture and culling (Sallas Forest Strata Corporation 2009).

Two main periods of fallow deer management occurred on Sidney Island. The first period of deer management occurred from 1981 to 2003 and involved independent management of the fallow deer population by Sallas (live capture and shipping, guided hunting and independent hunting) as well as limited entry hunting in the park portion of the island that was independent of the Sallas deer management activities (T. Golumbia pers. comm. 2011).

The second period of deer management, which began in 2004 and is ongoing, has been collaborative management between PCA and Sallas. This included the establishment of an advisory group of experts and is an objective-driven deer reduction. Between 2004 and 2008, PCA set up an ecosystem monitoring program (please refer to **Section 2.3 Ecosystem Recovery Monitoring** for additional information) and Sallas redesigned and rebuilt their deer capture facilities. Between 2009 and 2012, the short-term goal was an 80% reduction in the fallow deer population using an aggressive capture and cull program augmented by increased hunting pressure and capture/cull operations on the remaining park population (using the Sallas capture facility). This initial reduction was intended to initiate the natural restoration of the ecosystem and provide the advisory group with time to assess future fallow deer management options such as continued control or eradication.

Between 1981 and 2012, efforts to control the fallow deer population have resulted in the removal of over 11,000 deer from Sidney Island. This number is likely an underestimation of deer removed, as it does not include unreported mortality, poaching, and natural mortality (Sallas Forest Strata Corporation 2009, Golumbia 2010, Coastal Conservation and Native Range 2012).

In 2012, PCA contracted Coastal Conservation to develop a plan to investigate the feasibility of eradicating fallow deer from Sidney Island (please refer to **Appendix 1: Sidney Island Feasibility Plan** for additional information). The feasibility plan provided a detailed overview of introduced herbivores' impacts on island ecosystems, a comparison of control versus eradication, a discussion of the methods currently used to eradicate ungulates from islands, project goals, predicted outcomes (both positive and negative), potential challenges associated with fallow deer removal, a recommended approach to eradicate fallow deer from Sidney Island, potential impacts and mitigation of risk to non-target species, regulations and compliance issues relating to the project, public outreach/engagement, biosecurity recommendations, and an estimated budget to eradicate the deer. The plan provided PCA with a high level decision-making tool to guide the next steps in the Sidney Island restoration program including the challenges and costs associated with undertaking the eradication. Coastal Conservation participated in several meetings that were held following release of the plan, including presentations and discussions with Sallas to review the options surrounding fallow deer management.

2.1.4 Stakeholder Perspectives Regarding Fallow Deer Management on Sidney Island

The eradication of fallow deer from Sidney Island is feasible with effective planning and the use of a highly experienced eradication team employing a host of proven techniques. However, the success of the project is also critically dependent on stakeholder support for the project. Since 2011, Coastal Conservation has been involved in numerous discussions concerning fallow deer management on Sidney Island with community members and stakeholders including PCA, Sallas, individual Sidney Island residents, Islands Trust, BC Government (Forest, Lands, and Natural Resource Operations), and the BC Society for the Prevention of Cruelty to Animals (SPCA). Based on these conversations, Coastal Conservation believes that the project is supported by PCA, the BC Government (S. Pendergast pers. comm. 2011-2017), and Islands Trust (J. Ralph pers. comm. 2011). The SPCA is aware of the project and initial introductions/discussions between GINPR representatives and this organization took place in the summer of 2017 via Coastal Conservation. The SPCA has previously acknowledged the need for invasive deer management activities and supports these actions if humane methods are used to euthanize deer (S. Dubois pers. comm. 2017 regarding the 2017 Gwaii Haanas Restoring Balance project). We recommend that PCA invites the SPCA to review documentation relating to the eradication operation with the goal of obtaining an official letter of support from this organization for the project.

Based on several face-to-face meetings with official Sallas representatives, as well as individual private land owners (M. Parfitt pers. comm. 2016), there appears to be a general understanding of the benefits of removing fallow deer from Sidney Island. However, it is unlikely that all residents of Sidney Island support the project for different reasons (please refer to **Section 3.1 Potential Challenges Associated with Fallow Deer Removal** for additional information). Therefore, it is critical to continue engagement with Sallas as well as individual private landowners to determine the level of support. This will influence the decision to conduct the eradiation on the entire island or restrict it to GINPR lands.

The Coast Salish First Nations have strong connections to Sidney Island and to the Gulf Islands as a whole. They continue to pursue traditional activities within the park, including undertaking an annual

fallow deer hunt in the Sidney Spit day use area (Golumbia, 2010). Although fallow deer were not part of the traditional diet of the Coast Salish First Nations, the annual hunt has become part of their culture. The eradication of fallow deer from Sidney Island will bring an end to the annual hunt, which may result in opposition to the project. However, providing the Coast Salish First Nations with deer meat harvested during the operation (please refer to **Section 4.5.3 Meat Recovery** for additional information) and discussing the benefits to culturally important wildlife and plants following deer removal may help to secure their support for the project. This strategy was successfully employed for the 2017 Gwaii Haanas Restoring Balance project (please refer to Please refer to **Section 6.2.2 Example Projects**, Restoring Balance project for additional information).

2.2 Eradication Theory & Techniques

2.2.1 Maximizing the Probability of Success

Although every invasive species eradication operation is different, there are fundamental rules that can maximize the probability of removing 100% of the target population (from Cromarty et al. 2002, Parkes et. al. 2002):

Rule 1: All individuals in the target population must be put at risk by the techniques employed during the eradication operation. This rule determines the tactics that must be employed.
Rule 2: The target population must remain naive to the eradication techniques while the population is being reduced.
Rule 3: Individual animals must be killed at rates faster than their rate of increase at all densities. This rule determines the likely intensity and length of the campaign.
Rule 4: The risk of re-colonization must be zero, or as close to zero as possible.
Rule 5: The local regulatory, social, and economic conditions must be conducive to meeting Rules 1–4.

For an invasive deer eradication these rules can be broken down into four main objectives:

1. Rapid knockdown
2. Follow up (target any remaining animals)
3. Confirmation (ensure all target animals have been removed)
4. Long-term monitoring (biosecurity)

In addition, the methods used should be humane and ethical, and must comply with the relevant local and federal regulations or guidelines (e.g., PCA Animal Care Committee permit, Canadian Council on Animal Care standards). Multiple techniques are often needed, and rarely can one technique alone achieve eradication success for larger animals such as deer. In most cases, specific detection and eradication techniques must be employed in concert to remove the last few animals and to confirm that the eradication is complete.

Careful planning and preparations, well in advance of the eradication operation, can reduce the probability of eradication failure caused by educating the target animal, an inability to detect the target animal at low densities, or funding and/or legal challenges that may terminate a project (either temporary or permanently) prior to completion. The most successful eradications are typically over-engineered, employ adaptive management strategies, have a short timeline for implementation (weeks or months, rather than years), and are resourced (funding and personnel) accordingly.

The success of an eradication operation is closely tied to effective project management (including defined goals and adaptive management) and rapid implementation and completion. These aspects of the project will maximize the probability of removing 100% of the target population while limiting the impact of common obstacles that can prematurely halt a project, such as funding or legal restrictions and socio-political concerns. A short timeframe for project completion will also reduce the influence of population replacement on the project, reducing, in turn, the total number of animals that ultimately must be removed from the island (increased efficiency; Morrison 2008). If the project duration is long (e.g., years), vegetation will begin to recover and provide an abundant food source for the remaining deer, which may make some eradication methods such as baiting less effective.

Following the completion of a successful eradication operation, the implementation of a well-designed biosecurity plan ensures that immigration of the target species to the project island is maintained at or near zero. The plan must enable the organization responsible for the management of the island to detect and quickly respond to any potential reinvasion (please refer to **Section 3.2 Island Biosecurity – Protecting the Investment** for additional information).

2.2.2 Proven Methods for Deer Eradication or Control

In recent decades, eradication campaigns have seen considerable advances in strategies and tactics for achieving eradication goals (Veitch et. al. 2011). While ground hunting is the primary method employed for eradicating ungulates from islands, many projects augment it with one or more of the following methods: Judas animals (Campbell et al. 2005), trained indicator and bailing dogs (McIlroy and Saillard 1989, Cruz et al. 2005), aerial hunting by helicopter (Macdonald and Walker 2006), or toxicants such as 1080 (Fraser et. al. 2003).

The use of a professional hunting team is critical to the success of the project because they have the knowledge and skills to employ a range of proven, non-traditional eradication techniques, applying them systemically at the appropriate population density with the overarching goal of keeping the target species naive at all population densities (e.g., Macdonald and Walker 2006). Professional hunting teams are also specifically trained to plan how the last animal will be removed well before the first is even approached. These teams utilize an adaptive management approach to quickly respond to changes in animal behaviour as a result of hunting pressure, technique, or varying conditions on the target island (e.g., Macdonald and Walker 2006).

2.2.2.1 Ground Hunting

There are a range of ground hunting techniques that can be employed by professional hunting teams depending on the target IAS and conditions present on the island (e.g., topography, vegetation). A strategic approach is to use a combination of techniques that are appropriate for the population density and apply them in a manner that avoids educating the target animal while the population is being reduced. The success of a ground hunting operation will depend on the use of extremely skilled and motivated professional hunters with expertise and experience in eradication operations.

Professional hunters use low calibre firearms (e.g., .223)[1] fitted with noise suppressors. These have many benefits for ungulate eradication operations compared to larger calibre firearms, including increased accuracy; reduced recoil (by up to 40%), which in turn improves accuracy and reduces shooter

[1] The firearm calibre selected for the eradication must be high enough to consistently and humanely kill the target animal.

fatigue; reduced disturbance of groups of target animals; and more humane culling (MacCarthy et al. 2011). Most critically, the use of lower calibre firearms and noise suppressors allows for naivety in the target population to be maintained as animals will quickly become wary of loud muzzle blasts. Lower calibre firearms with noise suppressors also minimize disturbance to native species (e.g., nesting birds).

2.2.2.1.1 Stalking

Stalking is a common method for recreational hunting; a lone hunter walks through the area and shoots any deer encountered. This technique is not generally used for eradication operations because it has a low success rate at medium to high population densities (i.e., if more than one deer is encountered there is a high probability that the other deer will escape and become educated to the eradication technique) and a low probability of detection at low population densities (i.e., low encounter rates/low return on investment). Stalking was trialed during the Gwaii Haanas 2017 Restoring Balance project but was deemed ineffective.

2.2.2.1.2 Line or Team Hunting

During line hunting, a team of professional hunters, positioned a specific distance apart, systematically walk through an area in a line on the target island and dispatch any deer that they encounter. This method can be successful when target species densities are high, but success rates quickly decline as the population is reduced due to lower encounter rates. There is also a high likelihood of educating animals and the technique requires multiple support personnel; therefore, the return on investment is generally low. Furthermore, deer are generally too wary for this to be an effective eradication technique (N. Macdonald pers. comm. 2015), although line drives using at least one trained hunting dog, several support personnel, and fencing to guide animal movement was considered moderately effective at targeting deer on Murchison Island in Gwaii Haanas during the 2017 Restoring Balance project.

2.2.2.1.3 Bait Station Hunting

Using a highly attractive bait (e.g., whole kernel corn, dried apple) to draw deer to a specific site is a critical tool that can maximize the probability of encountering and dispatching individuals during an eradication operation without educating other animals. Bait stations are generally distributed on the project island so that there are 2 to 3 bait stations per average deer home range and are pre-baited prior to the eradication operation to elicit a conditioned response from the deer (T. DeNicola pers. comm. 2018). The stations are strategically placed to provide the marksman with a clear shot at deer attracted to the station while taking into consideration wind direction (scent drift) and other factors that might influence shooter success.

Whenever possible, bait stations are replenished by people (not mechanical feeders) to further condition the animals to human scent and activity and associate humans with food, not threat (T. DeNicola pers. comm. 2018). The bait stations are replenished at the same time of day using the same approach and method to further condition the animals. Remote cameras should be used to monitor deer usage of the bait stations to maximize the effectiveness of bait station shooting.

This technique was employed during the 2017 Gwaii Haanas Restoring Balance project (Please refer to **Section 6.2.2 Example Projects**, Restoring Balance project).

2.2.2.1.4 Hunting with Trained Dogs

Because of their keen sense of smell and ability to search large areas in a relatively short amount of time, trained dogs working with professional hunters/handlers have the highest probability of detecting animals at low densities compared to other detection techniques (e.g., remote trail cameras) and are

considered an essential tool for any ungulate eradication operation. Trained dogs are utilized during the later stages of the eradication, when only a few target animals remain on the project island, so that individual animals can be targeted. Trained dogs can also be used to confirm eradication success.

Dogs have been successfully used during deer, pig, and goat eradications globally, including the 2017 Gwaii Haanas Restoring Balance project (Please refer to **Section 6.2.2 Example Projects**, Restoring Balance project), Secretary and Resolution islands (New Zealand) deer eradication and the Santa Cruz Island (USA) feral pig eradication (Please refer to **Section 6.2.3 Example Projects**, Santa Cruz Island Feral Pig Eradication project; Smith et al. 2001, Morrison et al. 2007). The success of this technique is highly dependent not only on the abilities of the dog to detect deer but also the cohesiveness and experience of the dog/handler team.

Two types of dogs are often used for deer eradications: indicator and bailing dogs. Indicator dogs work near the dog handler/professional hunter, tracking deer and identifying the location of the animal to the handler (pointing). In contrast, bailing dogs are trained to actively pursue a deer, either by scent or visually, until they come into direct contact with the animal. Once in contact the dog will eventually "bail" the animal (i.e., prevent it from fleeing and bark repeatedly to alert the hunter to its location). Using highly trained bailing dogs and systematically covering the island (ensuring there are no gaps in the coverage) can result in a very high probability of detecting the target species, even at low population densities. Bailing dogs are only incorporated into an eradication operation when deer densities are extremely low. Bailing dogs cannot be used on islands where more than one deer species is present but only one is being targeted for removal, as is the case with Sidney Island. However, indicator dogs should be trialed to assess their efficacy on Sidney Island (please refer to **Section 4.3 Proposed Baseline Research & Trials** for additional information).

Each dog is fitted with a radio collar so their location can be monitored, either on the ground or from the air and their track recorded to show where they have searched. Once a target animal has been bailed, it can be humanely dispatched by the ground hunting team or by aerial hunting (please refer to **Section 2.2.2.2 Aerial Hunting** for additional information).

2.2.2.1.5 Spotlight and/or Forward Looking Infrared Hunting

Deer are often more active at night and can be detected by taking advantage of the distinctive 'eye shine' that is characteristic of this species when seen in a high-powered spotlight or by body heat signatures that can be seen when using a Forward Looking Infrared (FLIR) device. When properly employed, deer do not associate the spotlight or FLIR with risk and can thus be quickly dispatched. However, this technique has the potential to educate animals standing nearby, which can be a risk to eradication success, and there is inherent risk when shooting at night (personnel safety). Spotlight/FLIR hunting is generally more suitable to open areas. Furthermore, it may be challenging to rapidly differentiate native Sitka black-tailed deer from fallow deer on Sidney Island during night hunting, therefore, this technique should be trialed prior to incorporating it into the operational plan (please refer to **Section 4.3 Proposed Baseline Research & Trials** for additional information).

Boat hunting (circumnavigating the project island by boat and dispatching animals found on the shore) was used during the 2013 deer cull on Murchison and Faraday islands prior to the black rat eradiation (Parks Canada Agency 2013) and during the 2017 Restoring Balance project (Please refer to **Section 6.2.1 and 6.2.2 Example Projects**, Night Birds Returning Program and Restoring Balance project).

2.2.2.2 Aerial Hunting

Aerial hunting from helicopters is a proven and cost-effective method of rapidly removing ungulates from islands (Carrion et al. 2007, Cruz et al. 2009). This technique is employed after the initial population reduction phase (please refer to **Section 4.2.2 Phase 2: Implementation - Intensive Population Reduction** for additional information) and targets individual deer or small groups of animals. Efficient aerial hunting operations require a helicopter pilot with considerable experience in ungulate eradications; use of a fast, manoeuvrable helicopter (e.g., Hughes 500); an experienced professional aerial hunter; and the use of preferred firearms (e.g., 0.223 calibre firearms including but not limited to the AR15).

When deer densities are extremely low, aerial hunting is used in combination with ground hunting (e.g., dog hunting) to maximize the probability of success. The aerial hunter and ground hunting teams are in constant communication via VHF radio during hunting sorties. The aerial hunter is also equipped to monitor the location of each hunting dog and dog handler using Garmin Astro™ GPS devices. This is critical when a bailing dog is in pursuit of a deer because it allows the helicopter pilot to anticipate the deer's direction of travel and position the helicopter where the aerial hunter may achieve a clear shot.

Aerial hunting was a very effective way to quickly reduce the deer population during the 2017 Gwaii Haanas Restoring Balance project (please refer to **Section 6.2.2 Example Projects**, Restoring Balance project). Wildlife Capture Management, Ltd., one of Coastal Conservation's partners on this proposal, has considerable experience with aerial hunting and was involved in the Restoring Balance project.

2.2.2.3 Aerial Herding

Wildlife Capture Management, Ltd., one of Coastal Conservation's partners on this proposal, has considerable experience herding wildlife including deer using a helicopter (Figure 2). Aerial herding requires a very experienced helicopter pilot who can anticipate movements of animals and a highly maneuverable helicopter. Aerial herding is best suited for social species such as fallow deer and in areas with natural and man-made openings like those found on Sidney Island. The helicopter and ground personnel drive groups of animals towards a corral or funnel shaped trap that is constructed of see-through netting or other material. Once the animals are inside, the sides of the corral/trap are covered so they appear solid to reduce stress on the animals. The deer inside the trap can then be dispatched with close-range head shots from a small calibre rifle (.223) by experienced marksmen (Golumbia 2010) or by other methods commonly used by commercial abattoirs (e.g., captive bolt guns). Any native black-tailed deer (*Odocoileus hemionus columbianus*) captured during aerial herding would be released.

Figure 2. Wildlife Capture Management, Ltd. pilot Mike Reed herding elk in the Yukon (credit: Wildlife Capture Management)

2.2.2.4 Judas Animals

A common reason for unsuccessful eradication attempts is the failure to remove the last animals because of an inability to detect them at low population densities. The Judas animal method, which exploits the social nature of many ungulates such as fallow deer, can be 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 sterilized deer (usually females administered with estrogen boosters, K. Campbell pers. comm. 2018) are fitted with radio telemetry collars and released to seek out and/or attract other deer. The Judas deer are then tracked, either on foot or by helicopter, and any accompanying deer are killed. The Judas deer are left to seek out other animals and are checked on a regular basis. The Judas animal technique has been used successfully for several ungulate eradications (Campbell et al. 2005, N. Macdonald pers. comm., 2015). On San Clemente Island, California, where more than 29,000 goats were removed, a combination of trapping and helicopter shooting failed to remove the remnant population. The utilization of Judas goats finally enabled the removal of the last 263 individuals (Keegan et. al. 1994). The Judas animal technique was also used during the successful eradication of feral pigs from Santa Cruz Island, California, a project implemented by partner organizations Native Range, Inc. and White Buffalo, Inc. (please refer to **Section 6.2.3 Example Projects**, Santa Cruz Island Feral Pig Eradication).

2.2.2.5 Trapping

Trapping animals using temporary walk-in traps, drop nets, funnels, or corrals may be utilized early in an ungulate eradication operation to reduce the population, especially if meat recovery is a goal of the project. If done properly, trapping has a low likelihood of educating any animals that are not caught. However, trapping requires a significant infrastructure (equipment and personnel effort) and can be expensive to implement. To be effective, an extensive network of traps must be established across the target island and regularly monitored. This technique is most suitable on islands with minimal

vegetation cover (open areas) and simple topography, and with animals that have not been previously exposed to trapping efforts.

2.2.2.6 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 1983, 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).

The use of toxicants to eradicate deer from islands comes with the added risk of exposing and harming individuals of non-target species (e.g., 1080 is extremely toxic and not species specific), thus toxicant use requires careful planning and testing prior to being incorporated into an eradication operation. There are also social and legal issues with the use of toxicants for IAS control. For example, 1080 is currently only approved for use in the provinces of Alberta and Saskatchewan to control coyotes (Health Canada 2018). A product registration application to the Pest Management Regulatory Agency (PMRA) would therefore be required before this eradication technique could be considered for deer eradication on Sidney Island. Coastal Conservation has partnered with industry to work with the PMRA to secure registrations for bait products for conservation purposes. The legal process for registration can be complex but it is navigable if the benefits outweigh the risks and the product use is tightly controlled under professional settings such as for conservation purposes by a federal land management agency (e.g., PCA).

2.2.3 Currently Unproven Methods for Deer Eradication or Control

2.2.3.1 Contraception

Several approaches to large mammal contraception have been explored, including surgical sterilization, hormone implants, and immunocontraception (vaccination; Fraker and Schwantje 2011). Surgical sterilization requires the capture of deer, a general anaesthetic, and sterile surgical techniques 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). Hormone implants must be replaced frequently 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., ungulate management on islands) and many vaccines are still in the experimental phase. The most tested approach uses PZP (pig *zona pellucida*) proteins to produce antibodies that attach to the surface of the eggs of treated females and prevent sperm from fertilizing the eggs; 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 (treatments also need to be repeated), which is generally not financially or logistically feasible for large populations. 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 only 20–25 does is 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 technique 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 would need to be held until the entire population is caught, which is problematic in itself. Because the captured animals are wild, it is arguably less humane to hold the 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.

2.2.3.2 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). For the most part, biological control is irreversible, and it is therefore critical that all potential consequences are adequately considered beforehand. Currently, biological control is only permitted for insects and plants in Canada.

2.2.4 Methods that are not Recommended

2.2.4.1 Recreational Hunters

Many skilled recreational hunters live in British Columbia, including on Sidney Island, and PCA may be compelled to involve them in the project. However, recreational hunters using common hunting techniques (e.g., stalking) 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 recreational 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).

Recreational hunters can inadvertently contribute to some of the most common causes of eradication failure (Brown 2005, Campbell and Donlan 2005):

> Educating the target animal to the eradication technique (inappropriate hunting methods) Recreational 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 recreational hunters will educate the target animals to the eradication techniques (e.g., animals escape their first encounter with a hunter as a result 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

Recreational 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

Recreational hunting effort varies with deer density; when deer detection frequencies decline, most recreational 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 eradication techniques during the removal of the initial 90%. Using recreational hunters increases the probability of educating deer and is likely to make the later phases of the eradication more difficult and expensive.

2.3 Ecosystem Recovery Monitoring

Demonstrating scientifically sound ecological change post- eradication is imperative to the integrity of the project, PCA's reputation, and future investment into IAS management on islands, especially if the project is controversial. The greater the controversy and challenges or questions from the community, the more significant and influential the science demonstrating the ecological need and positive outcomes of the project must be.

The removal of introduced fallow deer from Sidney Island facilitates the objective to restore native forest vegetation including management of invasive vegetation and protection of species at risk as well as culturally important species. To demonstrate that this objective has been achieved, pre- and post-eradication biological monitoring of the ecosystem is recommended to compare changes in species abundance, richness, and distribution. One or more components of Sidney Island's ecosystem that are likely currently being impacted by the presence of fallow deer can be selected for monitoring. Possible components include:

- forest cover;
- native plants and/or plant community diversity, abundance, and distribution;
- seedling recruitment rates;
- forest songbird species diversity, abundance, and breeding success;
- small mammal abundance;
- amphibian and reptile abundance; and/or
- insect diversity and abundance.

Monitoring total vegetation cover, plant community composition, or seedling regeneration would likely demonstrate the effectiveness of deer removal. A standard BACI (before after control impact) study design can be used to statistically detect change by conducting surveys on Sidney Island and another island where fallow deer are present that receives no management action before and after the eradication. The paired surveys should be completed one-year prior to fallow deer eradication and one-year post-fallow deer eradication. Information on vegetation cover and species composition could be

obtained from satellite or other digital aerial images and may also already exist through Parks Canada Agency's ongoing ecosystem monitoring (e.g., Golumbia 2008)[2]. To document recovery, at least three years of post-eradication survey data are recommended, although changes in total vegetation cover obvious enough to detect using aerial images or Light Detection and Ranging (LIDAR) may take longer.

PCA has undertaken a multi-year ecosystem monitoring project on the Federal park reserve portion of Sidney Island that includes

- forest songbird abundance (point counts initiated 2008);
- vegetation cover (paired vegetation plots initiated 2007);
- deer relative abundance (deer pellet plots initiated 2006);
- Eagle Island vegetation surveys (initiated 2008);
- Purple Martin abundance (nest box surveys initiated 2005); and
- shoreline change (erosion/deposition) and shoreline profiles (initiated 2007).

We recommend that PCA evaluates the statistical power of each of these projects for demonstrating or detecting ecological change, and modifies methodologies, sample sizes, data collection techniques, etc., as required to increase their statistical power. Alternatively, or concurrently, PCA should consider developing partnerships with universities to support graduate projects focused on effective pre/post-eradication monitoring following the BACI design to provide an independent, objective assessment of the effectiveness of the operation at meeting project objectives.

3 Proposed Work Plan, Approach & Methodology: Risk Management (4.1.3)

3.1 Potential Challenges Associated with Fallow Deer Removal

3.1.1 Socio-political Challenges

The eradication of fallow deer on Sidney Island will likely draw significant public attention. With the considerable number of visitors to GINPR during the summer months, the presence of island residents, and the proximity to the heavily populated Greater Victoria, Vancouver Island, and Lower Mainland regions, the potential for the project to polarize the public and generate a negative response from interest groups is high. This social conflict can have significant consequences for the development, implementation, and sustainability of the project if no proactive investment is made to address it. As an example, the impact of hyperabundant native deer on southern Vancouver Island in urban/suburban interface areas is a highly controversial topic that is discussed almost daily in online venues, newspapers (e.g., Victoria Times Colonist 2017), and public meetings. Hyperabundant native deer management is also being undertaken at the regional and provincial levels (BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development 2018, Capital Regional District 2018). Communities that have advanced deer management actions using lethal and non-lethal methods have been threatened

[2] Although broad systematic surveys have not been undertaken across Sidney Island, there are data from several inventory projects that provide a relatively comprehensive plant list. There have not been any systematic surveys of fauna on Sidney Island although large numbers of naturalists have provided opportunistic data, particularly with respect to birds (Golumbia 2008).

with legal action or stopped altogether. This often leads to the loss of funding or support for the project, even if there is scientific justification. Deer management projects such as the proposed fallow deer eradication on Sidney Island must carefully assess socio-political concerns before committing to any management actions.

Increasing the receptivity and support for the Sidney Island fallow deer eradication is more likely to be accomplished if the project team can proactively uncover, identify, and reconcile any opposition/conflict, ideally before but also during operational implementation. A review of eradication and control projects in North America (Howald et al. 2005, National Park Service 2006, Morrison et al. 2007), and elsewhere (Parkes et al. 2002, Simberloff 2002) offer insight into the socio-political conflicts that could be experienced with the Sidney Island project. These conflicts will likely manifest in the form of disagreement/misunderstanding of the goals of the project; the proposed methods and their perceived humaneness or safety; and/or the concept of eradication or population control. The project may also uncover deeper rooted, historical conflict with PCA and/or within Sallas (between residents either supporting or opposing the project), including frustrations with historical management decisions and anti-government sentiment. Ultimately, the degree to which the above issues are perceived to challenge an individual or group's identity will determine how much energy they will invest to slow, disrupt, or stop the project. Common tactics include but are not limited to politicizing the issues using social media campaigns; agency and/or political engagement with the intention of putting unwarranted pressure on land managers to stop the project (see Howald et al. 2005, Morrison et al. 2007); and intentionally disseminating mis-information about the project. Threats of or attempts at sabotage and legal challenges are tactics that have been used against previous eradication projects (Howald et al. 2005, Morrison et al. 2007) and require significant resources and time to defend, which can threaten internal support as well as the feasibility of being able to undertake the project.

An ideal strategy for the Sidney Island fallow deer eradication to prevent and/or minimize socio-political conflict is to use conservation conflict transformation approaches (Madden & McQuinn 2014) such as strategic and targeted engagement and communications (all stakeholders and opponents), leveraging the expertise and skills of the entire project team, including the field team, as appropriate. A successful, proactive risk management/engagement strategy can neutralize the impact of any opposition, or even resolve the underlying conflict, which might potentially be transformed into support of the project.

Support for the Sidney fallow deer project may be easier to obtain if:

1. the community and public recognize the significant negative impacts that fallow deer are having on the forest ecosystem and private properties (Myers et al. 2000, Simberloff 2002);

2. the goals of the project are clear, unambiguous, justified, and quantifiable: scientific evidence acknowledges that fallow deer are negatively impacting the native flora and fauna on Sidney Island, the eradication is achieved, and evidence of ecosystem recovery post eradication is provided (Morrison et. al. 2007);

3. the project is informed by community values and employs methods that are proven, legal, safe, and minimize animal welfare concerns (Dubois et al. 2017); and

4. the eradication is sustainable (i.e., fallow deer can be prevented from re-establishing from nearby islands through the implementation of a biosecurity program).

As an example, on Lord Howe Island, Australia (1455 ha), the eradication of feral goats failed in part because some members of the local community opposed it and caused delays by filing lawsuits alleging cruelty to animals (Parkes, Macdonald, & Leaman 2002). A study of this eradication campaign showed that strict adherence to animal welfare protocols, open information about procedures, and government approval of protocols was necessary to avoid potential legal issues in future eradication campaigns (Parkes et al. 2002). On Santa Cruz Island, California, a comprehensive investment into a multi-disciplinary team approach, including building in sensitivity to animal welfare considerations to the development of a feral pig, eradication was key to a robust and successful implementation (Morrison et al. 2007). For the Sidney Island fallow deer project, legal action would at best delay or slow the implementation and increase costs. At worst, if the project is halted due to loss of funding and/or diminished support after 90% of the effort is completed, all previous investment in the project will be lost as the remaining population recovers to levels that existed prior to any eradication effort. Thus, the need for adherence to regulatory requirements and processes, supported by early and effective community, political, and social engagement cannot be overstated.

The Sallas portion of Sidney Island is owned by approximately 70 individuals, most of which are not present year-round (K. Poskitt pers. comm. 2012). Many of these owners have begun to recognize that fallow deer are having a significant negative impact on the island ecosystem as well as their own properties. However, if most of these landowners are not supportive of the project, there is a high likelihood of significant opposition, which may include some residents preventing access to their properties or demanding a complete halt to the project.

Public opposition might pose barriers (but not insurmountable) to employing recommended eradication techniques. For example, challenges may be encountered with utilizing aerial hunting due to:

- public concern/opposition to aerial hunting, which is often perceived as inhumane (aerial hunting of wolves in British Columbia to conserve caribou populations continues to garner considerable opposition) or;
- opposition by Sallas or individual residents over personal and property safety concerns.

There may also be public opposition if a decision is made to not recover all deer meat during the project (please refer to **Section 4.5.3 Meat Recovery** for additional information).

The Sidney Island fallow deer project has the potential to be controversial and members of the public and/or special interest groups may attempt to halt the project before operations begin or once they are underway. Fortunately, there are strategies and tactics to mitigate or eliminate the risks to the project resulting from any controversy and challenges that may emerge. At its core, eradication projects are more likely to succeed when projects are based on scientific, legal, community, ethical, operational, and communication foundations through the involvement of a multi-disciplinary team that oversees the development and implementation of the project from beginning to end. The team must remain focused on the goal of the project while managing and mitigating the risks of potential and real socio-political conflict that may emerge. The goal of the multi-disciplinary team is to insulate the eradication team from this conflict so that they can undertake the operation in a way that maximizes the probability of success.

We recommend that PCA employ a multi-disciplinary team (a project partnership) to oversee the development and implementation of the fallow deer project. The resiliency and effectiveness of the project will be dependent on the composition of the team, how the team is managed, and its ability to

engage, consult, and build relationships with key stakeholders. We propose that composition of the team be informed by the known conflicts (based on PCA's considerable knowledge surrounding hyperabundant deer management in Canada including the conflicts outlined above) and a stakeholder mapping exercise to better understand the stakeholders and organizations that have influence over the project. Not all stakeholders should be on the team. However, under the leadership and direction of PCA, the inclusion of key representatives from First Nations, Sallas, Islands Trust, Coastal Conservation, the BC Government, and potentially other organizations such as the BC SPCA could help to maximize the probability of successfully completing the project with the least amount of conflict or negative image.

PCA has undertaken many years of consultation with stakeholders and organizations concerning fallow deer management on Sidney Island including those mentioned in the previous paragraph. This engagement should continue during the planning phase and throughout the operation to mitigate any challenges/conflict/opposition, and to avoid the perception of a 'top-down' implementation. Early and effective engagement is most likely to result in public support and ownership of the project. Public ownership can in turn lead to tasks such as biosecurity monitoring being carried out and enforced, at least in part, by the community over the long term.

Coastal Conservation is experienced with working on multi-disciplinary teams and island eradication projects. This includes the successful implementation of large-scale eradication projects that have been highly controversial with high social and political conflict, including overcoming legal challenges and attempts at project sabotage, and supporting government partners in very contentious public meetings. Our staff have received training Conservation Conflict Transformation (CCT) skills and processes and have successfully applied these skills during many projects. Please refer to **Section 6.1 About Us: Technical Expertise & Qualifications** for additional information.

3.1.2 Logistical & Technical Challenges

The eradication of fallow deer from Sidney Island, while challenging, is possible. However, if 100% eradication is not achieved, fallow deer will eventually recover to pre-eradication numbers. The eradication methodology outlined in this proposal is designed to minimize this risk. However, it is possible that not all fallow deer will be successfully removed from Sidney Island due to biological or abiological circumstances that are either unforeseen or beyond control. There is also a risk of re-invasion from nearby islands.

The success of the Sidney Island fallow deer project will be dependent on many factors including but not limited to the following:

- The long history of fallow deer culls. As stated previously, not educating animals to the eradication technique(s) while the population is being reduced is perhaps the most important means of limiting the risk of failure (Macdonald and Walker 2006). The ongoing deer culls on the island have likely resulted in a general wariness of humans, which could make detection at low densities challenging. This is compounded by the fact that fallow deer are naturally difficult to approach without being detected as a result of their highly developed senses and herding behaviour. The use of a highly trained and experienced eradication team employing novel hunting techniques that have not been previously utilized on Sidney Island can help to overcome this challenge. *We highly recommend that all fallow deer culling and recreational hunting on the island cease immediately. This may reduce the wariness of the deer, which could make them easier to detect and remove.*

- Deer density on Sidney Island may be significantly higher or lower than anticipated. Both scenarios can increase hunter effort to track and remove animals. However, implementing multiple eradication and detection techniques can maximize eradication success and efficiency. This approach has been used during previous ungulate eradications to successfully locate and remove all target animals from a project island, even at low densities (please refer to **Section 6.2.2 Example Projects**, Restoring Balance project as an example).

- Some Sallas residents may not permit access to their property during the eradication operation. These properties could then act as refugia/source populations that would eventually lead to recolonization of the island. Employing a mix of social conflict transformation approaches to minimize the number of property owners that choose to prevent access and strategic hunting techniques can help to mitigate for this situation. For example, using the helicopter to drive animals off the property towards ground hunters in an accessible area has been successfully employed during previous ungulate eradications (e.g., Point Reyes non-native axis and fallow deer eradication completed in 2006, N. Macdonald pers. comm. 2015).

- Inclement weather could prevent the eradication team from accessing the island if they were based in Sidney. Seeking accommodations on island will ensure that weather does not impact the ground hunting team

- Forest crown closure on certain portions of the island and/or inclement weather may make it challenging for the aerial hunter to locate and target deer. However, these conditions are unlikely to substantially impact an aerial hunting operation on Sidney Island based on the effectiveness of the aerial hunting operations undertaken during the 2017 Gwaii Haanas Restoring Balance project on islands with higher crown closure, taller trees, and more challenging terrain, and frequented by intense storm events (please refer to **Section 6.2.2 Example Projects,** Restoring Balance project). Furthermore, ground hunting would also be utilized during the operations; therefore, the influence of these factors on the eradication outcome is likely negligible compared to other challenges outlined here.

- Limited road networks on the island. Using all-terrain vehicles and the helicopter to transport the ground hunters rapidly to different parts of the island and using a physically fit eradication team will help to address this risk.

- The coastline is dominated by sandy beaches, dunes, and steep eroding bluffs. There is a large lagoon, as well as rocky shoreline, particularly along the southern and eastern aspects and at Eagle Island, in the lagoon (Golumbia 2008). The lagoon, rocky shoreline, and steep bluffs may present a challenge in terms of access by the eradication team. However, as stated above, several eradication techniques would be used during the operations and the eradication team has completed other projects with similar or more challenging island topography. Therefore, the influence of topography on the eradication outcome is likely nominal.

- Recovering deer carcasses during an eradication can negatively impact the operation by distracting the eradication team from their primary task (eradicating all fallow deer from the island), increasing logistical complexity, and leading to higher project costs due to the requirements associated with processing the meat for human consumption as per CFIA standards. However, meat recovery can play an important role in public support for the project. For example,

during the 2017 Gwaii Haanas Restoring Balance project, more than 635 kg of venison was distributed to seniors, school children, and community groups across Haida Gwaii via community food programs such as Meals on Wheels and the Haida Gwaii Local Foods to Schools. Several positive media reports highlighted the meat recovery program and feedback from the community regarding the project and meat recovery was overwhelmingly positive.

3.1.2.1 Adaptive Management

During an eradication operation, an adaptive management approach can help to maximize the probability of eradication success. It is thus critical for the eradication team to quickly adapt and respond to changes in animal behaviour resulting from hunting pressure and/or efficacy of hunting techniques, variations in physical terrain, unanticipated weather events, or other challenges (e.g., public opposition or unpredicted political environments). Adaptive management played a critical role in the success of PCA's Night Birds Returning Program and Restoring Balance project (Please refer to **Section 6.2.2 Example Projects**, Night Birds Returning Program and Restoring Balance project).

3.1.3 Financial Challenges

Eradication operations are financially challenging, often costing in the millions of dollars to complete. It is imperative to secure sufficient resources to fund the campaign to its conclusion, including an adequate contingency fund to account for unanticipated scenarios, project delays, or other factors. If funding is not sufficient to complete the operation in a timely manner, all conservation gains would be lost as the remaining fallow deer population recovers to levels that existed prior to any eradication effort.

3.1.4 Personnel Challenges & Effort

During the initial phases of the eradication operation it is anticipated that a considerable number of animals will be removed with relatively little hunting effort. As fallow deer numbers decline, hunting effort per animal increases and far fewer deer are removed. No definite trend towards fewer deer removed may be evident, which may result in a realization that an increased and sustained effort is needed even as the hunter effort to success ratio continues to decline. PCA's support may falter as there is "no end in sight" in terms of completion of the project and this in turn may negatively impact project personnel morale. There is a risk of project abandonment or declaration of failure at this stage. Often, eradication failure occurs because insufficient effort is spent searching for and removing the last few animals and the project is declared complete too early when a few animals remain. The use of a highly trained and experienced eradication team employing proven hunting techniques can help to overcome this challenge and maximize the probability of success.

3.1.5 Risk to Non-target (Native) Species

The risk to non-target species during an eradication operation is a function of the eradication methodology as well as the species present on the island during the eradication. Applied research and trials can help to identify and mitigate potential non-target impacts to native wildlife (individual animals and short-term impacts). However, the need to minimize temporary non-target impacts must be balanced with maximizing the probability of eradication success and financial realities (e.g., the lack of funds for a second attempt if the original eradication fails due to the influence of mitigative activities).

Due to the targeted nature of the eradication operation (i.e., it is a conscious decision of the professional hunter to identify and shoot fallow deer) there is very little direct risk to any non-target species. There is a minor risk of short-term disturbance to individual or breeding pairs of non-target

wildlife that are present on the project island resulting from ground hunting personnel searching the island for fallow deer. The most common disturbance will result from helicopter use, which will occur throughout the aerial hunting phase of the project. Helicopter noise disturbance is predicted to cause temporary, short-term disturbance and/or displacement to wildlife on or near Sidney island. Birds are likely to be disturbed off roosts but these effects are considered to be negligible because of the short duration of the disturbance, the disturbance being confined to the area of the project island, and the mobility of the wildlife in the area. Timing the eradication to occur between the fall and spring will ensure that most non-target birds have completed their breeding cycles and migratory species have departed the island for their wintering grounds. This will minimize the temporary impacts to native species on the island resulting from helicopter activity (noise disturbance) and other eradication activities (e.g. rifle discharges, off trail hiking, etc.). The use of rifle noise suppressors will further minimize disturbance to native wildlife during the eradication operation.

There is also a low probability that scavenging species such as Bald Eagles, Common Ravens, and Northwestern Crows could ingest fragments of lead-based bullets while feeding on deer carcasses that cannot be safely recovered (e.g., due to challenging terrain or other factors), which could result in potential lead exposure. Recovering deer carcasses where feasible will help to minimize the probability of lead exposure to scavenging species. If carcasses cannot be recovered and head shots are used wherever possible (recommended), the head of the animal should be removed if possible and buried to prevent exposure to lead fragment in brain matter.

3.1.6 Potential Negative Ecosystem Response

Successful IAS eradications on islands have generally benefited biological diversity. However, there is also evidence that without sufficient planning, eradications can have unwanted and unexpected impacts on native species (including plants) and ecosystems (Figure 3; North, Bullock, & Dulloo 1994, Priddel, Carlisle, & Wheeler 2000).

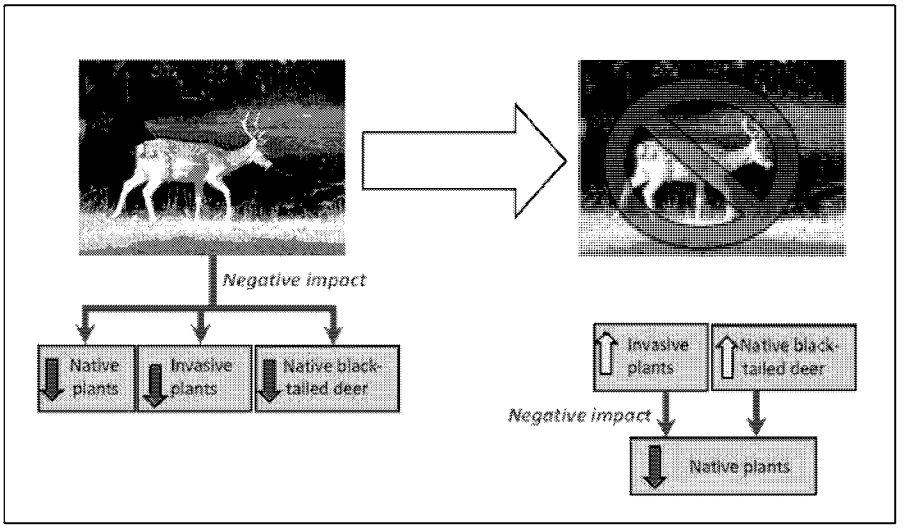


Figure 3. Possible negative impacts of fallow deer eradication on native species and IAS on Sidney Island.

Because eradication efforts are usually targeted at species posing substantive threats to island resources, their removal can cause a fundamental and negative shift in community dynamics and even ecosystem function. While some undesired effects might be predictable, others may not be anticipated. For example, the removal of a habitat modifying herbivore increases food resources for smaller herbivores which may lead to an increase in their abundance and 1) continued suppression of native

plant species, and/or 2) a consequent release of predators from food limitation, with an adverse effect on other native prey species. Eradication managers must therefore be prepared to detect and manage the undesired, and sometimes unanticipated, effects of an eradication operation. Secondary effects of invasive species eradication become more likely as the number of interactions among non-native species increases, and as other non-target invasive species that were previously suppressed by the target invasive species begin to outcompete native wildlife (Bullock et al. 2002, Donlan et al. 2002).

Several eradication projects completed to date on islands around the world have reported increases in exotic plant populations as well as native plant species (e.g., Halvorson, Fenn, & Allardice 1988, Klinger, Schuyler, & Sterner 1994, Abbott et. al. 2000). However, the interaction between exotic herbivores and invasive plants remains largely unstudied and reports are mostly anecdotal (Driesche & Driesche 2000). Several examples are presented below that demonstrate that the removal of an invasive herbivore can have undesirable impacts.

- Feral herbivore removal from Santa Catalina Island, Channel Island National Park, led to an increase in native species richness, but also to increases in cover by exotic plants (Laughrin et al. 1994).

- Rabbit eradication on Round Island, Mauritius, led to the recovery of three endemic tree species and six reptile species. However, rabbit removal also released grazing pressure on a previously sparse exotic grass, *Chloris barbata*, which quickly overtook the island (North, Bullock, & Dulloo 1994).

- Following removal of feral goats and pigs from Sarigan Island in the Commonwealth of the Northern Mariana Islands, the exotic vine *Operculina ventricosa* rapidly became abundant and now covers much of the island (Kessler 2011).

- Following a rabbit and goat eradication on Round Island, vegetation responses were predictable in the short term, but some long-term changes were dramatic and unpredictable, particularly the increase in non-native plant species (North & Bullock 1986, North, Bullock, & Dulloo 1994, Bullock et al. 2002).

3.1.6.1 Invasive Plants

Introduced invasive plant species are prevalent on Sidney Island both as a result of accidental and intentional introductions (Golumbia et al. 2011). The distribution of several species on the island is likely underestimated due to heavy herbivore pressure and many would likely increase rapidly if grazing pressure by fallow deer was removed (Table 3; Fairburns 2005). Release of grazing pressure could also lead to an increased fire hazard resulting from increased forest litter, shrubby vegetation, and grass thatch.

The response of invasive plants to the removal of fallow deer is a complex situation and resurgence of plant biomass following fallow deer removal should be closely monitored. Some introduced plant species may quickly establish themselves, but over the long term other invasive plant species may outcompete these 'pioneer' species (succession). The goal, therefore, is to determine how best to manage invasive plants both on a species by species basis, but also as succession takes place. For example, the initial resurgence of certain non-native plants may be less of a concern from a conservation perspective compared to invasive plant species that outcompete these pioneer species.

Because of this, restoration efforts on Sidney Island may focus on the later successional invasive plants. Prior to undertaking a fallow deer eradication several questions need to be addressed including: What invasive plant species can we expect short term versus the long term? What invasive plant species should be addressed in terms of natural succession?

Table 3. Potential impact of fallow deer removal on introduced invasive plant species known to occur on Sidney Island. Note: Data on invasive species present on Sidney Island is limited to surveys of Sidney Spit by Fairbarns (2005).

Common Name	Scientific Name	Current Population Size or Distribution	Impact from Fallow Deer Removal
English Hawthorn	*Crataegus monogyna*	Not currently abundant	May spread to open deciduous forests and woodlands throughout the island, which may also encourage the establishment of other invasive species that English hawthorn shelters
Scotch Broom, English Broom	*Cytisus scoparius*	Widespread	Possible rapid distribution expansion[3]
European Beach Grass, Marram Grass	*Ammophila arenaria*	Widespread on Sidney Island Spit	Possible distribution expansion[4]
Himalayan Blackberry	*Rubus armeniacus*	Widespread	Rapid distribution expansion
English ivy	*Hedera helix*	Widespread	Rapid expansion of ivy could outcompete native plant species
Moist Meadow Complex	Multiple species-	Abandoned livestock pastures and/or hayfields	Rapid expansion of introduced grasses and forbs but limited by the availability of moist open areas on the island

Based on the potential for population and/or distribution expansion of several invasive plant and vertebrate species it is imperative that a risk management strategy and response plan is developed prior to initiating a fallow deer eradication operation. The plan should outline strategies to manage potential negative response from other invasive species and include (adapted from Environment Canada 2004):

- Development of regular, carefully designed and targeted monitoring surveys to assess population and distribution changes in the invasive plant species outlined in Table 3 and an effective reporting system. The existing exclosure plots on Sidney Island can be used to help determine species of concern immediately following a fallow deer eradication (pioneer invasive plant species) compared to successional invasive plant species. Monitoring activities may also include detailed botanical surveys for Species at Risk (provincially listed and federally designated).

- Development of indicators for monitoring impacts of introduced invasive plant species

- Prioritization of invasive plant species on Sidney Island for eradication, containment, and/or control based on their threat to the island's native species in the absence of fallow deer

- Development of clear eradication, containment, and/or control protocols and procedures for

[3] Fallow deer are currently controlling the distribution of broom on Sidney Island. The current exclosure plots show this on the dunes but also on the open fields (T. Golumbia pers. comm. 2012).

[4] There is an interesting dynamic on the island between native Leymus (dunegrass) vs. Ammophila (European beach grass, marram grass). It is anticipated that a resurgence of native dunegrass will occur in certain areas where Ammophila does not grow well. There may also be an increase in Ammophila because it is not clear if deer eat the new shoots (this species expands distribution through rhizome production, T. Golumbia pers. comm. 2012).

priority invasive plant species

- Development of protocols and procedures for rapid decision-making (adaptive management), communication, and implementation of emergency response plan to address population expansion in priority invasive plant species. Include clear delineation of lead, coordination, and other responsibility/authority

- Establishment of an emergency fund that can be accessed in a timely fashion to respond rapidly if population expansion of other invasive plant species on the island occurs post fallow deer eradication

- Development of education and outreach initiatives that are targeted to ensure public support for rapid response measures

3.1.6.2 Black-tailed Deer

The reduction in of heavy grazing pressure through fallow deer eradication may also result in black-tailed deer population increases. Black-tailed deer are considered native to the gulf islands but often occur at hyper abundant levels resulting from the lack of natural predators and limited hunting (Golumbia 2008). Currently dietary overlap and resource competition with fallow deer is suppressing black-tailed deer populations on Sidney Island. If fallow deer are removed from Sidney Island, it is possible that the black-tailed deer population may expand leading to impacts on native plants and ecosystems (Figure 3). Although native vegetation on the Gulf Islands has co-evolved with this species, this potential negative ecosystem response to fallow deer removal requires further consideration (e.g., possibly controlling black-tailed deer numbers to allow the ecosystem to fully recover).

Monitoring the black-tailed deer population size prior to and following the fallow deer eradication in concert with vegetation plot monitoring will help to inform decisions regarding black-tailed deer impacts and management options. Conducting research with hyperabundant deer specialists such as Dr. Tara Martin and Dr. Peter Arcese (University of British Columbia) to assess vegetation impacts by native deer and determine the population size above which significant negative ecosystem impacts occur (i.e., the black-tailed deer carrying capacity of the island that allows for vegetation recovery post fallow deer eradication) would further support the case for managing black-tailed deer if numbers significantly increase following removal of fallow deer.

Several options may be available to maintain black-tailed deer numbers where ecosystem recovery can occur, although the efficacy of these options must be further assessed before they are incorporated into a native deer management plan:

- The current British Columbia hunting regulations permit licensed recreational hunters to harvest three black-tailed deer (antlered or antlerless) from the Sallas portion of Sidney Island (BC Ministry of Environment 2018) with a hunting season that extends from August 26 to February 28. If the public is permitted to hunt black-tailed deer recreationally on Sallas lands, it is possible that the population could be maintained to a certain degree. However, it is unlikely that enough hunters would come to the island to hunt deer and there are Sallas residents who oppose recreational hunting, especially by hunters who do not live on the island (M. Parfitt pers. comm. 2016). It is therefore unlikely that this option would be effective at population control.

- Implement a black-tailed deer cull using a professional hunting team. This could include bait station hunting or other techniques including the use of Sallas corral trap that is currently being used for fallow deer management.

3.2 Island Biosecurity – Protecting the Investment

The eradication of fallow deer from Sidney Island is feasible and should encourage the natural restoration of native wildlife, plants, and plant communities including culturally important species for local First Nations. However, the conservation benefits of eradicating deer will only be fully realized if reinvasion is prevented.

Invasive species biosecurity plans are critical components of successful eradication campaigns. To mitigate the risk of a post eradication deer reinvasion, an effective early detection, rapid response plan (EDRR) must be put into action prior to the eradication and continued indefinitely. Key elements of an EDRR are the decision points concerning what management action(s) is undertaken and if or when to remove any incursions (immediately, annually, or when a threshold population density exists).

Fallow deer are present neighbouring islands including James, D'Arcy, Little D'Arcy, Forrest, Mandarte, Eagle, and Halibut, Mayne, Saturna, as well as the Saanich Peninsula (J. Thrupp pers. comm. 2012) and are known to swim between the islands (Figure 4)[5]. Initiating discussions with residents of islands in closest proximity to Sidney Island concerning the fallow deer project goals and objectives should be considered during public and stakeholder engagement. The sustainability of the eradication may be closely tied to the adjacent island's management or future management of fallow deer. PCA may wish to consider partnerships with land managers from these islands to explore shared objectives and investigate potential outcomes, goals, and even project partnerships concerning fallow deer management on the Gulf Islands.

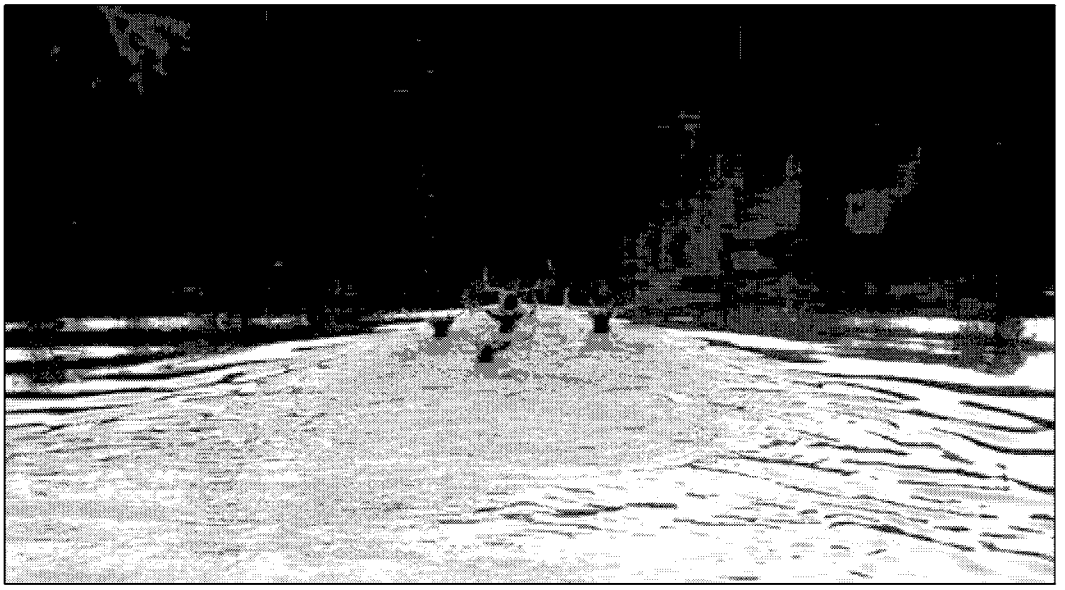


Figure 4. Fallow deer swimming between Sidney Island and Eagle Island (photo © Parks Canada 2008)

[5] Fallow deer are also present on the San Juan Islands, USA. We therefore recommend that PCA considers investigating the genetic connectivity between fallow deer populations on the Gulf Islands and US San Juan islands to better understand the genetic relatedness of the populations and identify possible source populations for Sidney Island.

3.2.1 Early Detection

Early detection of a potential reinvasion is critical to the ongoing success of the project. Several methods and techniques should be assessed for their utility in detecting a fallow deer reinvasion including formal and informal surveys such as:

- Ongoing utilization of the Judas deer used during the eradication operation, marked to distinguish them from other non-Judas deer (e.g., fluorescent radio collars, ear tags, etc.). PCA personnel should monitor the Judas deer on a regular basis post-eradication using radio telemetry and remove any non-Judas fallow deer found with them (please refer to **Section 2.2.2.4 Judas Animals** for additional information).

- Regular formal and non-formal ground and aerial surveys for fallow deer conducted by trained staff.

- Remote trail cameras installed at key coastal sites on Sidney Island where fallow deer would most likely arrive from neighbouring islands to detect new incursions. Motion-sensing trail cameras can be an efficient means of documenting deer presence (Crouchley et al. 2011); however, they cannot be solely relied on to detect an invasion due to the small area sampled by each camera. The probability of detecting deer with cameras can be enhanced by placing bait or hormone attractants within the camera's field of view (Macdonald and Walker 2009). The cameras should be checked on a regular basis so that PCA can rapidly respond to a confirmed reinvasion.

- Signage established at key landing sites for visitors to the island that outlines the project, including a description of fallow deer and the Judas deer, the anticipated outcome of the project (ecosystem recovery), and who to contact if a non-Judas deer is seen on the island for rapid follow up by PCA personnel.

3.2.2 Rapid Response

If a report of fallow deer on Sidney Island is received, PCA should take steps to confirm or refute the existence of the animal by conducting an interview with the individual reporting the sighting and undertaking a thorough search of the island for the animal. Similarly, if a deer is recorded on a trail camera installed on the island or an untagged animal is found with a Judas animal, steps should be taken to rapidly mobilize a trained eradication team to dispatch the animal.

4 Proposed Work Plan, Approach & Methodology: Operational Considerations (4.1.4)

4.1 Site Visits, Meetings, & Reviews

4.1.1 Strategic Technical Planning Meetings & Site Visits

The eradication of fallow deer from Sidney Island is feasible but its success depends on the foundation of a balanced operational plan that combines logistical, biological, technological, legal/regulatory, and social sciences and expectations. A well thought out and socio-politically resilient operational plan will be key to the success of the Sidney Island fallow deer project. Integrating all pieces requires close coordination and collaboration amongst PCA, eradication experts, Sallas, First Nations, and stakeholders.

Site visits and workshop-style meetings to assemble current knowledge and sentiments of stakeholders, residents, and local knowledge holders and to facilitate technical assessment of the project site by eradication experts are vital to the development of a realistic and effective eradication operation plan. These meetings should be undertaken prior to finalizing the eradication techniques and approaches. We strongly recommend that a facilitated strategic technical planning meeting including PCA, Sallas representatives, and Coastal Conservation eradication experts be incorporated into the proposed meeting schedule to discuss not only the recommended methods and their challenges as outlined in this proposal but all methods that have been included in **Section 2.2.2 Proven Methods for Deer Eradication or Control** and **Section 2.2.3 Currently Unproven Methods for Deer Eradication or Control.**

The stated Contractor responsibilities in the RFP include "at least 2 site visits to Sidney Island to aid in the development of the Eradication Operation Plan" (Section 6.1 b). We recommend that one of the site visits be styled as a workshop, during which Coastal Conservation's eradication experts would assess the project site with local PCA representatives and additional stakeholders (at the discretion of PCA)

The workshop would encompass two days: a 1-day site visit, including aerial reconnaissance conducted to allow eradication experts, PCA, and potentially other stakeholders to make an accurate assessment of the physical challenges and the feasibility of aerial eradication methods; and a one-day meeting to:

- set expectations of PCA and Coastal Conservation so that the appropriate commitments (e.g., personnel, equipment, funding) can be made early enough to avoid unforeseen expenses once the eradication is underway;
- discuss eradication methods for Sidney Island that will maximize the probability of success; and
- identify logistical, socio-political, and implementation challenges, and design strategies to mitigate their impact on the project.

Eradication experts in attendance should include Chris Gill (Eradication Planning Chief, Coastal Conservation), Gregg Howald (Director of Global and External Affairs, Coastal Conservation), Dr. Tony DeNicola (deer behaviour specialist and bait station marksmen unit leader, White Buffalo, Inc.), an aerial hunter (e.g., Norm Macdonald, Native Range, Inc.), Lennard Sparks (Dog Hunting Unit Leader, Coastal Conservation), and Mike Reed (aerial herding specialist, Wildlife Capture Management, Ltd.).

It is the opinion of Coastal Conservation that the proposed 2-day workshop-style site visit could take the place of the two site visits outlined in the RFP and increase our capacity to deliver a robust and detailed eradication operation plan that has a high likelihood of eradication success while also building support for the project. Coastal Conservation's financial bid includes the costs associated with having the abovementioned eradication experts attend the proposed 2-day workshop (daily rates and travel costs as per PCA's travel directorate). If 2 separate site visits are preferred, Coastal Conservation can adjust the list of attendees to allocate costs within the parameters of the bid. Please note that the costs associated with additional meetings and site visits beyond the estimated nine (9) occasions stated in Annex "B" Basis of Payment, or with inviting additional experts not listed above, are not included in Coastal Conservation's financial bid.

4.1.2 External Reviews

Prior to implementation, we recommend that PCA initiate the following project reviews:

- A review of the operational plan with specific emphasis on the proposed eradication techniques to assess their suitability for fallow deer eradication on Sidney Island, with the goal of identifying areas that could be improved, modified, or require further assessment. The intent of the review is to maximize the probability of success prior to implementation and commitment of resources.

- A review of the techniques used to humanely euthanize deer by the Federal Animal Care Committee to ensure that they comply with the relevant local and federal regulations, including guidelines for animal euthanasia developed by the Canadian Council on Animal Care and the American Veterinary Medical Association.

- Engagement with the BC SPCA to provide an opportunity to review the Draft Environmental Impact Assessment including eradication techniques to ensure animal welfare considerations are met (as outlined in Dubois et al. 2017) and to increase external support for the project.

4.2 Proposed Eradication Operation Phases, Methods, & Timeline

DISCLAIMER: The efficacy of the proposed methodologies outlined below, personnel requirements, and the amount of time required to implement the operational plan must be further assessed by conducting site visits, trials, and additional research prior to incorporating them into a final operational plan. The regulatory and socio-political environment will also influence the eradication methods that can be employed for the project.

We highly recommend that all fallow deer culling and recreational hunting on the island is immediately halted. This may reduce the wariness of the deer, which could make them easier to detect and remove during the eradication.

During the eradication operation, it is critical that the fallow deer remain naive to the eradication techniques at all population densities. The eradication tools that will be applied early in the project are selected based on their effectiveness on the group sizes likely to be encountered (e.g., bait station hunting, aerial herding, aerial hunting); those tools applied towards the end of the project are selected on their effectiveness to detect and remove animals at low densities (e.g., Judas animals, dog hunting, spotlight/FLIR hunting). Each of these tools must be deployed in a manner that minimizes the opportunity for any animal or group of animals to escape and become educated to the eradication techniques being employed.

The use of an experienced, professional hunting team will be instrumental in maximizing eradication success and reducing project duration. For example, each hunter 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 hunter to dispatch the deer (public and property safety). Not only is this approach humane, it also avoids conditioning the deer to the eradication techniques employed during the project.

The length of time each hunting technique is employed would be determined by deer density, forest cover, weather conditions during the operation, and the socio-political environment (e.g., public opposition to the project could impact how long a particular technique is employed or the length of the operation as a whole). During the operation, all relevant data will be collected including but not limited to hunting effort, hunting tracks (GPS data collected during hunting sorties), animal sighting locations (observed but not killed), the number of animals removed, and biological and location data from each animal (i.e., gender, age, weight, reproductive condition, GPS location).

Developing a detailed operational plan to guide the eradication is critical, but it must be understood that adaptive management is key to the success of the project and could result in considerable changes or additions to various technical elements and/or timelines detailed in the operational plan during the eradication. Adaptive management can enable the eradication team to quickly respond to changing conditions (observed vs. expected) encountered during the operation including unanticipated deer response to the eradication techniques, island topography and vegetation cover, and socio-political situations.

We propose that the operation is implemented in four phases as follows:

Phase 1. Pre-eradication planning & preparations:

- Baseline research and eradication trials to verify the efficacy of the proposed methods (please refer to **Section 4.3. Proposed Baseline Research & Trials** for further details);
- detailed assessment of logistical, biological, regulatory, and socio-political considerations; and
- development of the operational plan.

Phase 2. Implementation: Intensive population reduction
Phase 3. Implementation: Target remaining deer
Phase 4. Confirming success

The initiation of each eradication phase will be directly related to the density of fallow deer on Sidney Island and the decreasing success (observed through real-time data collection) of the techniques being used. *Please note that the methods and total time to implement each phase outlined below must be further assessed by conducting site visits and meetings with eradication experts and appropriate field trials before incorporating any methods into the operational plan, as described in the previous section.* Please refer to **Section 4.1.1 Strategic Technical Planning Meetings & Site Visits** for additional information.

We conservatively estimate the total time required to plan and complete the eradication operation (not including confirming success) at approximately 1.5 years barring any unforeseen circumstances including but not limited to socio-political challenges (please refer to **Section 3.1.1 Socio-political Challenges** for additional information). Confirming success will require three site visits over the course of one year following completion of phase 3. This does not include office preparation time for hunting personnel, personnel staging, potential work stoppages resulting from public opposition to the project, or other unforeseen circumstances that may impact the progress of the eradication operation.

4.2.1 Phase 1: Pre-eradication Planning & Preparations

This first phase of the operation is to complete planning and preparations prior to the eradication team arriving onsite to implement the eradication.

Activities/deliverables:

- Scoping document/feasibility plan development
- Workshops with PCA and Sallas to review scoping document and to determine if all fallow deer will be removed from the island or only from PCA land
- Site visit and meeting with eradication experts to discuss and assess proposed eradication methodologies
- Baseline research and trials (please refer to **Section 4.3**)
- Operational plan development
- Detailed Environmental Impact Analysis (DEIA) development
- Development and implementation of contracts relating to the eradication operation
- Permitting and logistics preparation
- Eradication personnel identification and role assignments (e.g., team lead, advisors, hunters, helicopter pilot, GIS, boat operators, etc.)
- Preparing for eradication implementation (purchasing/organizing equipment, establishing bait stations on Sidney Island, constructing funnel traps/corrals for aerial herding, etc.)

Total time: Approximately 1 year.

4.2.2 Phase 2: Implementation – Intensive Population Reduction

During operational implementation, the first objective of the eradication is to rapidly reduce the deer population without educating individual deer to the eradication techniques. This will be accomplished by aerially herding the deer into funnel and/or corral traps and bait station hunting, if these techniques are proven to be effective during the planning phase (please refer to **Section 4.3 Proposed Baseline Research & Trials** for additional information). Meat recovery activities should be focused on this phase of the operation, during which most of the deer will be killed (please refer to **Section 4.5.3 Meat Recovery** for additional information).

Proposed activities[6]:

- Finalize bait station preparations and pre-bait
- Finalize installation of funnel and corral traps
- Create Judas deer (NOTE: this could be completed during aerial herding)
- Aerial herding/trapping and bait station hunting
- Meat recovery

[6] If the trials outlined **in Section 4.3 Proposed Baseline Research & Trials** are efficacious and are approved for use by PCA and Sallas.

Total time: estimated ~5 weeks

- 2 weeks of preparations (personnel and equipment staging, training, final bait station set up including pre-baiting, final set up of funnel and/or corral traps[7], capturing and creating Judas deer, etc.),
- 1 week of aerial herding;
- 2 weeks of bait station hunting.

4.2.3 Phase 3: Implementation – Target Remaining Deer

Following the intensive population reduction phase, deer numbers should be low enough to make encountering animals on the island challenging. At this point in the operation, aerial hunting and various ground hunting techniques will be implemented to maximize the probability of detecting animals at low densities. For Sidney Island, aerial hunting will target natural and man-made openings. In addition to aerial hunting, the helicopter will also be used to efficiently transport ground hunters including the dog hunting team to various parts of the island and to track/drive deer in concert with the ground hunters and dog teams.

Proposed activities[6]:

- Implement aerial hunting
- Implement ground hunting with a mix of hunting techniques including hunting with detection dogs and spotlight/FLIR hunting from boats and/or land
- Release and monitor Judas deer by ground and by air

Total time:

- Aerial hunting: ~6-7 weeks (not including office preparation time, travel to/from the island, etc.)
- Ground hunting ~3 weeks (not including office preparation time, travel to/from the island, etc.)

4.2.4 Phase 4: Confirming Success

Following completion of phase 3, subsequent one-week site visits to confirm efficacy would be conducted 3, 6, and 12 months post-eradication to confirm complete removal of fallow deer from Sidney Island.

Proposed activities[6]:

- Aerial hunting
- Monitor Judas deer by ground and by air and target any other animals with them
- Conduct other ground hunting operations including line hunting using detection dogs and spotlight/FLIR hunting.

Total time: ~3 weeks

- Three 1-week site visits (not including office preparation time, transiting to and from the island, etc.).

[7]The permanent deer capture facility used by Sallas for the deer culls (Columbia 2010, Sallas Strata Forest Corporation 2009) could be utilized with modification to increase the number of animals the facility could safely hold (animal welfare considerations).

4.3 Proposed Baseline Research & Trials

Following site visits with the eradication experts, we recommend that select pre-eradication trials be undertaken prior to finalizing the operational plan and implementing the operation to gain a better understanding of fallow deer behaviour, the anticipated effectiveness of the proposed eradication techniques, and the impacts of other variables (e.g., the presence of native black-tailed deer and residential properties on the island). At a minimum, the following trials are recommended. However, additional trials may be necessary based on the results of the site visit.

4.3.1 Baseline Research: Deer Home Range & Movements

Capture deer of various ages and sex from several areas of Sidney Island and fit them with GPS/VHF collars before being released. The data collected from these collars will provide an estimate of home range size, seasonal/daily movement patterns, and habitat usage. This information will help to confirm which eradication methods to apply and where on the island to use them to maximize project success. We recommend that data are collected at minimum during the proposed operational window (please refer to **Section 4.4 Eradication Timing** for additional information) and ideally for at least one year prior to implementing the operation. The results of is study may require changes to the operational plan to address unanticipated deer home range size and/or movements.

4.3.2 Efficacy Trials for Proposed Eradication Methods

We propose several eradication methods to eradicate fallow deer from Sidney Island including aerial herding & trapping, bait station hunting, aerial hunting, dog hunting, spotlight/FLIR hunting from boats/land, and Judas deer. These techniques have been proven effective for previous eradication, control, and management projects. However, it is critical to assess their utility, effectiveness, safety, and risks in the Sidney Island environment prior to confirming the methods to be utilized to maximize the probability of eradication success.

We recommend conducting trials on the entire GINPR portion of Sidney Island (~120 ha) to test the efficacy of the proposed eradication methods prior to applying these methods to the entire island, if a full island eradication option is selected. The fencing separating GINPR land from Sallas land could be used as the trial area boundary. Repairs/reinforcement of this fencing would be required to ensure that it is an effective barrier to fallow deer immigration/emigration prior to implementing the trial. This might also require the fencing to be extended further into the ocean to discourage deer from swimming around it. Once the fencing is secured, we recommend implementing trials, generally in the following order, and assessing the efficacy of each method to detect and remove fallow deer. If any of the proposed methods do not appear to be effective, especially the initial knockdown methods (aerial herding/trapping and bait station hunting), they should be carefully evaluated to determine if modifying the method could increase success rates before finalizing the choice of techniques for the actual eradication operation.

Trial 1: Aerial herding/trapping and Judas animal trials

During the eradication operation, aerial herding combined with the existing Sallas corral trap or temporary funnel traps may be a highly effective means of rapidly removing most of the fallow deer population in a short period of time (please refer to **Section 2.2.2.3 Aerial Herding** for additional information). This technique, if effective, would also be a cost-efficient means of recovering meat during the project (please refer to **Section 4.5.3 Meat Recovery** for additional information).

During the trial, we recommend assessing the effectiveness of aerial herding combined with trapping. The fence separating the GINPR land from Sallas Land could be modified to create an opening for a funnel trap that leads into a temporary corral on the Sallas side of the fence. Drift netting or other netting could be installed along the shoreline and angled toward this opening to direct deer into the funnel[8]. During the aerial herding trial, we recommend that a certified meat recovery contractor is on site to process deer captured using this technique for distribution to First Nations and the community (please refer to **Section 4.5.3 Meat Recovery** for additional information).

The Judas animal method, which exploits the social nature of many ungulates such as fallow deer, can be a vital tool for detecting the target species at low densities and as a monitoring tool to confirm eradication and/or for biosecurity purposes (Taylor & Katahira 1988, Campbell 2002). To maximize their effectiveness, Judas animals (females are generally preferred) should be sourced from the target population as they are more likely to seek out other animals (T. DeNicola and N. Macdonald pers. comm. 2015). This significantly complicates an eradication operation as it means holding and caring for these animals until the final stages of the operation when the density of the target species has been reduced to near zero using other eradication techniques. The animals must also be sterilized prior to release and females inoculated with an estrogen booster, which requires considerable personnel effort including the use of a wildlife veterinarian.

Two different Judas experiments are proposed here. However, revisions to these trials or additional trials may be recommended as a result of the site visits with the eradication experts that are mentioned above.

Judas Deer Experiment 1: Determine if the Judas animal technique can be humanely and effectively applied on fallow deer on Sidney Island. Sterilize adult female deer captured during the aerial herding trial, use ear tags or other visual means to identify each individual, and fit them with a VHF collar before releasing. Monitor the Judas deer to determine if they continue to socialize with other fallow deer on the island following release[9].

Judas Deer Experiment 2: Obtain adult female fallow deer from a nearby island or deer farm. Sterilize, inoculate with an estrogen booster, and fit with a VHF collar before releasing on Sidney Island. Use ear tags or other visual means to identify these deer so they can be distinguished from the Judas deer sourced from Sidney Island and monitor them to determine if they socialize with other fallow deer on the island. If these deer locate and socialize with other fallow deer, it is possible that the Judas deer can be obtained off island, which would eliminate the need to hold deer in captivity on Sidney Island until the final stages of the operation, when fallow deer densities are considerably reduced.

If the Judas deer are effective, they could be used as a biosecurity tool to detect a reinvasion from nearby islands once the eradication is completed (fallow deer are present on James, Mayne, Saturna, D'Arcy, Little D'Arcy, Forrest, Mandarte, Eagle, and Halibut islands, as well as the Saanich Peninsula, J. Thrupp pers. comm. 2012).

[8] Any black-tailed deer captured during aerial herding could be subsequently released.
[9] It is possible that this trial could be combined with the home range and movement trails. Please refer to **Section 4.3.1 Baseline Research: Deer Home Range & Movements** for additional information.

Trial 2: Bait preference & bait station hunting trials

Bait station hunting using a highly attractive bait to draw deer to a specific site is proposed as the second method to rapidly reduce the fallow deer population on Sidney Island. Bait stations are established at several locations on the project island and pre-baited prior to the eradication operation to elicit a conditioned response from the deer. Bait station hunting was employed during the 2017 Gwaii Haanas Restoring Balance project (Please refer to **Section 6.2.2 Example Projects**, Restoring Balance project) but was less effective than anticipated due to the choice of bait used, requiring the project team to supplement bait station hunting with other hunting methods (adaptive management)[10]. Had bait preference trials been conducted prior to the operation, it is very likely that a more attractive bait may have been identified, which would have likely increased the effectiveness of bait station hunting. It is therefore critical to determine the most effective bait attractant for fallow deer on Sidney Island prior to operational implementation to maximize the effectiveness of bait station hunting. We recommend conducting bait preference trials that are timed to coincide with the operational window (please refer to **Section 4.4 Eradication Timing** for additional information) to test whole kernel corn, whole kernel corn with molasses, dried apple, and other suitable attractants (e.g., alfalfa). Once an effective bait attractant(s) is identified, data from the deer home range experiment (please refer **to Section 4.3.1 Baseline Research: Deer Home Range & Movements** for additional information) should be used to establish the density and placement of bait stations during the bait station hunting trial. The efficacy of bait station hunting should then be trialed. This trial should include observations of native black-tailed deer usage of the bait stations (potential bait competitor).

Trial 3: Spotlight/FLIR Hunting from Boats or Land

Fallow deer are generally crepuscular, with peak grazing activity and movements usually occurring during dusk and dawn (Locke 2007), although nocturnal movements and grazing are commonly reported for this species, especially if herds are prone to hunting pressure or other disturbance (Chapman and Chapman 1997). Spotlight and FLIR hunting from boats or land may therefore be an effective technique to target individual deer (please refer to **Section 2.2.2.1.5 Spotlight and/or Forward Looking Infrared Hunting** for additional information). This technique has been successfully used for other eradication operations including the 2017 Gwaii Haanas Restoring Balance project (please refer to **Section 6.2.2 Example Projects**; Restoring Balance project for additional information) and may be a valuable tool if individual fallow deer can be easily distinguished from native black-tailed deer and targeted in a safe manner (people and property safety) without educating other animals. Achieving a steady aim from a moving boat is also extremely challenging and any missed shots increases the probability of educating deer to the eradication technique.

We recommend conducting water-based and land-based spotlight/FLIR hunting trials to assess both the effectiveness of the technique for fallow deer and its safety in the Sidney island environment. These trials could be undertaken concurrently with the bait preference trails mentioned above.

[10] Whole kernel corn was selected as the preferred bait because it was found to be a suitable attractant for ungulates during previous eradications (T. DeNicola pers. comm. 2015). However, a considerable portion of the deer appeared to show little or no interest in the corn and did not visit the bait stations. Deer in Gwaii Haanas are accustomed to feeding on a variety of natural foods, including shoreline foliage and kelp, but have had limited to no exposure to alternative foods such as corn. Dried apple was found to be very effective during a 2012-13 deer cull on Murchison and Faraday islands (P. Dyment and C. Johnson pers. comm. 2017) and could be considered for future eradication or control efforts. This issue reinforces the need to conduct a bait preference trial prior to future operations to identify suitable bait options.

Trial 4: Aerial hunting

Aerial hunting is likely to be highly successful for fallow deer on Sidney Island because most of the forest canopy is open enough detect deer and there are numerous natural and man-made openings on the island (N. Macdonald pers. comm. 2015[11]). However, it is presently unknown how fallow deer will respond to aerial hunting. During the 2017 Gwaii Haanas Restoring Balance project, black-tailed deer proved to be extremely wary of the helicopter and would bolt for the closest cover and hide under a log or tree (N. Macdonald pers. comm. 2017). The deer often did not move from cover, even with pressure from the helicopter. This behaviour was novel to black-tailed deer and had not been previously observed by the aerial hunter or the helicopter pilot, both of whom have extensive experience with a variety of ungulate species (N. Macdonald and M. Reed pers. comm. 2017).

Based on this experience, it is critical to assess the response of the fallow deer on Sidney Island to helicopter activity and aerial hunting and if necessary, adapt aerial hunting techniques to novel or unexpected fallow deer behaviour. Furthermore, given the presence of native black-tailed deer on the island, it is important to assess the ability of the aerial hunter to quickly differentiate the deer species before targeting an animal. Finally, the suitability of aerial hunting on Sallas lands should be assessed from a public and property safety perspective.

Trial 5: Ground hunting with dogs

During the final phase of the eradication, the operation is focused on targeting and removing the remaining deer. This requires methods that can effectively detect deer at low densities. Because of their keen sense of smell and ability to search large areas in a relatively short amount of time, professional hunting dogs working with professional hunters/handlers have the highest probability of detecting animals at low densities compared to other detection techniques, with the exception of Judas deer (please refer to **Section 2.2.2.1.4 Hunting with Trained Dogs** for additional information).

Although hunting dogs are very effective for ungulate eradications, the presence of two deer species on Sidney Island (fallow and black-tailed deer) could reduce hunting efficacy because the dogs are may not to be able to differentiate between the species. This could increase the time required to complete the dog hunting phase during the actual eradication operation. Conducting trials to determine if hunting dogs could be trained to target fallow deer only and how they respond to native deer in real time is critical to evaluate if dog hunting is an effective eradication tool before incorporating this method into the eradication operation.

4.4 Eradication Timing

Ideal eradication timing is a function of target species biology and logistical constraints imposed by factors such as regulatory complexities, public and eradication team member safety, and/or presence of sensitive native species on the island (e.g., disturbance to nesting birds). Rarely do all factors perfectly align; therefore, eradication timelines often select a subset of the governing factors to direct the project dates. Eradications should be planned for the period in the target species' annual cycle when population sizes are static or declining because of reductions in seasonal food resources or other factors. However, in temperate regions, seasonal weather patterns will influence the feasibility and safety of eradication projects, especially when aerial operations are incorporated into the project. Ensuring public and personnel safety during the eradication operation is paramount.

[11] This assessment is based on a site visit to the island in 2012.

For Sidney Island, an optimal timeline for the eradication operation during which all eradication constraints may be balanced is from the fall to early spring (September to March). This coincides with:

- a low public presence on the island;
- predictable weather patterns that are favourable for ground and aerial operations;
- static or declining fallow deer population size;
- low natural food availability (increases bait station hunting efficacy); and
- the peak rutting time (October) for the territorial bucks.

4.5 Logistical Considerations

4.5.1 Personnel Needs

Table 4 provides a summary of the proposed personnel needs during eradication implementation and includes personnel from PCA, Coastal Conservation, and its partners. *Please note that personnel needs may change based on the results of the site visit, the experimental trials, and the methods that are ultimately selected for the eradication operation.*

Table 3. Personnel needs for planning and operational plan implementation.

Organization	Role	Quantity
PCA	Team Lead	1
	External Communications	1
	Boat Operators (transiting hunting teams to/from island if they are not living on-island), FLIR/spotlight surveys from the water	≥2 (note: may not be required)
	Bait Station Marksmen (trained Gwaii Haanas marksmen involved in the Restoring Balance project could fill this role)	4
	GIS Analyst/Data Manager	1
	General support staff for aerial herding/managing funnel/corral nets, Judas deer capture, general eradication support	5
	Veterinarian for Judas deer (immobilization, sterilization, fitting with radio collars, etc.)	1
Coastal Conservation and partners	Eradication Planning Chief	1
	Implementation Advisor & Stakeholder Engagement	1
	Project Coordinator	1
	Bait Station Marksmen Unit Leader, Dog Hunting Unit Leader, Aerial Hunting Unit Leader, Eradication Field Manager	4
	Professional ground/dog Hunters	3
	Helicopter Pilot and Engineer	2
Contractor	Meat recovery processing team	4

4.5.2 Data Collection & Reporting

Geographic Information Systems (GIS) and GPS data collection methodologies will be integrated with ground-based hunting, aerial hunting, and Judas animal techniques. GPS units would be used to record

hunting effort (hours spent hunting), hunter tracks (ground and aerial), animal encounter locations, and kill sites. Paper datasheets would be used to record biological data from the animal (i.e., gender, age, weight, reproductive condition). This data would be downloaded regularly and entered into Microsoft Excel™ and ArcMap™ databases to analyze hunter tracks (aerial and ground coverage of the island) and other pertinent information. This information would enable the eradication team to target areas where deer were observed but not killed and/or focus on portions of the islands where additional hunting is required, or where a high percentage of deer kills occurred. These data will also allow for real-time monitoring of the operation's progress, and provide information needed to make adaptive management decisions (Lavoie et al. 2007).

4.5.3 Meat Recovery

Deer culled during the experimental trials (specifically aerial herding and bait station hunting) and during the eradication operation (particularly during phase 2 when most deer will be removed) could be processed and donated to local communities including but not limited to First Nations and Sallas residents. This will increase the logistical complexity and cost of the project because of the need to process the meat onsite. It will also require additional personnel and logistical support. However, meat recovery is critical to building support for the project, particularly for the Coast Salish First Nations on whose traditional territory the project will occur. Meat recovery was a critical component of the 2017 Gwaii Haanas Restoring Balance project and helped to build community support for the project (please refer to **Section 6.2.2 Example Projects**, Restoring Balance project).

All reasonable attempts should be made to maximize the amount of meat recovered during the project. However, this is likely to be impacted by:

- the Canada Food Inspection Agency (CFIA) food safety restrictions on the size and condition of deer that are suitable for processing;
- the CFIA food safety requirement to begin processing the carcasses within a short time period after a deer is killed (1-3.5 hours). This increases the risk of disturbing/educating other deer that may be nearby, especially during bait station hunting, and might make these deer more challenging to target and remove, thereby increasing the risk of eradication failure;
- the safety of project personnel during meat recovery (i.e., some carcasses suitable for processing may not be easily recovered without risking personnel injury); and
- the need to ensure that the recovery of carcasses does not negatively impact the eradication operation (i.e., reducing hunting efficacy and/or distracting the eradication team from their primary responsibilities).

The Sallas corral and processing facility could be used to capture large numbers of deer for meat recovery if aerial herding is deemed effective. Please refer to **Section 2.2.2.3 Aerial Herding** for additional information.

Deer that do not meet CFIA standards could be donated to local wildlife rehabilitation centres such as the BC SPCA Wild Animal Rehabilitation Centre to help garner support for the project or left in situ/placed at a designated composting site to allow natural nutrient recycling to occur.

Estimates of the fallow deer population range from 300–500 animals (T. Golumbia pers. comm. 2012) to 700–1,200 animals (Parks Canada Agency 2010). However, based on the results of previous ungulate eradications, the final tally is often far greater than anticipated (e.g., Keegan, Coblentz, & Winchell 1994). For example, during the Guadalupe Island, Mexico, feral goat eradication the total number of animals was estimated at approximately 2,000. When the eradication was completed almost 10,000

animals had been removed (Campbell and Donlan 2005). The eradication operation on Sidney Island could therefore result in a considerable number of deer carcasses. Processing and distribution of culled animals must therefore be very well organized and efficient, with robust back-up plans in place for dispersal, storage, and /or disposal of meat and by-products

Following the experiential trials and phase 2 of the eradication operation, the initial population reduction phase, the level of carcass handling during the Sidney Island eradication should ultimately be directed by its impact on the eradication operation (logistics and financial costs) as well as the influence of public optics, and pressure on conservation managers.

5 Proposed Work Plan, Approach & Methodology: Partner Collaboration (4.1.5)

5.1 Working with Parks Canada Agency

Coastal Conservation has established a long history of successful project collaboration with PCA through the Gwaii Haanas Night Birds Returning Program (phase 1:2010-2012, phase 2: 2012-2013) and the Restoring Balance project, which focused on the removal of black-tailed deer from six islands in Gwaii Haanas (2015-present; please refer to **Section 6.2.1 and 6.2.2 Example Projects,** Night Birds Returning program and Restoring Balance project for additional information). The success of these eradication operations was highly dependent on a close collaboration and effective communications between PCA and Coastal Conservation.

Dr. Andrew Wright, a philanthropist and photographer, visited the Bischof islands during the 2011 eradication and had the opportunity to observe the collaboration of Coastal Conservation and Gwaii Haanas from an outsider's perspective. His comments affirm the effective collaboration that was established during this project:

> *"It is a truly multi-disciplinary, multiagency endeavor with significant jurisdictional overlaps and burdened with complex logistic requirements – it is a classic recipe for inefficient and dysfunctional failure. But nothing could be further than the truth – this has to be the most well-organized cooperative and efficient endeavor I have ever witnessed – it should be a case study for the Harvard Business Review, for many CEO's and corporations could learn from the successes of this program." (Wright 2011).*

Coastal Conservation is also familiar with the fallow deer management issue on Sidney Island. Since 2011, we have participated in preliminary discussions concerning the issue of hyperabundant fallow deer with multiple representatives from PCA's GINPR management staff as well as key stakeholders including Sallas, Islands Trust, the BC SPCA, and the BC Government. In 2012, Coastal Conservation was contracted by PCA to develop a feasibility plan for the removal of fallow deer from Sidney Island (please refer to **Appendix 1** for further information). This expertise, combined with that of our strategic partners, will be critical to the success of the Sidney Island fallow deer project.

5.2 Training and Capacity Building

In addition to restoring the ecological integrity of Sidney Island, the eradication of introduced fallow deer also provides a capacity building opportunity for PCA personnel. Capacity building was a key component of the Gwaii Haanas Restoring Balance project (please refer to **Section 6.2.2 Example**

Projects, Restoring Balance for additional information). The Sidney Island fallow deer eradication provides an opportunity for capacity building within PCA in general. For example, at PCA's request, Coastal Conservation could train designated GINPR personnel in proven ground hunting/eradication techniques, key shooting techniques, and deer behaviour to maximize hunter efficiency in the field. This training will increase hunter efficiency and establish a team-oriented approach for the eradication operation that will maximize the probability of success. Additionally, at least four Gwaii Haanas staff completed intensive marksmanship training under the guidance of Dr. Tony DeNicola, White Buffalo, Inc. (one of Coastal Conservation's strategic partners), prior to undertaking bait station hunting during the Restoring Balance project. If bait station hunting is utilized during the Sidney Island fallow deer eradication, we recommend that PCA investigate the feasibility of using these Gwaii Haanas marksmen under the direction of Dr. DeNicola. This will not only reduce personnel costs but also provide additional training and experience for PCA staff in deer management actions that can be applied to other reserves in the future.

Coastal Conservation is also amenable to undertaking additional training and capacity building opportunities if requested by PCA. However, the cost of such training is not included in our financial bid that accompanies this proposal.

5.3 Meetings & Reporting

Tracking the progress of planning and preparations for projects of this size is extremely important and can help inform future eradication projects, especially if unforeseen challenges are encountered. In addition to development of the feasibility plan, operational plan, DEIA, eradication trials report, and a final project report, Coastal Conservation will document all major decisions during the project (Please refer to **Appendix 2** for example documentation recording major decisions during an eradication operation). During the planning phase, the Eradication Planning Chief (Chris Gill) and other key personnel as required (e.g., Aerial Hunting Unit Leader, Bait Station Unit Leader) will conduct weekly conference calls with the GINPR team lead to provide updates on the planning process and other pertinent information.

In addition to these meetings, project oversight committee meetings should be held quarterly during the early stages of planning and preparations, monthly as the project nears the implementation phase, and bi-weekly during operational implementation. This committee would provide strategic, high-level guidance, direction, and oversight for the project and function as a platform for the project partners and key stakeholders to communicate various aspects of the project. This includes sharing information on project planning, implementation preparations, and external relations requirements, and addressing major issues, decisions, or risks that may affect the outcome of the project. The committee should include PCA representatives (e.g., team lead, external communications, etc.) as well as key stakeholders including but not limited to Sallas, Coastal Conservation (Chris Gill and Gregg Howald), First Nations, BC Government, and the BC SPCA.

During operational implementation, the Eradication Field Manager or Eradication Planning Chief will provide daily updates to the PCA team lead via email or phone call. These updates will include the total number of deer killed by technique and any issues (e.g., equipment, personnel/public/property safety, encounters with the public, etc.).

5.4 Partnerships

The Sidney Island fallow deer eradication project will require meticulous preparations coupled with considerable support from PCA, its partners, and stakeholders to insulate the eradication team from potential socio-political issues during the operation and to ensure that steps have been taken to maximize the probability of success. The support structure needs to be sufficient to maximize the resilience of the project to the inevitable expected and unexpected challenges. Some challenges can be anticipated (please refer to **Section 3.1.1 Socio-political Challenges** for additional information) while others may not be anticipated. Overcoming these challenges will often require a creative and nimble approach to troubleshoot and find solutions. Diligence in proactively anticipating or identifying and resolving challenges before they become disruptive requires the attention and awareness of the entire project team during all phases of the project.

It is not enough to plan the eradication based on logistical or biological considerations alone. The scientific evidence in support of the eradication is clear; however, the socio-political context that the eradication will take place in is complex and potentially volatile, and success will thus also be dependent on non-scientific elements. In addition to detailed planning of operational activities and logistical coordination, the project team will need to secure political support and strategically coordinate communications and outreach to various audiences in attempt to mitigate, minimize, or eliminate factors that may impact project success. These elements are essential and complementary to the scientific and technical foundations of the eradication, and all must work together concurrently for it to succeed. The sheer volume of work to successfully implement large-scale restoration projects requires effective cooperation and coordination by all partners and stakeholders.

The outcome of the Sidney Island fallow deer project will be based on the strength of the strategic partnerships that are formed. Most successfully implemented island eradication projects in Canada and internationally employ a partnership model in which one or more entities with expertise or additive value work together to build, develop, implement, and troubleshoot challenges as they emerge.

An important step in planning a successful fallow deer eradication on Sidney Island is the formation of a formal partnership and working relationship between PCA and Sallas. This partnership will enable access to all parts of the island and allow the project to apply for federal and non-federal grants that are not available to Parks Canada (e.g., Habitat Stewardship Program, Interdepartmental Recovery Fund).

In addition to this partnership there are other governmental and non-governmental organizations that may be engaged during the planning phase to: enable collaboration (e.g., ecosystem recovery monitoring), provide input on project implementation, assist with eradication activities, support permit applications, and access potential funds.

Typically, eradication program partners fall into one or more of five categories:

1. Those that share a common mission/objectives or conservation goal;
2. Landowners/stakeholders;
3. Financial supporters (government agencies, foundations, corporations, private philanthropists);
4. Strategic – some partners are simply strategic in that they may not have a direct, vested interest in the project outcome, but may be able to assist with overcoming bureaucratic hurdles, or assist dealing with adversarial opposition to projects.
5. Academic partners such as Universities.

At minimum, we recommend that representatives from Sallas, the provincial government, and NGO partners join PCA on a Steering Committee to guide, develop, protect, and foster the success of the Sidney Island Restoration Project. Consideration of other partners could be added if and when they are identified and consulted (e.g., CRD).

5.4.1 Federal Governmental Agencies

In addition to PCA's involvement in the project, other federal government agencies such as the Canadian Wildlife Service and Environment Canada may be involved indirectly, primarily through potential funding opportunities for operations of non-federal Sallas lands (e.g., Habitat Stewardship Program, Aboriginal Funds for Species at Risk, Interdepartmental Recovery Fund). Based on several conversations with individuals at Environment Canada (Laurie Wilson, Dave Smith, Moyra Lemon, and Kathleen Moore pers. comm. 2012) it is unlikely that this agency would be directly involved in a particular aspect of the project (e.g., ecosystem monitoring). However, if the project moves forward it would be beneficial to re-contact the agency to see determine if a strategic partnership is feasible, primarily to provide credibility to the project, assist with addressing challenging political hurdles, and managing opposition to the project.

5.4.2 Provincial Governmental Agencies

The British Columbia Ministry of the Environment is supportive of the Sidney Island fallow deer eradication operation and could be involved in several aspects of the project. In terms of permits, the Ministry of Environment can assist with the acquisition of acquiring the general permit application from the Provincial Permit Authorization and Service Bureau, which is required for eradication of fallow deer off the private portion of Sidney Island (S. Pendergast pers. comm. 2017).

The Wildlife Branch of the Ministry of Environment has been previously involved in fallow deer culls on Sidney Island (S. Pendergast pers. comm. 2017) because the private lands on Sidney Island fall under the jurisdiction of the Provincial Wildlife Act. Fallow deer are scheduled as wildlife under the Act; hence, any fallow deer management actions on the island are controlled by this legislation. Conversely, on federal park lands, wildlife is governed under the National Parks Act and is managed as such. Under a collaborative deer eradication program on Sidney Island, both national and provincial jurisdictions need to be considered. Therefore, provincial agency involvement and support in this project is critical.

5.4.3 Non-government Organizations

There are several non-governmental organizations that could potentially be involved in the fallow deer eradication. Partnerships with eradication experts including Coastal Conservation for planning, coordination, implementation, partnerships, and mitigating socio-political issues is critical. Partnerships with other institutions and organizations such as universities, the Gary Oak Ecosystem Recovery Team, and Islands Trust could be utilized to undertake ecosystem monitoring activities to provide an unbiased opinion on the effects (both positive and potentially negative) of fallow deer removal from Sidney Island.

5.5 Regulatory Policy & Compliance

The eradication of fallow deer from Sidney Island will be carried out in close collaboration with PCA's chosen contractor. All actions undertaken during the operation must follow applicable provincial and federal laws, including PCA's internal policies and regulations. The following assessments and permits must also be submitted for review and approval well in advance of implementing the eradication operation:

- Detailed Environmental Impact Analysis (DEIA; Canadian Environmental Assessment Act) – this may be developed collaboratively by PCA and Coastal Conservation
- Species at Risk Act permit – submitted by PCA
- Research and Collection permit – submitted by PCA
- Animal Care permit – submitted by PCA
- Research permit – submitted by PCA
- Provincial General Wildlife Permit for live capture (e.g., home range/movement studies, Judas deer), or eradication of fallow deer on Sallas property (non-federal lands); this includes a provincial animal care application if live capture of animals will take place – submitted by Sallas and Coastal Conservation

Additional regulatory compliance may be required (e.g., compliance of aerial hunting with Transport Canada regulations). All regulatory requirements will be identified in conjunction with PCA during a process of discovery upon initiation of the contract with Coastal Conservation.

5.5.1 Compliance with PCA's Regulations

Coastal Conservation and any subcontractors used for the eradication operation will comply with PCA's policies and procedures concerning personnel/public safety, as well as GINPR's natural and cultural resource management directives. Coastal Conservation will also provide the appropriate certifications as outlined in Section 5 of the Request for Proposal.

6 Project Team Experience (4.2)

6.1 About Us: Technical Expertise & Qualifications

Coastal Conservation is a Canadian organization comprised of eradication experts that have worked throughout North America and globally on numerous successful invasive species eradications. We work closely with governmental and non-governmental agencies, including PCA, BC Parks, BC Ministry of Forests, Lands, and Natural Resources Operations, Environment Canada, Bird Studies Canada, US Fish and Wildlife Service, National Fish and Wildlife Foundation, and Island Conservation to assess, plan, and implement the removal of introduced invasive species from islands and develop effective invasive species re-introduction prevention (biosecurity) programs.

Since 2010, Coastal Conservation has collaborated with PCA and the Haida Nation to plan and implement large-scale invasive species eradications from island ecosystems within Gwaii Haanas, including the removal of invasive Sitka black-tailed deer from six islands in Juan Perez Sound (please refer to **Section 6.2.1 and 6.2.2 Example Projects** Night Birds Returning program and Restoring Balance project).

Coastal Conservation has strategically partnered with White Buffalo, Inc., Native Range, Inc., and Wildlife Capture Management, Ltd. to assist PCA with the planning of the Sidney Island fallow deer eradication project, as outlined in the Request for Proposal, Solicitation Number: 5P420-17-5313/A. Coastal Conservation and its partners are considered global leaders in the eradication of invasive species from islands based on our considerable experience eradicating non-native deer, feral pigs, feral goats, rats, and mice from islands in Canada and around the world. Each team member identified below was intimately involved in the Gwaii Haanas Restoring Balance project and has gained considerable insight

into the socio-political and technical challenges associated with eradicating invasive deer from islands within Canada.

Coastal Conservation's team have more than 20 years of experience conducting successful, large-scale IAS eradications from island ecosystems including but not limited to introduced ungulate species. Data collection, analysis, and technical reporting of project results has been a key aspect of every project, allowing us to document and assess the implementation and outcome of each operation and inform future eradication projects, with the goal of increasing our efficacy and potentially increasing the probability of eradication success. Furthermore, Coastal Conservation's successful and ongoing collaboration with stakeholders and/or Indigenous groups during these IAS eradication projects has been integral to their success. The extensive experience and unique skill sets of our team members are outlined below.

Chris Gill, Program Director, Coastal Conservation

Chris Gill has 25 years of experience in applied conservation biology with a primary focus on removing introduced invasive species to protect endemic wildlife and plants. Since 1999, Chris has contributed his expertise to several invasive species eradications in North America. During the past eight years, Chris worked closely with PCA staff to plan and successfully implement three large-scale IAS eradication operations: Night Birds Returning Program Phase 1 (Bischof and Arichika islands) and Phase 2 (Faraday and Murchison islands)—eradications of black and Norway rats from four islands within Gwaii Haanas—and the Restoring Balance program (removal of Sitka black-tailed deer from six islands within Gwaii Haanas). These projects included: developing feasibility plans, operational plans, and Detailed Environmental Impact Assessments; identifying permitting requirements and assisting with securing permits; identifying key eradication experts to assist with operational implementation; and assisting with data collection, analysis, and technical report development. Please refer to **Section 6.2 Example Projects** for additional information).

Chris also developed the Sidney Island feasibility plan for PCA in 2012, which focused on the eradication of introduced fallow deer to restore native plants and plant communities (please refer to **Appendix 1. Sidney Island Feasibility Plan** for additional information) and is currently developing a feasibility plan for the eradication of invasive mink and raccoon from the Scott Islands for Environment Canada.

Chris has more than 10 years of experience working closely with numerous First Nations organizations on wildlife projects in British Columbia including the Haida Nation, Upper Nicola Band, Nooaitch Band, Cooks Ferry Band, Coldwater Band, Siska Band, and Shackan Band, as well as First Nations organizations including Esh-kn-am Cultural Resources Management and the Nicola Tribal Association. He has also participated in meetings with key organizations and stakeholders concerning the removal of fallow deer from Sidney Island. This includes presenting eradication versus control options at the Sallas annual general meeting in 2012, attending the Sallas picnic to answer questions concerning fallow deer removal, and meetings concerning the project with PCA, Islands Trust, Sallas, and the BC Government since 2011.

Chris has worked with Island Conservation USA, National Fish and Wildlife Service, and the US Fish and Wildlife Service to assess the feasibility of proposed invasive species eradication projects and develop risk assessments for rare, non-target species that might be impacted by invasive species eradication operations (e.g., Farallon Islands invasive mouse eradication, California; Palmyra Atoll black rat eradication, South Pacific; Aceton Gambier invasive rat eradication, French Polynesia). He has a MSc in

ecotoxicology and is a Registered Professional Biologist who has published several peer-reviewed scientific papers. Over the past 25 years, Chris has worked on more than 50 projects that required data collection, data analysis, and technical report development.

In 2014, Chris received the prestigious Parks Canada CEO Award of Excellence for his work on the Night Birds Returning program (invasive rat eradication from four seabird islands in Gwaii Haanas). The CEO Award of Excellence is presented annually and celebrates the outstanding achievements of employees and project partners as they work to fulfil Parks Canada's mandate, vision, and goals.

Gregg Howald, Director of Global & External Affairs, Coastal Conservation

Gregg is one of the foremost experts in the field of island restoration, with 25 years of experience restoring more than 75 islands in 8 countries from the Caribbean to Japan, the Arctic to the deep tropics and the Galápagos Islands. With a diverse technical background that includes training in ecotoxicology, his interest lies in ecological risk assessment and catalyzing the innovation of new, more effective, and safer conservation tools to facilitate larger, more complex, and currently unattainable conservation actions.

Gregg uses his training in social conflict transformation skills during highly controversial projects and public engagement processes to communicate risks and benefits of projects and inform values-based decisions. He effectively communicates the science of conservation and environmental issues in support of complex regulatory compliance processes with regulators, the media, and the public and has extensive experience working with government agencies in Canada and the United States to conduct environmental assessments (e.g., Canadian Environmental Policy Act, US National Environmental Policy Act), design research protocols, and implement field studies to collect data in support of environmental assessments and/or decision-making process (permitting) for invasive species eradications in both countries. Gregg is currently building multi-lateral/transboundary public–private partnerships to bring industry, government, scientists, and NGOs together under national and international policy frameworks that are focused on island restoration programs.

Gregg has been involved with the development, planning, management, and/or direction of island eradication projects in British Columbia (Gwaii Haanas Night Birds Returning project; Gwaii Haanas Restoring Balance project; Langara, Lucy, and Cox islands, Haida Gwaii); the Aleutian Islands, Alaska (Rat Island; Bay of Islands - Adak); the Channel Islands, California (Anacapa Island; Farallon Islands; San Miguel Island; Alcatraz Island); the Gulf of California, Mexico (San Pedro Martir, San Jorge, Farrallon de San Ignacio, Isabel); the Caribbean (Desecheo Island, Puerto Rico; Banco Chinchorros, Mexico); the Galapagos Islands, Ecuador (Rabida and Pinzon Island); the Hawaiian Islands (Lehua Island; Wake Island); the Line Islands (Palmyra Atoll); and the Caroline Islands, Micronesia (Ant Atoll, Pohnpei State Islands; Fanna Island, Palau; Yap). He has also been involved with and participated in the design of a strategic approach to rodent eradications in the Aleutian Archipelago, Alaska, USA; Galapagos Islands, Ecuador; and Micronesia (including Palau).

Pete McClelland, Eradication Expert, Coastal Conservation

Pete has more than 20 years of experience eradicating IAS from islands around the world. He has also provided expert opinion on a wide range of other eradications in New Zealand and overseas, ranging from the Tropical Pacific to the Azores to South Georgia. Pete was involved in Phase 2 of the Gwaii

Haanas Night Birds Returning program (2013) and again during the Gwaii Haanas Restoring Balance project (2017) where he acted as the eradication field manager, overseeing all field operations, managing data collection, and assisting with the development of feasibility plans, operational plans, and the final technical project report.

Tony DeNicola, President, White Buffalo, Inc.

Tony is the president and founder of White Buffalo, Inc., a non-profit organization whose mandate is to conserve native species and ecosystems through the control or eradication of introduced ungulate species. Tony received his PhD in wildlife ecology and management from Purdue University and holds research affiliate positions with the University of Georgia and the Denver Zoological Society. He has worked on hundreds of field projects, produced more than 30 publications in reputable scientific journals, and presented at numerous professional conferences. Most recently, Tony participated in the implementation of the 2017 Gwaii Haanas Restoring Balance project, where he acted as the Bait Station Marksmen Unit Leader, overseeing all bait station hunting during the initial population reduction phase. He also trained select Gwaii Haanas staff in proven ground hunting/eradication techniques, key shooting strategies, and fundamentals of deer behaviour to maximize hunter efficiency in the field and develop capacity for eradication projects within PCA. In addition to his operational experience, Tony has undertaken numerous ungulate control projects in urban environments that have required him to manage often intense public opposition and media scrutiny.

Norm Macdonald, President, Native Range, Inc.

Norm Macdonald has more than 40 years of experience implementing and managing invasive deer and feral pig control and eradication projects. He is credited with pioneering the ungulate control and eradication programs in New Zealand and developing aerial and ground hunting techniques and strategies that have made him one of the world's leading ungulate eradication experts. Many of these techniques have been adopted by governmental agencies such as the New Zealand Department of Conservation, The Galapagos National Park Service, and The Nature Conservancy. Over the span of his career, Norm and his professional team of hunters have successfully completed more than 500 ungulate control and three goat eradication projects in New Zealand and Australia alone.

Norm is currently working with the New Zealand Department of Conservation as a regional, national, and international advisor on ungulate control/eradication projects and recently completed two large-scale and immensely complex red deer eradications on Secretary Island (8,200ha) and Resolution Island (22,000ha), which are located off Fiordland National Park's rugged coast. Norm's other responsibilities include controlling deer/chamois in the Murchison Mountains, a large area of wilderness (50,000ha) on the edge of Lake Te Anau, where the New Zealand Department of Conservation is carrying out an intensive recovery program for Takahe, a critically endangered New Zealand flightless bird.

Innovation and pushing the boundaries of what is possible is what Norm does best. This has led to significant advancements in the way animal control is carried out all over the world. For example, the Galapagos National Park Service/Charles Darwin Foundation modeled the Isabella Island goat eradication (the largest goat eradication in the world) on the techniques Norm developed in New Zealand. His most notable achievement is planning and implementing the successful eradication of feral pigs from Santa Cruz Island (25,000 ha, located approximately 30 km off the coast of Santa Barbara, California) in 2007. This project set the benchmark for all other eradications around the world.

Norm acted as the Aerial Hunting Unit Leader during the 2017 Gwaii Haanas Restoring Balance project. Through a process of adaptive management, Norm and the project's helicopter pilot (please refer to Mike Reed, Wildlife Capture Management, Ltd., below) modified their hunting technique to adapt to unanticipated deer behaviour and the high forest crown closure on the project islands (aerial hunting accounted for 30% of all deer killed during the project).

Norm has also worked as a technical advisor during the planning and implementation of numerous international eradication projects including:

- Australia—Lord Howe Goat eradication, completed project - NSW National Park and Wildlife Service/Lord Howe Board.
- Costa Rica—Coco's Island feral pig, whitetail deer, and goat eradication feasibility study - ICUN.
- Chile—Selkirk Island/ Robinson Crusoe Island goat eradication feasibility study- ICUN/ Island Conservation
- Galapagos—Isabela Island goat eradication planning and implementation - Galapagos National Park Service/Charles Darwin Foundation.
- Mexico— Guadalupe Island goat eradication planning and support Grupo de Ecología y Conservación de Islas (GECI)
- New Zealand—Auckland Island pig eradication feasibility study, Secretary Island deer eradication, Resolution Island deer eradication, Banks Peninsula deer eradication feasibility study/work plan, Shotover River goat eradication feasibility study – DOC; Great Barrier Island goat eradication - Auckland Regional Council
- Puerto Rico - Mona Island pig eradication feasibility study- Island Conservation
- USA— Santa Cruz Island pig eradication, completed project - The Nature Conservancy (TNC); San Diego pig feasibility study and planning - USNPS/ USFS/ San Diego State/ TNC; Santa Rosa Deer eradication, completed project – USNPS; Point Reyes deer eradication, completed project - USNPS

Lennard Sparks, Professional Dog Hunter, Coastal Conservation

Lennard is a professional ground hunter specializing in the use of trained hunting dogs for ungulate control and eradication operations worldwide. In 2008, he received his Bachelor of Applied Sciences from the Auckland University of Technology. Since that time, Lennard has trained and used highly specialized indicator and bailing dogs for a variety of ungulate eradication and control projects aimed at conserving native plants and ecosystems on islands. These include projects focused on eradicating deer, pigs, and goats from extremely rugged and remote islands such as Secretary and Resolution islands, New Zealand (8,200 and 22,000 hectares. respectively). Most recently, Lennard participated in the 2017 Gwaii Haanas Restoring Balance project, where he and his indicator dog Sue worked with four other professional dog hunters to target and remove Sitka black-tailed deer from six rugged islands in Gwaii Haanas.

Mike Reed, Helicopter Pilot, Wildlife Capture Management Ltd.

Helicopter pilot and owner Mike Reed has been conducting aerial wildlife capture operations for more than 25 years and works with some of the most experienced wildlife veterinarians, biologists, and specialists in the field. He has completed more than 4,000 successful captures using net-gun, chemical immobilization (traquilizers), and/or aerial herding/corralling, both in western Canada, New Zealand, and the USA. Mike has been the pilot and capture lead on projects targeting bison, boar, bighorn sheep caribou, elk, moose, wolves, red deer, fallow deer, and sika deer across a wide variety of terrain and

altitudes, ranging from densely treed canopy at sea level to rocky crags at 3,000m. In addition, he has logged more than 3,800 hours as a net-gunner, aerial shooter, and wildlife handler, valuable experience that allows him to understand and anticipate the needs of the aerial shooter to maximize success.

Mike provided vital helicopter support during the 2017 Restoring Balance project. His skills and experience as a pilot allowed the aerial hunting team to navigate the challenging broken canopy on the project islands, which had many tall spruce and cedar spars, to successfully target Sitka black-tailed deer; this is believed to have increased both the deer sightings and the percentage of successful kills.

Moretta Shuert, Project Coordinator, Coastal Conservation

Moretta Shuert completed her BSc in biology at the University of Victoria and spent eight years at the Royal BC Museum, where she managed Natural History specimen collections and associated data, assisted local and international researchers, and developed and presented public education opportunities, including the Aliens Among Us and Behind the Scenes exhibits. After joining Coastal Conservation in 2014, Moretta used her public education experience to develop invasive species curriculum material for elementary school students.

Currently, Moretta applies her knowledge of BC natural history and invasive species management as well as expertise in technical writing to prepare many of the documents required for our major invasive species projects, including biosecurity plans, feasibility studies, operational plans, and environmental impact assessments. Her attention to detail has been essential during previous projects; she has played a vital role in acquiring permits, coordinating local and international travel, and troubleshooting during project implementation.

6.2 Example Projects

The following examples of projects completed by the Coastal Conservation team are directly related to the deliverables outlined in ANNEX E - TECHNICAL EVALUATION as outlined in the Request for Proposal, Solicitation Number: 5P420-17-5313/A and are presented in fulfillment of Mandatory Technical Criterion 3.1 - three relevant project examples. To date, Coastal Conservation has completed two major invasive species eradications within British Columbia: The Night Birds Returning program (phases 1 & 2) and the Restoring Balance project. Detailed overviews of these projects and other pertinent projects completed by our strategic partners included on this proposal are outlined below.

6.2.1 Example Project 1: Night Birds Returning Program, Phase 1 & 2

Location: British Columbia (Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve, and Haida Heritage Site)
Land Manager: PCA
Target species: Norway rats (*Rattus norvegicus*); black rats (*Rattus rattus*); Sitka black-tailed deer (cull)
Year completed: Phase 1: 2011; **Phase 2:** 2013
Island names and size: Phase 1: Bischofs (90 ha) and Arichika (10 ha); Phase 2: Murchison (400 ha) and Faraday (316 ha).
Implementing organizations: Coastal Conservation and Island Conservation

In 2010, PCA, the Haida Nation, the Archipelago Management Board, Coastal Conservation, and Island Conservation began implementing the Night Birds Returning program. The goal of this program was to restore seabird breeding habitat by eradicating introduced Norway and black rats from four island

groups in Gwaii Haanas National Park Reserve and Haida Heritage Site. In addition to benefiting seabirds, removing rats from these islands will restore ecological balance, reduce pressure on other native wildlife, and allow small mammal populations, such as that of the dusky shrew (*Sorex monticolus*), to recover.

While phase 1 and phase 2 projects were both funded under the Night Birds Returning program, each was a distinct project with different target IAS, distinct eradication methodologies, and unique challenges to overcome.

Phase 1

The eradication of Norway rats from the Bischof islands and Arichika Island was achieved using a bait station approach. Completed in 2011, this project required significant planning and preparation, including feasibility plan development, several pre-eradication site visits, detailed operational plan development, permit applications, and applications to the Pest Management Regulatory Agency (PMRA) to approve the use of a rodenticide specifically for conservation purposes. During project implementation, personnel from PCA, Coastal Conservation, and Island Conservation worked effectively and efficiently as a team to successfully eradicate rats from both island groups.

Bait stations were checked by field personnel on each island every 24–48 hours during the primary eradication phase and every 3–5 days during the secondary phase. The amount of bait added to stations on Arichika Island was adjusted as the eradication progressed using an adaptive management process to maximize the probability of eradication success. Changes to bait application rates were based on observed bait uptake rates on each island and the influence of adverse weather events that prevented field personnel from accessing some of the stations.

Handheld field personal computers and paper datasheets were used to record several data parameters during each visit to the bait stations. Data was downloaded to a SQL server database and analyzed daily both spatially using Arcview GIS™ and graphically using Microsoft Excel™. Data analyses included monitoring of bait uptake at each station and for individual islands, carcass search effort, and wildlife sightings. Daily data analyses enabled real time monitoring of the eradication progress and allowed the eradication managers to react to variations in bait uptake rates on an island-by-island basis. Upon completion of the project, the data was further analyzed, and a final technical report was developed by Coastal Conservation outlining implementation details and the results of the eradication operation.

Remote trail cameras were used as a tool to monitor target and non-target activity, including bait uptake, station tampering, and general wildlife activity. Data from the remote cameras was analyzed to monitor the progress of the eradication and effectiveness of the non-target mitigative measures.

During the eradication operation, field personnel were stationed in a remote camp. Because personnel were required to work and live in close proximity to each other for long periods of time the establishment of a close working relationship among PCA staff and Coastal Conservation staff was essential to the success of the project.

Phase 2

Following the success of phase 1, PCA, the Haida Nation, the Archipelago Management Board, Coastal Conservation, and Island Conservation continued the collaboration to plan and implement phase 2 of the Night Birds Returning Program, the eradication of black rats from Murchison and Faraday islands using aerial broadcast of a rodenticide bait. Completed in 2013, this was the first aerial eradication in

Canada and thus required significant preparation time, including a second application to the PMRA to approve a rodenticide bait for application via aerial broadcast.

The project required two years of planning and preparation, including: development of a feasibility plan, pre-eradication trials to determine the initial bait application rate, development of a detailed operational plan, and calibration of the bait bucket. Implementation was undertaken jointly by PCA and Coastal Conservation with other experts from New Zealand, Mexico, and the US on hand to provide advice as the eradication proceeded. The actual implementation was highly complex, involving dozens of field personnel, multiple vessels, and a helicopter. Given the intricate nature of the operations, an Incident Command System was established to ensure that all field personnel worked effectively as a team to accomplish their individual tasks.

The eradication of black rats from Murchison and Faraday islands posed several challenges, including bait competition by non-target species (introduced Sitka black-tailed deer), bait interception by the dense forest canopy, minimizing bait entering the marine environment, potential negative impacts to non-target species, and determining the optimal timing for the eradication operation. Prior to implementing the eradication operation, an intensive cull of Sitka black-tailed deer was completed on Murchison and Faraday islands by PCA staff, following input from Coastal Conservation on the methods and equipment to use to maximize efficacy. Strategies included shoreline hunting from boats, line drives, and the use of hunting dogs. The success of this cull was based on the quality and motivation of the PCA hunters utilized for the project.

Several data parameters were collected during the eradication by the GIS technician, who processed data and scanned areas flown by the helicopter for potential baiting gaps or low bait application rates. The eradication management team reviewed the data analysis in real time and adjusted application rates and/or flight paths accordingly (adaptive management). Upon completion of the project, the data was further analyzed, and a final technical report was developed by Coastal Conservation that outlined implementation details and the results of the eradication operation.

Follow-up

New Norway rat incursions to three of the project islands were detected in 2014 (Bischof islands) and in 2017 (Murchison and Faraday islands). PCA is currently investigating the possible causes of the incursions (e.g., natural incursion from Lyell Island or a biosecurity breach) and assessing options to address this reinvasion. Arichika Island remains free of invasive rats.

6.2.2 Example Project 2: Restoring Balance Project

Location: British Columbia (Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve, and Haida Heritage Site)
Land Manager: PCA
Target species: Sitka black-tailed deer
Year completed: 2017
Island names and size: Ramsay (1,622 ha), House (33 ha), Hotspring (17 ha), Murchison (400 ha), Faraday (316 ha), and the Bischof islands (90 ha).
Implementing organizations: Coastal Conservation, White Buffalo, Inc., Native Range, Inc., and Wildlife Capture Management, Ltd.

In 2015, PCA, the Haida Nation, and Coastal Conservation again partnered to undertake a third large-scale ecosystem restoration project in Gwaii Haanas called *Llgaay gwii sdiihlda* - Restoring Balance. The project aimed to remove Sitka black-tailed deer from six islands: Ramsay, Faraday, Murchison, Hotspring, House, and the Bischofs to encourage the regeneration of plants, animals, and Haida cultural uses.

The project required two years of planning and preparation including development of a feasibility plan, detailed environmental impact assessment, and detailed operational plan; permit applications, including work permits for non-Canadian citizens employed by Coastal Conservation for the project (white Buffalo, Inc. and Native Range, Inc.), and general planning and preparations. The operational plan developed during the planning phase outlined the project phases and order of implementation, operational timeline, personnel and equipment needs, data management, efficacy monitoring, meat processing, biosecurity, training and capacity building, logistics, permitting, public safety, and mitigative measures for native wildlife.

Four PCA personnel and a local hunter completed marksmanship training and deer behaviour training prior to project implementation and during phase 1 of the operation under the direction of Dr. Tony DeNicola (White Buffao, Inc.). This training allowed the PCA personnel and local hunter to further refine shooting skills, knowledge of deer behaviour, key decision-making processes to maximize hunter efficiency in the field, and ways to avoid educating any animals to the eradication techniques being employed. This training will be critical for post-eradication biosecurity operations to maintain a low deer density on the southern coastline of Lyell Island (to reduce the likelihood of deer swimming to the project islands) and rapidly respond in the event of a reinvasion of the project islands.

Operational implementation was undertaken jointly by PCA, Coastal Conservation, White Buffalo, Inc., Native Range Inc., and Wildlife Capture Management, Ltd. The operation was highly complex, involving approximately 30 field personnel, multiple vessels, and a helicopter. A modified Incident Command System (ICS) management structure, the PCA standard for incident management, was used to establish lines of supervisory authority and formal reporting relationships.

Multiple techniques were utilized to target deer on the project islands including: bait station hunting, shoreline hunting from boats using spotlights and FLIR, aerial hunting, hunting with detection and bailing dogs, line drives, and combinations of these hunting techniques. During the eradication operation, an adaptive management approach was critical to allow the eradication team to quickly respond to unpredicted deer behaviour, changes in deer behaviour as the project progressed, and other unforeseen circumstances (e.g., lower than anticipated efficacy of a particular hunting technique, weather, equipment challenges). Adaptive management during the implementation included a variety of strategy changes and the addition of shoreline hunting as an eradication technique. The ability of the eradication team to quickly adapt helped to maximize the number of deer that were removed from the project islands.

A total of 595 deer were removed during the project including all known deer from Ramsay, House, Hotspring, Murchison, and the Bischof islands. More than 635 kg of venison was distributed to seniors, school children, and community groups across Haida Gwaii via community food programs such as Meals on Wheels and the Haida Gwaii Local Foods to Schools (LF2S). In addition, the Haida Nation and School District 50 will use the deer skins and hooves for educational, community, and ceremonial purposes. Additional meat (approximately 75 animals) was used to feed the Restoring Balance team during five months of project implementation.

While the globally accepted methodology to confirm success for ungulate eradications is to conduct intensive grid searches scaled to the size of the project island, the lower than anticipated efficacy of phase 1 left insufficient time and budget to complete these searches. PCA plans to conduct additional hunting on the project islands in 2018 and 2019 to confirm eradication success.

While the project remains incomplete from an eradication standpoint, the substantial reduction of deer on the project islands have reduced the impacts on native vegetation, particularly on Ramsay Island. The lessons learned during the project have increased our knowledge of the eradication techniques that are most applicable to the Haida Gwaii environment and the challenges that can be associated with large-scale restoration projects.

Eradication methods employed during the operation:

- Bait station hunting
- Aerial hunting
- Ground hunting with indicator and bailing dogs
- Shoreline hunting from boats using spotlights and FLIR

6.2.3 Example Project 3: Santa Cruz Island Feral Pig Eradication

Location: California
Target species: Feral pigs
Year completed: 2007
Island name and size: Santa Cruz Island (24,000 ha).
Land Mangers: The Nature Conservancy and National Parks Service
Implementing organizations: Native Range, Inc. and White Buffalo, Inc.

Santa Cruz is a semi-arid island with approximately 50% forest cover that is characterized by steep, rugged terrain and located approximately 30 km off the coast of Santa Barbara, California. The Santa Cruz Island feral pig eradication was a joint project funded by The Nature Conservancy (TNC) and the US National Park Service (USNPS).

The eradication team included nine hunters, two helicopter pilots, one GIS technician, one office support person/cook, one helicopter, three trucks, and twenty-two hunting dogs from New Zealand. Despite constant law suits from animal rights groups attempting to stop the project, the operation was completed on time, with the last feral pig dispatched 15 months after the start of the project. A further 4 months of intensive monitoring was completed to confirm eradication success. During the eradication, a total of 5,036 pigs were removed from the island.

Many additional factors contributed to the rapid success of the project. The use of only professional hunters to design and then deploy a sequence of control methods minimized the chance of pigs either learning or escaping from their first encounter with the control technique. Employing several eradication methods in sequence minimized the opportunity for any pig to learn to avoid the hunters and become at best a costly animal to ultimately find and dispatch near the end of the operation or at worst a survivor that would cause the eradication to fail. Comprehensive effort and outcome data were collected and evaluated on a daily basis, which allowed for appropriate short-term adaptive implementation by the hunting team and informed strategic decisions by the program managers and the contractor in the medium term. The team approach to hunting was also a key to efficiency. The integration of ground and aerial hunting and the use of highly trained dogs, all supported by

communications and GPS technology, optimized the chance that all of the pigs in the area being hunted were at risk during any single hunting event.

Several animal protection organizations expressed concerns about the project, specifically questioning the need to eradicate pigs. TNC and USNPS attempted to maintain open communications with these groups with the goals of showing that the project was based on a serious assessment of environmental impacts and the methods and contractors were chosen to minimize the suffering of individual animals.

Eradication methods employed during the operation:

- Trapping
- Aerial hunting
- Bait station hunting
- Aerial net gunning
- Helicopter assisted team hunting with bailing dogs
- Judas pigs (including aerial & ground radio telemetry)
- Intensive GIS data collection

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Appendix 1: Sidney Island Feasibility Plan

Sidney Island Restoration and Conservation Initiative: Eradication of Fallow Deer Feasibility Study

Prepared for:
Gulf Islands National Park Reserve

July 3, 2012

COASTAL CONSERVATION

Conservation Done Efficiently

Prepared by: Coastal Conservation
Native Range
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INTRODUCTION

The purpose of this document is to assess the restoration of Sidney Island through the complete removal (eradication) of non-native European Fallow Deer (*Dama dama*). The eradication of invasive fallow deer from Sidney Island is feasible and will encourage the natural recovery of the islands' native wildlife, plants, and plant communities.

1.1 Impacts of Introduced Herbivores on Island Ecosystems

Islands occupy approximately three percent of the earth's surface but give refuge to between 15 and 20 percent of all plant, reptile and bird species. Islands are also characterized by a high rate of species endemism (Courchamp et al. 2002). Approximately 70 percent of confirmed animal extinctions have been island species, and most of these extinctions were the result of invasive species. At present, more than half of all IUCN red listed avifauna are threatened by introduced species (Birdlife International 2012). Biological invasions on islands resulting from the introduction of non-native species are a major driver of biodiversity loss which not only affects native plant and wildlife species, but also human economy, health and ecosystem services provided by intact systems (Veitch et al. 2011).

Introduced invasive vertebrates, including herbivores are one of the most significant threats to insular ecosystems globally and have impacted islands for more than a century leading to numerous plant extinctions and negative effects on native wildlife (Wallace 1892, Melville 1979, Ebenhard 1988, Courchamp et al. 2002, Donlan et al. 2002). Altered species composition is a common attribute of mammalian herbivore-plant interactions in many island ecosystems and frequently occurs with the introduction of non-native herbivores (Donlan et al. 2002). An overabundance of foraging non-native herbivores can reduce seedling density and sapling growth preventing natural tree regeneration, reduce understory vegetation leading to the alteration of plant community composition and dominance of less preferred, more browse tolerant species, and spread introduced invasive plant species.

Plant biomass, species richness and insect diversity are all interconnected, thus the direct alteration of one will indirectly affect most are all of the others. The detrimental effects to native plant life and communities in turn instigates cascading effects on soils, invertebrates, birds and other mammals (Courchamp et al. 2002, Donlan et al. 2002, Allombert et al. 2005, Allombert et al. 2005a, Campbell & Donlan 2005, Stockton et al. 2005, Gaston et al. 2006, Manuwal & Sweitzer 2007, Martin et al. 2011). Consequently, changes to species compositions, whether plant and/or animal species, leads to altered ecosystem states eventually affecting entire ecosystem processes (e.g. nutrient cycling; Donlan et al. 2002).

Despite the dramatic changes that occur, shifts in plant species and communities on islands can be reversed through control and/or removal of introduced herbivores (Donlan et al. 2002, (Veitch et al. 2011).

1.2 Overview of Invasive Alien Species Eradications Worldwide

To date, 1,159 whole-island Invasive Alien Species (IAS) eradication projects have occurred or are in process (Figure 1, IC 2011). Of this total, 353 projects targeted herbivores: cattle, sheep, donkey, horse,

deer, pig, goat, rabbit, hare, and marmot. While introduced herbivores directly impact native plants (Vitousek 1990, Campbell and Donlan 2005), this group of species also disrupts or alters ecosystem processes and can cause lasting damage to island biota (Brown et al. 2001, Fukami et al. 2006, Traveset and Richardson 2006, Mulder et al. 2009).

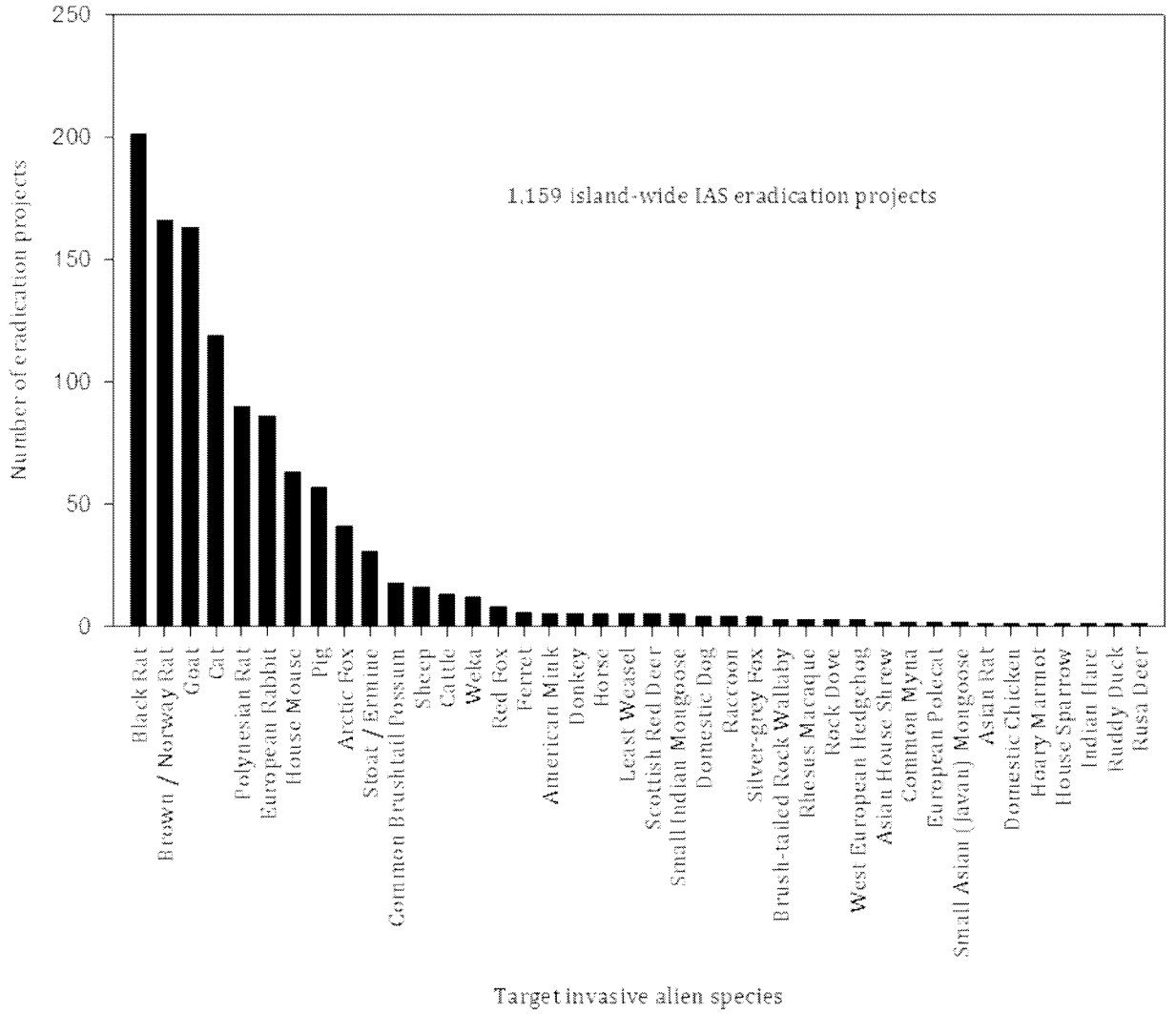

Figure 1. A count of known invasive alien species eradication projects on islands (IC 2011).

Lessons learned from decades of eradication attempts and subsequent advances in eradication technology have made the removal of IAS from islands a highly effective conservation tool (Towns and Broome 2003, Veitch et al. 2011) (Table 4). The eradication of IAS is now recognized as a prerequisite to the restoration of insular ecosystems and the protection of native species (Bellingham et al. 2010). While IAS eradication projects share the common goal of removing targeted populations, the variation in eradication environments and the surrounding factors between projects preclude the development of a general recipe for eradication.

Table 4. A summary of the status of 1,159 invasive alien species eradication projects on islands (IC 2011). The projects included in the "reinvaded after a successful eradication" category were also counted as "successful" eradications.

Successful	In Progress	Unknown	Failed	Reinvaded after a successful eradication
78%	6%	6%	10%	4%

1.3 Overview of Ungulate Eradications Worldwide

A review of Island Conservation's Global Island Invasive Vertebrate Eradication Database (IC 2011) found 267 eradication projects focused on the removal of introduced ungulates from islands, with 226 succeeding (85% successful) and 6 instances of ungulate reinvasion following an eradication (Table 5). The ungulate eradications occurred between 1916 and 2011 on 197 islands in 38 countries. Fifty of the ungulate eradications involve the removal of more than one species. A majority (67%) of ungulate eradication projects occurred in four countries: 66 in New Zealand, 50 in Australia, 35 in the United States, and 26 in Ecuador. Two goat eradications occurred in Canada, both in the Gulf Islands in the late 1980's: Saltspring Island, and Sidney Island (Shackleton 1999). The mean duration of ungulate eradication projects ranges from 1 to 29.5 years (Table 6); much of the variation comes from project-specific idiosyncrasies in the eradication environment, funding limitations, and politics.

Table 5. A summary of known ungulate eradications on islands (IC 2011). Note: this table does not include eradication operations that are currently underway.

Target animal	Eradication status					
	Planned	In progress	Failed	Successful	Unknown	Total
Cattle	-	-	-	13	-	**13**
Sheep	-	1	-	15	-	**16**
Donkey	-	2	1	2	-	**5**
Goat	-	6	11	141	5	**163**
Horse	-	-	-	4	1	**5**
Deer/elk		3	1	4		**8**
Pig	1	-	2	49	5	**57**
Total	**1**	**12**	**15**	**228**	**11**	**267**

Table 6. The mean duration of ungulate eradications on islands (IC 2011).

Target animal	Mean duration (years)	Number of cases	Standard deviation (±)
Cattle	3.7	6	4.2
Sheep	7.6	10	12.9
Donkey	29.5	2	2.1
Goat	4	25	9.8
Horse	1	1	-
Deer/elk	1.25	5[12]	2.1
Pig	7.4	13	10.9

[12] The Point Reyes fallow deer eradication occurred in a National Park that was part of the mainland.

Eradication failures are prime opportunities to recognize removal methods that work, and retool ones to that do not. Failures are reported less frequently and with less detail than are successes; however, the following accounts include warning factors that should receive careful consideration when planning and executing an ungulate eradication. Campbell and Donlan (2005) give a list of the following reasons for nine failed goat eradications: denied access to private land, failure to remove final goats at low densities, eradication halted due to politics, ineffective removal method, lack of effort, lack of support from local community, and change in governance. Parkes et al. (2002) state that budget limitations were the primary cause of failure for the Lord Howe Island goat eradication project. Brown (2005) provides the following list of probable causes for the failure of initial efforts to remove Scottish red deer from Secretary Island, New Zealand:

1. Underestimate of the incursion rate
2. Incomplete coverage of the island
3. Unsystematic deployment of 1080 (Sodium fluoroacetate) and bait shyness
4. Insufficient effort
5. Budget fatigue
6. Unclear or inconsistent strategy toward eradication
7. Pessimism ("it can't be done") amongst project management staff
8. Decreased use of hunting dogs due to extensive and repeated applications of 1080 bait
9. Conflict with commercial interests – aerial hunting was financially-driven rather than results-driven
10. Ground hunting was a solo rather than team effort
11. High turnover rate for project management staff

The lessons mentioned above, combined with the general eradication guidelines, exemplify the level of detail and rigor that is required to successfully complete an ungulate eradication.

1.3.1 Methods Used to Eradicate Ungulates

In recent decades, eradication campaigns have seen considerable advances in strategies and tactics for achieving eradication goals (Veitch et al. 2011). While hunting is the most frequently employed method for eradicating ungulates from islands (Table 7), many projects augment hunting with one or more of the following methods: Sentinel animals, also known as Judas animals, (Wilcox et al. 2004, Sharp and Saunders 2008), Judas animals brought into permanent estrus (Campbell et al. 2005), specially trained hunting dogs (McIlroy and Saillard 1989, Cruz et al. 2005), fencing (Aguirre et al. 2005), use of aerial hunting by helicopter (Kessler 2002, Parks et al. 2010), and use of pesticides (Fraser et al. 2003). Deer eradications do not differ from projects targeting other ungulate species in that hunting is the primary removal method (Table 8).

Table 7. A summary of the primary methods employed to eradicate invasive ungulates from islands

Target animal	Primary eradication method			
	Hunting (%)	Trapping (%)	Other (%)	Unknown (%)
Cattle	31	-	-	69
Sheep	50	6	-	44
Donkey	60	-	-	40
Goat	56	3	2	39
Horse	-	-	-	100
Rusa deer	-	-	-	100
Scottish red deer, fallow deer, elk	100	-	-	
Pig	23	-	-	77
Total	**47**	**2**	**1**	**49**

Table 8. A summary of the methods employed to eradicate invasive deer from islands

Country	Island	Target IAS	Start	End	Status	Primary method	Alternate methods
USA	Santa Rosa	Elk and mule deer	2011	2011	Successful	Hunting	Sentinel animals
USA	Point Reyes (mainland)	Fallow deer	2009	2010	Successful	Hunting	Trapping
New Caledonia	Le Predour	Rusa deer	2009		In Progress	Hunting	
New Zealand	Anchor	Scottish red Deer	2002	2005	Successful	Hunting	Other
	Secretary	Scottish red Deer	1975	1975	Failed	Hunting	Poison
		Scottish red Deer	2009		In Progress	Hunting	Trapping, poison
	Resolution	Scottish red Deer	2011		In Progress	Hunting	
	Pomona	Scottish red Deer	2007	2007	Successful	Hunting	Trapping

The following is a list of deer eradication methods employed in New Zealand where five of the six known deer eradication projects occurred.

1. Ground Hunting: There are various forms of ground hunting, with single hunters or teams of hunters and with or without dogs used to locate or bail deer. Team hunting decreases the proportion of animals that escape their first encounter with the hunters, and handheld VHF radios and GPS units assist with the coordination of team hunting efforts (Fraser et al. 2003)

2. Aerial Hunting: Aerial hunting is a well-developed method for removing deer. Even though this method is most successful in non-forested habitats, it is often possible to shoot animals in forests either through the canopy or when the animals are using slips, river terraces, or other open habitats (Fraser et al. 2003).

3. Sentinel Deer: Releasing animals fitted with radio telemetry collars into the treatment area can lead ground or aerial hunters to conspecifics (Fraser et al. 2003). This method is

especially effective with social species, like fallow deer.

4. Trapping: Trapping deer in fenced pens, often with radio-controlled gates to save on the need for frequent inspection, can be an effective removal method (Fraser et al. 2003, Crouchley et al. 2007).

5. Aerial Baiting: Deer can also be poisoned by aerial baiting. Campaigns using the acute toxicant 1080 to control bushy-tailed possums in New Zealand kill between about 30% and 93% of deer (Fraser et al. 2003). The use of pesticides to remove deer from islands comes with the added risk of exposing and harming non-target species; poison-based methods should be give critical examination before incorporation into eradication plans.

6. Foliar Baiting: Gels laced with the rodenticide 1080 and smeared on leaves of palatable plant species have successfully reduced high-density deer populations in New Zealand; however, this method is likely to be less successful against low density populations where food is abundant, and is unlikely to eradicate such populations if used as a stand-alone method (Fraser et al. 2003).

2.0 BACKGROUND

2.1 Project Site Description

2.1.1 Physical Environment[13]

Sidney Island is located in the Southern Gulf Islands just east of the Saanich Peninsula (Vancouver Island) (Figure 2). The island is made up primarily of marine sands and clays and is an artifact of glacial outwash materials deposited in the area approximately 12,000 years ago. The vegetation is made up of second growth coastal Douglas fir forests fringed by Garry oak and arbutus woodlands and coastal bluffs. With the exception of several small dugout ponds, there is no significant source of surface water on the island. Considerable clearing and pasture seeding has occurred in the past resulting in large open meadow areas interspersed throughout the island. The coastline is dominated by sand beach with a rocky shoreline south of Miner's Bay on the eastern and southern shores. There is a large lagoon and spit complex to the Northwest known locally as Sidney Spit.

[13] From Golumbia (2010).

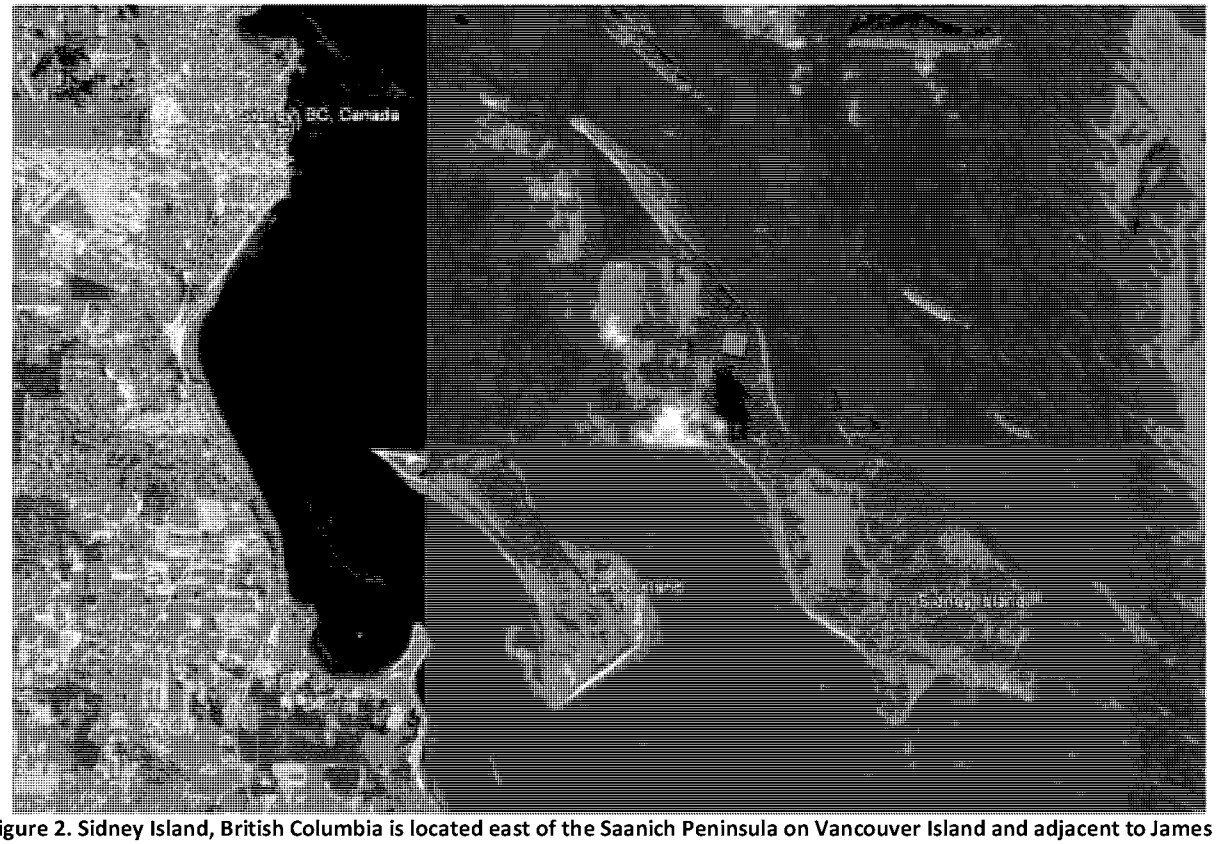

Figure 2. Sidney Island, British Columbia is located east of the Saanich Peninsula on Vancouver Island and adjacent to James Island.

2.1.2 Human Environment

Pre-contact, Coast Salish First Nation communities established camp settlements as well as sacred cultural sites and used areas of Sidney Island for hunting, fishing, harvesting seafood and plants (Golumbia et al. 2011). Following European contact, the Hudson Bay Company operated the island as a farm, and in the early 1900s, Sidney Island was used as a private hunting club. Brick works operations occurred on the north end of the island into the 1930s, around the same time that fallow deer were introduced, and the southern part was managed as a sheep farm until the late 1960s (Golumbia 2008, Golumbia et al. 2011).

Today, Sidney Island is managed under two jurisdictions. Gulf Islands National Park Reserve, located at the northern end of the island comprises approximately 14% (120 ha) of the island. The remaining 715 ha is owned by Sallas Forest Strata Corporation (herein referred to as "Sallas"). Both Parks Canada and Sallas share a common interest to protect the ecological integrity of Sidney Island and recognize that effective fallow deer management is required to mitigate continued deterioration of the island's natural environment. Sallas has managed fallow deer since 1981 and has developed considerable expertise in the technical aspects of deer management.

2.2 Sidney Island Flora & Fauna

2.2.1 Mammals

There are only five native small mammals on Sidney Island[14]: deer mouse (*Peromyscus sp.*), little brown bat (*Myotis lucifugus*), American mink (*Neovison vison*), river otter (*Lontra canadensis*), and red squirrel (*Tamiasciurus hudsonicus*; Columbia 2008). The island also hosts a number of invasive mammals including: black and Norway rat (*Rattus* spp., unconfirmed), grey squirrel (*Sciurus carolinensis,* extirpated), Townsend's chipmunk (*Neotamias townsendii*, extirpated), raccoon (*Procyon lotor*), European rabbit (*Oryctolagus cuniculus*) and fallow deer (*Dama dama*, Columbia 2008).

2.2.2 Birds

Ninety-three bird species have been recorded on Sidney Island on in the surrounding waters (Golumia 2008, please refer to appendix A for additional information), although only a small subset breed on the island. Of these species there are five federally designated Species at Risk and ten introduced species (Table 9 and Table 10).

Table 9. Federally designated bird species recorded on Sidney Island or in the waters surrounding the island (adapted from Columbia 2008).

SPECIES		CONSERVATION STATUS	
Common Name	**Scientific Name**	**Provincial/BC List**	**Federal/COSEWIC**
Great Blue Heron, *fannini* subspecies	*Ardea herodias fannini*	S2S3B,S4N/Blue	Special Concern
Long-billed Curlew	*Numenius americanus*	S3B	Special Concern
Marbled Murrelet	*Brachyramphus marmoratus*	S3B,S3N/Blue	Threatened
Peregrine Falcon, *anatum* subspecies	*Falco peregrinus anatum*	S2B/Red	Threatened/Special Concern
Western Screech-owl, *kennicotii* subspecies	*Megascops kennicottii kennicottii*	S3/Blue	Special Concern

Table 10. Summary of known introduced bird species on Sidney Island (adapted from Golumbia 2008).

COMMON NAME	SCIENTIFIC NAME
Blue Grouse	*Dendragapus obscurus*
California Quail	*Callipepla californica*
Canada Goose	*Branta canadensis*
European Starling	*Sturnus vulgaris*
Green Javanese Pheasant	*Phasianus spp.*
Reeve's Pheasant	*Syrmaticus reevesii*
Ring-necked Pheasant	*Phasianus colchicus*
Rock Dove	*Columba livia*
Turkey	*Meleagris gallopavo*
White Peacock	*Pavo* sp.

2.2.3 Plants & Plant Communities

Sidney Island is situated within the unique coastal Douglas fir moist maritime Biogeoclimatic zone (BCG), the rarest subzone in BC. Vegetation on the island consists of second growth coastal Douglas fir (*Pseudotsuga menziesii*) forests bordered by Garry oak (*Quercus garryana*) and arbutus (*Arbutus*

[14] Columbian black-tailed deer (*Odocoileus hemionus columbianus*) were introduced to Sidney Island although remnant populations are considered native (Columbia 2008).

menziesii) woodlands (Columbia 2008). There are at least nine provincially listed native plant communities that are confirmed present, or that have been extirpated from the island (Table 11). Garry oak and associated ecosystems are some of the richest and most biologically diverse ecosystems yet are also among the most endangered in Canada. These ecosystems are home to an extensive variety of plant and wildlife species, many of which are at risk, and support the highest plant diversity of any terrestrial ecosystem complex in coastal British Columbia (GOERT 2011, 2012).

Table 11. Summary of provincially listed forest plant communities that are confirmed present, or listed as extirpated from Sidney Island (adapted from Columbia 2008).

PLANT COMMUNITY		PROVINCIAL/BC LIST CONSERVATION STATUS
COMMON NAME	SCIENTIFIC NAME	
Black knotweed/yellow sand-verbena	*Polygonum paronychia/Abronia latifolia*	S1/Red
Douglas fir/arbutus	*Pseudotsuga menziesii/Arbutus menziesii*	S2/Red
Douglas-fir/dull Oregon-grape	*Pseudotsuga menziesii/Mahonia nervosa*	S2/Red
Douglas-fir/Alaska oniongrass	*Pseudotsuga menziesii/Melica subulata*	S1/Red
Garry oak/arbutus	*Quercus garryana/Arbutus menziesii*	S1/Red
Garry oak/California brome	*Quercus garryana/Bromus carinatus*	S1/Red
Garry oak/oceanspray	*Quercus garryana/Holodiscus discolor*	S1/Red
Western red cedar/slough sedge	*Thuja plicata/Carex obnupta*	S2S3/Blue
Western red cedar/Indian plum	*Thuja plicata/Oemleria cerasiformis*	S1/Red

Within these plant communities, 157 plant species have been identified on Sidney Island (Columbia 2008; please refer to appendix B for additional information). Surveys conducted in 2004 and 2005 identified five rare plant species on Sidney Island, one of which is designated as Endangered under the Federal Species at Risk Act (SARA, Fairbarns 2005, Columbia 2010, BC Conservation Data Centre 2012). There are two additional rare plant species on Sidney Island that are considered at risk (Table 12; Columbia 2008).

Table 12. Conservation status of rare plant species found on Sidney Island (adapted from Columbia 2008).

PLANT SPECIES		CONSERVATION STATUS	
Common name	Scientific name	Provincial/BC List	COSEWIC
contorted-pod evening-primrose	*Cammissonia contorta*	S1/Red	Endangered
graceful arrow-grass	*Triglochin concinna*	S2/Red	-
yellow sand-verbena	*Abronia latifolia*	S2S3/Blue	-
fleshy jaumea	*Jaumea carnosa*	S2S3/Blue	-
American glehnia	*Glehnia littoralis* ssp. *leiocarpa*	S3/Blue	-
creeping wildrye	*Leymus triticoide*	S1/Red	-
foothill sedge	*Carex tumulicola*	S2/Red	Endangered

Contorted-pod evening-primrose is considered critically endangered with only eight populations present on the gulf islands (COSEWIC 2006). Although yellow sand-verbena is more common, it functions as the host plant for the sand-verbena moth (*Copablepharon fuscum*), which is provincially red-listed, and designated as endangered under Schedule 1 of SARA and by COSEWIC (BC Invertebrates Recovery Team 2008, Columbia 2008). Creeping wildrye and foothill sedge are both Garry oak ecosystem associated species, which are among the most endangered ecosystems in Canada (BC Conservation Data Centre 2012).

In addition to the native plants there are approximately 30 known introduced plant species on Sidney Island (Table 13). Four of these non-native plants have been identified as invasive: English hawthorn (*Crataegus monogyna*), Scotch broom (*Cytisus scoparius*), European beach grass (*Ammophila arenaria*) and Himalayan blackberry (*Rubus armeniacus*, Golumbia 2008).

Table 13. Summary of non-native plant species on Sidney Island (adapted from Golumbia 2008).

COMMON NAME	SCIENTIFIC NAME
common hawthorn	*Crataegus monogyna**
Himalayan blackberry	*Rubus discolor**
Scotch broom	*Cytisus scoparius**
alsike clover	*Trifolium hybridum*
bull thistle	*Cirsium vulgare*
Canada thistle	*Cirsium arvense*
common chickweed	*Stellaria media*
common stork's-bill	*Erodium cicutarium*
curled dock	*Rumex crispus*
dovefoot geranium	*Geranium molle*
field bindweed	*Convolvulus arvensis*
field parsley-piert	*Aphanes arvensis*
hairy cat's-ear	*Hypochaeris radicata*
mouse-ear chickweed	*Cerastium fontanum*
poision-hemlock	*Conium maculatum*
purple cudweed	*Gnaphalium purpureum*
ribwort plantain	*Plantago lanceolata*
small hop-clover	*Trifolium dubium*
wall lettuce	*Lactuca muralis*
barren brome	*Bromus sterilis*
cheatgrass	*Bromus tectorum*
colonial bentgrass	*Agrostis capillaris*
common velvet-grass	*Holcus lanatus*
creeping bentgrass	*Agrostis stolonifera*
crested dogtail	*Cynosurus cristatus*
early hairgrass	*Aira praecox*
European beachgrass	*Ammophila arenaria**
perennial ryegrass	*Lolium perenne*
rough bluegrass	*Poa trivialis*
sweet vernalgrass	*Anthoxanthum odoratum*

*non-native plant species that have been identified as invasive.

Although grey beach peavine (*Lathyrus littoralis*), beach bindweed (*Convolvulus soldanella*) and black knotweed (*Polygonum paronychia*) have not been found on Sidney Island, suitable habitat for these rare plant species does exist (Golumbia 2008). These species have been found on islands adjacent to Sidney Island; therefore, it is possible that they may have once been present on the island.

2.3 Impacts of Fallow Deer on Sidney Island

Overgrazing by hyper abundant herbivores changes vegetation composition and cover and can lead to a decline in abundance and diversity of animals across taxa (e.g. rodents: Flowerdew & Ellwood 2001,

carnivores: Blaum et al., 2007; birds: Martin et al. 2011; reptiles and amphibians: Bullock et al. 2002).

On the Gulf and San Juan Island archipelagos of western Canada and the United States the lack of natural predators (e.g. cougars, *Felis concolor*) and limited hunting has lead to a hyper abundance of both native black-tailed deer (*Odocoileus hemionus*) and, on particular islands such as Sidney Island, British Columbia, introduced fallow deer.

European fallow deer are native to Asia Minor, the southern Mediterranean region, and possibly northern Africa (Wikipedia 2012). In the 1930s, fallow deer were introduced to Sidney Island, British Columbia (Golumbia 2010). This non-native species is a grazer, eating predominately grasses during most of the year and increasing intake of forbs during times of low forage availability. A number of extant rare species and ecosystems existent on Sidney Island are being threatened by a hyper abundance of introduced European fallow deer (Golumbia 2008, Golumbia et al. 2011). Foraging pressure from introduced deer can cause a chain reaction of deleterious effects on ecosystems through habit loss and decreased food availability for birds and terrestrial invertebrates thus causing a decrease in species diversity and abundance (Golumbia 2010). Degradation and alteration of habitat impacting native species on Sidney Island is directly related to fallow deer browsing; mitigating and/or eliminating the effects of these invasive deer is critical to the recovery of biodiversity and ecological integrity on Sidney Island (Golumbia 2008).

2.3.1. Impacts on Plants & Plant Communities

Overgrazing by introduced deer can cause shifts in plant structure and abundance, community structure, community composition and species richness (Stockton et al. 2005, Gaston et al. 2006, Martin et al. 2008, Martin et al. 2011). Figure 3 provides a comparison of the impacts of fallow deer overgrazing on Sidney Island's native plants and plant communities compared to two other Gulf islands with 1) no deer, or 2) moderate deer density. The differences in vegetation cover among islands with no deer, moderate density deer, and hyper abundant deer (Sidney Island) were largely based on shrub architecture and the contribution of herbs and saplings to the understory. On Sidney Island, for example, the majority of the understory is absent and what is present is dominated by species that appear to be unpalatable to fallow deer. A comparison the native shrub ocean spray among the three islands indicated that there was no difference in overall vegetation cover but significant variations in the shrub architecture which resulted in significant differences in low vegetation cover (less than 0.5 to 1.5 m strata, Martin et al. 2011).

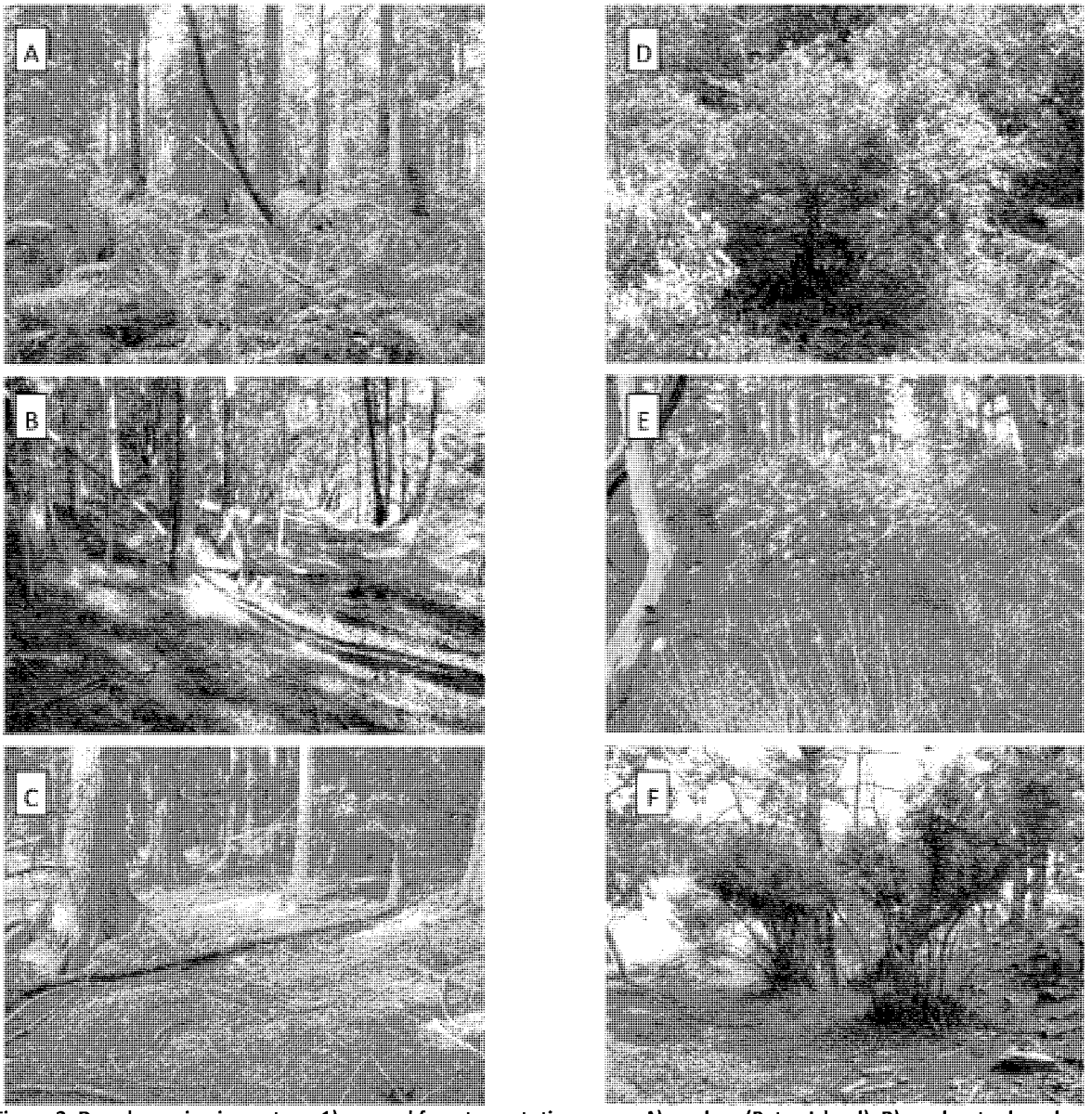

Figure 3. Deer browsing impact on: 1) general forest vegetation cover; A) no deer (Patos Island), B) moderate deer density (Wallace Island,) and C) high deer density (Sidney Island), and 2) impact of increasing browsing pressure on architecture of native shrub ocean spray (*Holodiscus discolor*); (D) no deer present (North Ballenas Island); E) moderate deer density (Little D'Arcy Island); F) high deer density (Sidney Island). Adapted from Martin et al. 2011.

Selective herbivory is another factor that can have deleterious effects on rare and endemic plant species found in island ecosystems. Many endemic species that have not experienced a history of herbivory may not have evolved chemical or physical defense mechanisms to deter herbivores in which case they are likely more palatable and desirable as a food source (Donlan et al. 2002; Allombert et al. 2005, Campbell & Donlan 2005, Stockton at al. 2005, Manuwal & Sweitzer 2007, Martin et al. 2011). Although fallow deer are not food specialists, they will likely forage on the most palatable and accessible vegetation. For example, on Sidney Island, Martin et al. (2011) reported that sapling density was sometimes high but comprised mainly of grand fir, which may indicate that fallow deer are selectively foraging on palatable species and avoiding those with high levels of phenolics or terpenoids (Vourc'h et al., 2002).

Sidney Island is a part of rarest biogeoclimatic subzone in the province, the coastal Douglas-fir moist maritime (CDFmm) and includes rare plant communities such as the endangered Garry oak ecosystem. The presence of hyper abundant fallow deer on the island therefore threatens a number of rare and endangered plant species and plant associations (Golumbia 2010) as well as other, more common plants. All seven rare species, as well as any other rare or remnant Garry oak associated grasses, forbs or shrubs on Sidney Island are ground or low shrub plants and are thus at risk of being consumed or trampled by fallow deer. In addition to their impacts on native flora, fallow deer may also assist in the spread of introduced invasive plants through seed or rhizome dispersal and soil disturbance.

2.3.2 Impacts on other Mammals

2.3.2.1 Native Ungulates

Although Columbian black-tailed deer (*Odocoileus hemionus columbianus*) were introduced to Sidney Island, remnant populations are considered native (Golumbia 2008). Black-tailed deer are primarily browsers whereas fallow deer have been shown to be grazers; however, during times of low food availability, fallow deer adapt feeding habits to consume greater amounts of forbs and browse (Elliott 1983, Elliott and Barrett 1985). A hyper abundance of fallow deer would result in increased competition with black-tailed deer for forbs and browse during dry periods and at the end of the summer (Connolly 1981, Elliott 1983, Fellers 1983). Intense competition for limited forage could result in weakened physical condition in black-tailed deer which would likely result in lowered doe fertility, decreased fawn production and fawn survival, and an overall decrease in reproductive capacity (Verme 1962 and 1967, Brunetti 1976, Thorne et al. 1976; Fellers 1983, Keech et al. 2000).

In addition to dietary overlap and competition, there may also be impacts to black-tailed deer related to habitat preferences. Black-tailed deer prefer a mosaic of various-aged vegetation that provides woody cover, meadow and shrubby openings while non-native deer favour habitats containing >50% grassland (CDFG 1998; Elliott 1982). However, there is some interspecies habitat overlap during certain times of the day and seasonally. Studies conducted at Point Reyes National Seashore in California also reported that black-tailed deer avoided large herds (consisting of more than 50 animals) of fallow and axis deer which may limit foraging opportunities (NPS 2006).

The issues of concern with regard to native and non-native deer at Point Reyes National Seashore also exist on Sidney Island. With only a remnant population of black-tailed deer, fallow deer are likely negatively impacting the black-tailed deer population on the island. If fallow deer are removed from the island it is likely that the black-tailed deer population would rapidly expand and require management to prevent overgrazing.

2.3.2.2 Small Mammals

There are only five native small mammals on Sidney Island: deer mouse, little brown bat, American mink, river otter, and red squirrel (Golumbia 2008). Four of these species (American mink, deer mouse, little brown bat, and red squirrel) may be affected by the presence of introduced fallow deer although none of these species are considered at risk, either provincially or federally under the Species at Risk Act (Conservation Data Centre 2012). Intense deer-browsing of low lying palatable vegetation eliminates essential small mammal food sources for small herbivores, exposes soils, reduces prey populations, changes microclimates, and decreases thermal and security ground cover (Flowerdew & Ellwood 2001).

1. ***Direct competition for food resources.***
   Analyses of fallow and axis deer rumen and fecal samples have indicated intense foraging of several plant species that comprise the diet of small mammals. Therefore, competition with fallow deer may also negatively impact small mammals (Elliott 1982, Fallon-McKnight 2006).

2. ***Indirect impacts on prey populations of small mammals***
   Overgrazing by fallow deer may also reduce habitat quality for common prey items for native species. For example, insects for little brown bat and deer mice. Reductions in deer mice populations, in turn, could impact mink populations.

3. ***Reductions in small mammal thermal and security cover***
   Overgrazing by fallow deer also reduces thermal and security cover for small mammals (Flowerdew & Ellwood 2001), which can lead to population declines and/or reduced reproductive fitness.

2.3.3 Impacts on Birds

Declines of North American forest birds (both passerines and non-passerines) have historically been attributed habitat loss and fragmentation (Robinson et al. 1995; Villard et al. 1999). However, Martin et al. (2011) and others (e.g. Allombert et al. 2005a,b; Martin et al. 2008; deCalesta 1994; Gill and Fuller 2007; Martin and McIntyre 2007; Martin and Possingham 2005; McShea and Rappole 2000) have demonstrated that modification of understory vegetation by native and exotic herbivores influences bird species community composition and relative abundance in habitats that might otherwise be considered to be intact. The deleterious impacts of deer hyper abundance are most often seen with understory and mid-story dependant bird species irrespective of migratory status (Martin et al. 2011). Substantially simplified bird communities are often associated with islands where browsing pressure is sufficient to eliminate or reduce understory and mid-story vegetation, such as that found on Sidney Island (Allombert et al. 2005a; deCalesta 1994; Hino, 2006; Martin et al. 2005; Martin and McIntyre 2007; McShea and Rappole 2000, Martin et al. 2011).

Martin et al. (2008) showed that declines in songbird abundance on the Gulf and San Juan Island groups may not necessarily be solely due to loss of understory vegetation and shift in plant community composition, but also the change in plant architecture. The height class at which deer forage is the most intensively impacted part of the plant and over time will shift its physical structure with less foraged parts of the plant being denser (e.g. from a shrub with relatively evenly distributed foliage and stems to a top-heavy umbrella-shaped shrub; Martin et al. 2011). This results in the loss of lower and ground-level habitat exposing soils and removing important habitat for species that rely on these areas. This important habitat may include nest sites, security cover, and food resources such as native seeds, fruits, insects, and small mammals (Allombert et al. 2005a, Martin et al. 2008, Martin et al. 2010). For example, ground and understory-level foraging birds (e.g. Song Sparrow, Fox Sparrow, Winter Wren (*Troglodytes troglodytes*), Spotted Towhee (*Pipilo maculates*), Rufous Hummingbird) on Sidney Island have been shown to be at lower densities than on other Gulf Islands with low or no presence of fallow deer (Martin et al. 2008). Intensive deer-browsed understory vegetation by invasive deer is likely the cause of these lower densities (Martin et al. 2008). Ground-nesting birds such as Song and Fox Sparrows may also experience a loss of vital habitat, potentially affecting reproductive rates and survival of young. Furthermore, because birds are capable of moving on and off islands, there are likely various other species which have not yet been observed on Sidney Island that may potentially be impacted by habitat loss resulting from fallow deer overgrazing (Golumbia 2010).

Impacts to songbirds and other forest-dwelling bird species can in turn impact species that depend on them as a primary prey source. For example, in the UK, heavy grazing, mainly from fallow deer, was shown to result in lowered reproduction in Tawny owls (*Strix aluco*) and Kestrels (*Falco tinnunculus*), which is likely attributed to reduced prey availability (Putman 1986). Similarly, on Sidney Island it is likely that fallow deer may be having an adverse impact on common prey species of owls [e.g. Great-horned Owl (*Bubo virginianus*), Barn Owls (*Tyto alba*), Western Screech-owl (*Megascops kennicottii*)], falcons [e.g. Merlin (*Falco columbarius*), American Kestrel (*Falco sparverius*)], Buteos [e.g. Red-tailed Hawks (*Buteo jamaicensis*), Northern Harrier (*Circus cyaneus*) and Peregrine Falcon[15] (*Falco peregrinus anatum*)], and accipiters [e.g. Sharp-shinned Hawks (*Accipiter striatus*), Cooper's Hawk (*Accipiter cooperii*)].

2.3.4 Impacts on Reptiles & Amphibians

Shifts in ground cover and low-level plant composition resulting from deer overgrazing alter habitat for reptiles and amphibians by changing soil conditions and microclimates and decreasing food resources (Bullock et al. 2002, Cote et al. 2004, Matsuda et al. 2006). Without vegetative cover, exposed soils become drier and less ideal for amphibians. Overgrazing by deer or other larger ungulates may also cause soil compaction preventing certain species from burrowing underground thereby reducing survivorship (e.g. hibernation, thermal cover, and security cover). For example, Fellers and Pratt (2002) reported that northern alligator lizards (*Gerrhonotus coeruleus*) were present in ungrazed sites at Point Reyes National Seashore but not in pastures grazed by cattle.

Two amphibian and two reptile species are present on Sidney Island (Golumbia 2008): Pacific chorus frog (*Pseudacris regilla*), Western toad (*Anaxyrus boreas*), northwestern garter snake (*Thamnophis ordinoides*), and western garter snake (*Thamnophis elegans*). Habitat alteration resulting from fallow deer overgrazing may be impacting these species through: loss of ground and mid-story vegetation cover and a consequent compaction and desiccation of soils, as well as a decline in common prey species (invertebrate and small mammals resulting from habitat loss).

2.3.5 Impacts on Terrestrial Invertebrates

Invertebrates occupy a large array of ecological niches within the terrestrial environment. Some are involved in the decomposition process leading to nutrient recycling; some with pollination of flowering plants; many are herbivorous and these have a major impact on plant biomass and survival; while others play important roles through the regulation of animal populations (e.g. parasitism). In turn, invertebrates provide an important food source for many amphibians and reptiles, birds and some mammals.

Declines in terrestrial invertebrate abundance have been linked to overgrazing by herbivores, which in turn, can impact species that rely on invertebrates as a food resource (e.g. Descender et al. 1999). For example, on Haida Gwaii, Allombert et al. (2005) compared invertebrate densities between deer-free and deer-browsed islands (historically less than 20 years and greater than 50 years) and found reduced invertebrate assemblage density with an increase in deer-browsing history.

On Sidney Island, it is likely that overgrazing by hyper abundant fallow deer is negatively impacting invertebrate abundance and species diversity similar to that reported by Allombert et al. (2005) on Haida Gwaii. Fallow deer have dramatically reduced understory vegetation on Sidney Island, simplifying

[15] The Peregrine Falcon, *anatum* subspecies is provincially red listed, is listed as threatened under Schedule 1 of the Federal Species at Risk Act (BC Conservation Data Centre 2012).

plant communities, community composition, and altering plant architecture (Martin et al. 2011). The loss of vegetative ground cover results in desiccation and compaction of soils and reduced habitat quality for terrestrial invertebrates, as well as other species that depend on them.

There is little information on what species of invertebrates are present on Sidney Island. However, surveys conducted several times since 2001 and most recently in 2006 to determine if the red-listed sand-verbena moth was present on the island indentified 14 other species of moths (Golumbia 2008)[16] . Graceful arrow-grass, the host plant for the Federally endangered sand-verbena moth (*Copablepharon fuscum*), is being negatively impacted by fallow deer overgrazing, which in turn indirectly impacts this moth species. The interconnectedness of the sand-verbena moth and graceful arrow-grass is an excellent example of the complex species relationships on Sidney Island and demonstrates the importance of removing non-native fallow deer from the island.

2.3.6 Impacts on Soils

Soils may be affected by non-native deer in through direct mechanical compaction or disturbance, through erosion related to the loss of overlying vegetation. Fallow deer on Sidney Island have altered and in some cases, eliminated vegetative ground cover and forest litter exposing soils to wind and sun. This in turn affects soil temperature and humidity and increases the likelihood of compaction and erosion and consequently increased run off (Lull 1959). All of these factors influence soil fertility, organic matter content, water filtration, and storage capacity which can negatively affect growing conditions for native plants. Overgrazing by fallow deer on Sidney Island thus creates a negative feedback loop because the initial plant destruction leads to effects that make it more difficult for plants to re-establish, which in turn leads to greater losses of vegetation and potential for more resilient invasive plant species to establish.

2.4 Previous Fallow Deer Control Activities on Sidney Island

Both Parks Canada and Salas Forest share a vested interest in managing fallow deer populations on Sidney Island. Salas Forest has conducted deer management activities since 1981 including: recreational and commercial guided hunting, live trapping and off-island relocation, and capture and culling (Salas Forest Strata Corporation 2009).

Two main periods of fallow deer management occurred on Sidney Island. The first period of deer management occurred from 1981 to 2003 and involved independent management of the fallow deer population by Sallas (live capture and shipping, guided hunting and independent hunting) as well as limited entry hunting in the park portion of the island that was independent of the Sallas deer management activities (T. Golumbia pers. comm.).

The second period of deer management, which began in 2004 and is ongoing, has been collaborative management between Parks Canada and Sallas. This included the establishment of an advisory group of experts and was an objective-driven deer reduction. Between 2004 and 2008 Parks Canada set up an ecosystem monitoring program (described elsewhere) and Sallas redesigned and rebuilt their deer capture facilities. Between 2009 and 2012 the short term goal was an 80% reduction in the fallow deer population using an aggressive capture and cull program augmented by increased hunting pressure and

[16] The sand-verbena moth was not detected on Sidney Island during the survey but has been seen within 10 kilometres of the island (Fairburns 2005).

capture/cull operations on remaining park population (using the corral trap). This initial reduction was intended to initiate the natural restoration of the ecosystem and provide the advisory group with time to assess future fallow deer management options such as continued control or eradication.

Between 1981 and 2012, efforts to control the fallow deer population have resulted in removal of over 11,000 deer from Sidney Island (**Error! Reference source not found.**). This number is likely an underestimation of deer removed, as it does not include unreported mortality, poaching and natural mortality (Salas Forest Strata Corporation 2009, Golumbia 2010).

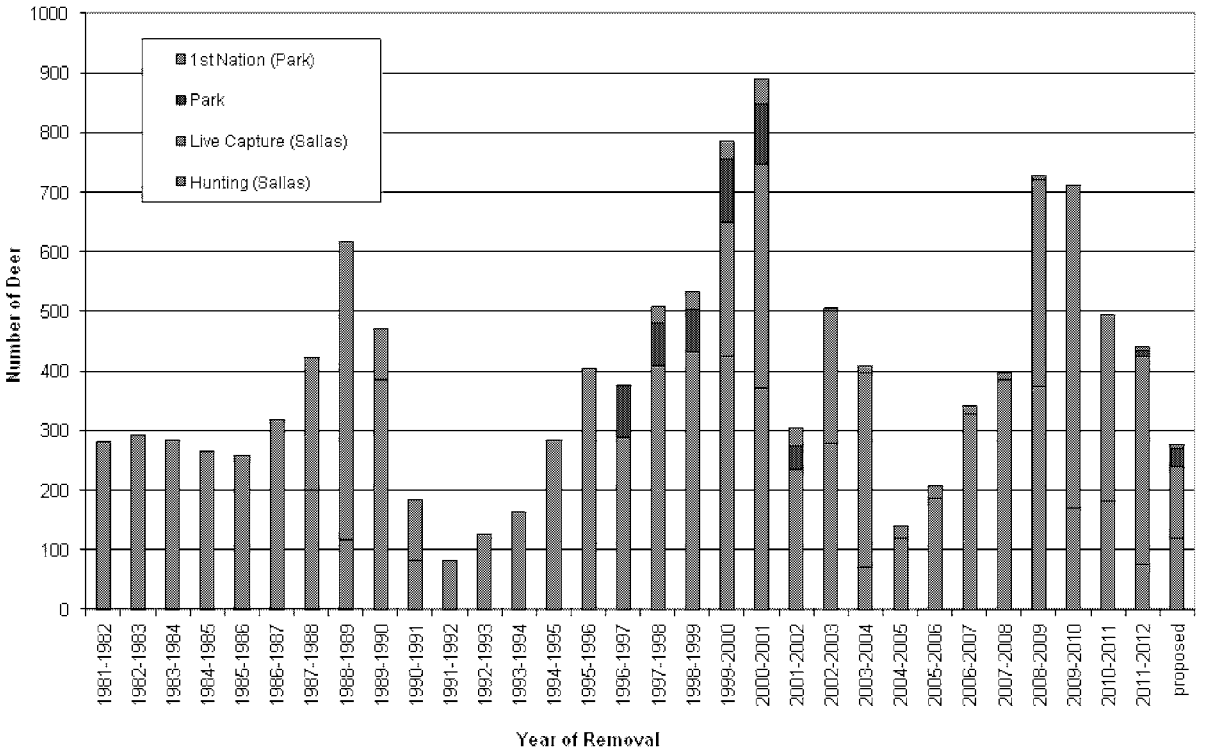

Figure 4. Number of deer removed through hunting and live-capture from 1981 to 2012 (Columbia unpublished data).

Based on seasonal fecal pellet counts in the park, the ongoing fallow deer management activities on Sidney Island appear to have reduced the population size (**Error! Reference source not found.**, G. Mercer unpublished data). For example, seasonal pellet densities between 2007 and 2009 were similar if standard error is taken into consideration. Following implementation of the intensive deer cull program in 2009 pellet densities on the island plots have exhibited a general downward trend. This downward trend in pellet counts likely indicates a reduction in fallow deer numbers on the island resulting from the intensive culling efforts, although inferences such as this must be done with caution.

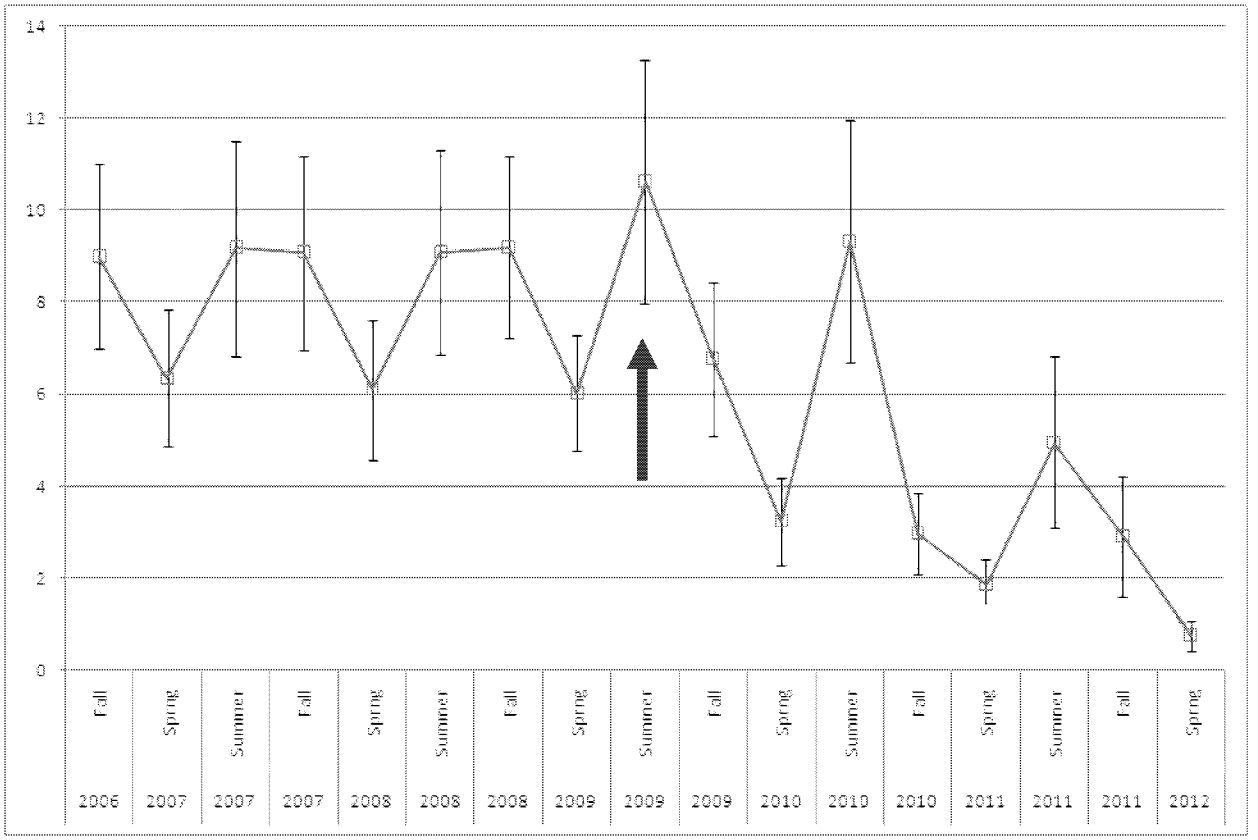

Figure 5. Average deer pellet density per 10m² plot on Sidney Island with 2 standard error bars. Red arrow indicates when the aggressive culling effort began on the island (G. Mercer unpublished data).

2.4.1 Sidney Spit (Gulf Islands National Park Reserve)

Following a halt to hunting activities on Sidney Spit in 1975, BC Parks erected deer fencing along the perimeter of the park boundary in an attempt to inhibit the extensive damage to vegetation caused by fallow deer (Golumbia 2010). Unfortunately the fencing was ineffective at deterring deer and populations continued to increase exponentially (Golumbia 2010). In response to a hyper abundance of fallow deer and related impacts, a limited entry hunt (LEH) was opened in 1996. The LEH occurred from October until March (at which time the park was closed to the public), coinciding with the First Nations hunts, and continued until 2001 (Golumbia 2010). Despite the number of deer taken during these hunts, this management approach has had limited success in reducing deer numbers (Golumbia 2010).

2.4.2 Sallas Lands

Sallas is committed to the management and sustainable use of the island's forest, which has included intensive silviculture, reforestation, and fallow deer management (Sallas Forest Strata Corporation 2009). In 1981 recreational and commercial guided hunting was organized on the island. During that time Provincial wildlife authorities also facilitated the attempt to control fallow deer populations by issuing permits to extend hunting season and easing bag limits (Salas Forest Strata Corporation 2009, Golumbia 2010). The harvest of fallow deer over the last decade averaged 190 per year and increased to 360 animals per year from 2006-2009 as a result of increased hunting effort. Commercial hunting was terminated in 2002 due to an increase in residential development on the island, and for the same reason the scope for increasing recreational hunting appears limited (Golumbia 2010).

Deer farming was introduced to British Columbia in the 1980s and became another outlet for the deer

captured on Sidney Island. Deer were captured, sold and transported off-island to deer farms around the province (Salas Forest Strata Corporation 2009, Golumbia 2010). Deer capture and relocation was relatively short lived as the deer farming industry collapsed and there was no longer a demand for the animals. In 2009 a live-capture facility was constructed and a mobile abattoir was brought onto the island (Salas Forest Strata Corporation 2009). A total of 728 deer were killed using the capture facility and authorized hunting between 2008 and 2009 (348 deer culled, 374 deer hunted, 6 deer hunted in park. T. Golumbia pers. comm.). Fallow deer were culled and processed on-island for human consumption, however, half the deer delivered to the abattoir were deemed unfit for consumption due to poor body condition (Salas Forest Strata Corporation 2009). The emaciated condition of the deer was another indication that the island's carrying capacity had been surpassed.

Culling and hunting operations continued and between 2009 and 2010 542 deer were culled and 170 were hunted for a total removal of 712 animals. In 2010 an additional 494 deer were culled using controlled hunting (180 animals) and the live capture facility (314 animals, Golumbia 2010). Most recently i 2011-12, 447 deer were removed through hunting, culling and capture. Based on the abovementioned numbers, the intensive culling operation has successfully removed a significant number of deer from Sidney Island. However, control operations such as this will never succeed in removing every last animal and thus the Sidney Island ecosystem will never fully recover from the detrimental impacts of fallow deer. Furthermore, if this intensive culling effort is not continued indefinitely fallow deer populations will quickly rebound thus negating any advances made to encourage the restoration of Sidney Island. If ecosystem restoration is an ultimate goal on Sidney Island, the logical next step from a fallow deer management perspective is to investigate the feasibility of implementing an eradication operation with the goal of removing 100% of the fallow deer population from the island.

3.0 ERADICATION OF FALLOW DEER FROM SIDNEY ISLAND

3.1 Project Goal & Objectives

The goal of this project is to encourage the natural restoration of native wildlife and ecosystems on Sidney Island.

The objectives include:

- The complete and permanent eradication of introduced, non-native fallow deer from Sidney Island;
- Minimizing impacts to native species during the eradication operation; and
- Successfully completing the project with support and cooperation from Salas Forest Strata Corporation as well as other governmental and non-governmental agencies.

3.2 Predicted Eradication Outcomes

The eradication of fallow deer is likely to have a significant impact, both positive and potentially negative[17], on Sidney Island's terrestrial native wildlife and the island ecosystem as a whole. Potential positive responses include:

[17] Please refer to section ***3.5.5 Potential Negative Ecosystem Response*** for more information

- Reestablishment of native plants and plant communities, including increases in forest vegetation cover and recruitment (Martin et al. 2011);
- Increased songbird abundance, species richness, and breeding, especially for forest-dwelling birds (Martin et al. 2011);
- Increased abundance and breeding success of forest-dwelling avian raptors such as accipiters, falcons, and owls;
- Increases in native small mammal presence/abundance (e.g. Bueshing et al. 2011) and consequent increases in species preying on them (e.g. birds of prey);
- Increased Sitka black-tailed deer abundance;
- Increased insect abundance and species richness (e.g. Allombert and Martin 2008);
- Increased native amphibian abundance (Pacific tree frog);
- Increased native reptile abundance (Northwestern Garter Snake, Western Garter Snake); and
- Restoration of ecosystem processes such as nutrient cycling and disturbance regimes (Hobbs 1996).

3.3 Planning an Invasive Species Removal Project

A review of successful eradication operations targeting invasive alien vertebrate species on islands reveals several consistent themes, including:

- Public and managerial support and belief in the program's merit and success.
- Stakeholder consultation and participation.
- Robust and meticulous planning.
- Adequate funding to ensure all stages of the program are undertaken.
- The use of skilled personnel with previous experience in eradication operations.
- Highly motivated personnel with a commitment to the task.
- Personnel experienced and responsive to living and working harmoniously in remote areas for extended periods.
- Flexible approach to resource use to optimize progress.
- Regular analytical reviews of progress and success, and adaptive management in the field.

3.4 Control versus Eradication: A Comparison

There are two general approaches that can be taken to manage the fallow deer population on Sidney Island:

Option 1: control population numbers by yearly culling and possibly sterilization for the life of the plan; or

Option 2: undertake an eradication operation with long term biosecurity monitoring.

Option 1 focuses on indefinitely controlling numbers of fallow deer at a pre-determined level (e.g. 84 to 334 fallow deer, Golumbia 2010) using lethal removal alone or possibly a combination of lethal removal and long-acting contraceptives. Option 2 focuses on the complete and permanent removal of fallow deer using lethal removal alone with indefinite biosecurity monitoring. Each approach has advantages and disadvantages that are outlined in Table 14 and also in the individual sections below.

Table 14. A comparison of control (cull) versus eradication of fallow deer from Sidney Island.

Eradication Technique	Efficacy	Vegetation impact (trail development, erosion)	Time to complete	Long term cost	Short term cost
Control	Low	Low	Ongoing	High	Low
Eradication	High	Low	~11-17 weeks for actual on-island eradication, within ~1.5 years to confirm eradication success	Low	High

3.4.1. Long-term Control of Fallow Deer Population

Control focuses on the reduction and long-term management of the fallow deer population size on Sidney Island. Managing fallow deer populations through culling and possibly sterilization is feasible based on the history of deer culls on the island. For example, Sallas has been undertaking fallow deer management since 1981 on the private land portion of Sidney Island and continues to do so under a recently updated management program in cooperation with Parks Canada Agency (Sallas Forest Strata Corporation 2009). During this program over 11,000 deer have been removed to date (Golumbia 2010).

Because the goal of this alternative would be to control fallow deer at a specified level and not to eradicate them, annual culling would continue indefinitely and the total number of deer removed is unknown (infinite).

Benefits

- Both Parks Canada and Sallas have significant expertise with fallow deer control techniques based on a long history of deer culls on the island.
- The short term costs of undertaking population control activities are relatively low compared to an eradication operation.
- Culling animals on Sidney Island has historically been effective at reducing the population of fallow deer.
- Likely minimal public opposition to continued culls because this is an established method of deer population control on the island.

Challenges

- A cull program would have to continue indefinitely because deer populations will quickly rebound in the absence of regular control procedures.
- Long term control projects often suffer from budget and personnel fatigue.
- The fallow deer population on Sidney Island will never be reduced to zero.
- In terms of cumulative impact (total number of deer eradicated) more deer are removed in a long term culling operation compared to an eradiation operation.
- There is a low return on investment.
- Potential for negative ecosystem response (e.g. invasive plants outcompete native plants as grazing pressure is reduced).

3.4.2 Eradication of Fallow Deer Population

Eradication involves the complete removal of every last fallow deer from Sidney Island. Although every invasive species eradication operation is different, there are fundamental "rules" or guidelines that maximize the probability of removing 100% of the target population (from Cromarty et al. 2002, Parks et al. 2002):

> **Rule 1**: All individuals in the target population must be able to be put at risk. This rule determines the tactics that must be employed.
> **Rule 2**: Target individuals must be killed at rates faster than their rate of increase at all densities. This rule determines the likely intensity and length of the campaign.
> **Rule 3**: The risk of re-colonisation must be as close to zero as possible.
> **Rule 4**: Ideally, individuals surviving the initial phase of the eradication should be detectable and dealt with before an increased population size becomes obvious. Failure to detect survivors increases the risk of operational failure.
> **Rule 5**: Where the benefits of management can be achieved without eradication, discounted future benefits should favour the one-off costs of eradication over the ongoing costs of sustained control. This condition is only measurable when the benefits are accounted in the same currency as the costs; a difficult task for non-market conservation values.
> **Rule 6**: The local regulatory, social, and economic conditions must be conducive to meeting Rules 1-5.

In addition, the methods used should be humane and ethical, and comply with the relevant local regulations. Multiple techniques are often needed, and rarely can one technique alone (with the exception of some rat eradications) achieve eradication. In addition, different techniques are often needed to remove the last few animals and to confirm that eradication is complete.

A strategic hunting approach is required to avoid the most common causes of failure in ungulate eradication projects - not educating animals while a population is being reduced[18]. This requires detailed planning and attention to how the last fallow deer will be targeted well before the first individual is even approached. An adaptive management approach is also necessary to allow the eradication team to quickly adapt and respond to changes in animal behaviour as a result of hunting pressure or varying conditions on the target island (e.g. forest crown closure on certain parts of the target island limits aerial hunting opportunities, Macdonald and Walker 2006).

In addition to educating the target animal other elements that are inherent to all eradication projects can increase the risk of failure such as an inability to detect the target animal at low densities as well as funding and/or legal challenges that may terminate a project (either temporary or permanently) prior to completion. However, these hurdles can be overcome through careful planning and preparation prior to implementing an eradication operation.

A key factor influencing the success of an eradication operation is a rapid implementation and completion, which will maximize the probability of removing 100% of the target population while limiting the impact of common obstacles that can prematurely halt a project, such as funding or legal restrictions. A short time frame for project completion will also reduce the influence of population

[18] An educated animal may be wary of any human activity and difficult to detect.

replacement on the project, which, in turn reduces the total number of animals that ultimately must be removed from the island (increased efficiency, Morrison, 2008).

A biosecurity plan would be required for an eradication operation to ensure that immigration of fallow deer to Sidney Island is maintained at zero. The plan must enable Parks Canada and Sallas to detect and rapidly respond to any potential reinvasion. If a rapid response is not possible, the success of the eradication would be compromised (please refer to *Section 3.13 Biosecurity* for additional information).

Benefits

- Short time duration.
- Permanent solution to the ongoing fallow deer impacts on Sidney Island.
- Reduced financial cost over the long term.
- Low likelihood of budget and personnel fatigue due to the short duration of the project.
- The risk of population replacement is reduced by rapid implementation/completion and effective planning to avoid project delays.
- In terms of cumulative impact (total number of deer eradicated) fewer deer are removed in an eradiation operation compared to a long term culling program.

Challenges

- Risk of eradication failure if the target animals are educated. This is a particular concern on Sidney Island where the deer population has been exposed to regular culling efforts for the past 30 years.
- Negative public reaction to an eradication operation.
- Potential for negative ecosystem response (e.g. invasive plants outcompete native plants in the absence of grazing pressure)
- Neither Parks Canada nor Sallas has experience or expertise in ungulate eradications or the techniques required to maximize the probability of project success. It is likely that external consultants would be required to carry out the operations.
- High short term costs.
- Challenging to confirm successful eradication (efficacy).
- Potential risk of reinvasion from nearby James Island, D'Arcy Island, Little D'Arcy Island, Forrest Island, Mandarte Island, Halibut Island, and the Saanich Peninsula (J. Thrupp pers. comm.).

3.5 Potential Challenges Associated with Fallow Deer Removal

3.5.1 Political Challenges

Because animal control/eradication is a controversial topic, the potential for negative public reaction towards the project is high. Legal action could prevent project completion even if the eradication was considered the only solution to restore Sidney Island's native ecosystem. If a project is halted due to loss of funding, diminished support, or legal action after 90% of the effort is completed, all previous investment in the project will be lost as the remaining population recovers to levels that existed prior to any eradication effort.

Support for invasive species eradication is easier to obtain if the local community recognizes the negative impacts of the target species (Myers et al. 2000; Simberloff 2002). For example, on Lord Howe Island (1455 ha), Australia, rats cause major damage to crops (Lord Howe Island Board 2009), and many inhabitants would prefer a rat-free island. On the same island, the eradication of feral goats failed in part because some members of the local community opposed it and caused delays by filing lawsuits alleging cruelty to animals (Parkes et al. 2002). A study of this eradication campaign showed that strict adherence to animal welfare protocols, open information about procedures, and government approval of protocols was necessary to avoid potential legal issues in mammal eradication campaigns (Parkes et al. 2002).

The private land portion of Sidney Island is owned by approximately 70 individuals, many of which are non-residents (K. Poskitt pers. comm.). In the last five years many of these owners have begun to recognize that fallow deer are having a significant negative impact on the island ecosystem. However, it is still likely that only 50% of these owners are currently in favour of a fallow deer eradication (K. Poskitt pers. comm.). If the majority of landowners on Sidney Island are not supportive of the project, there is a high likelihood of significant opposition to the project which may include an inability of access certain properties on the island or a complete halt to the operations as a result of political pressure.

In addition to potential opposition from Sidney Island landowners, there is also a high likelihood of opposition from the general public and animal welfare organizations. For example, the Cranbrook and Kimberly, British Columbia deer culls have attracted both national and international opposition to the project from individuals, as well as newly formed organizations such as the Humane Treatment of Urban Wildlife[19].

Finally, there may also be public opposition if a decision is made to dispose of the deer carcasses on site rather than donating the meat to local First Nations or charitable organizations to feed the hungry, or providing an opportunity for high-end restaurants to purchase the meat. However, it is important to assess the perceived (and short term) benefits of these public relations campaigns with the potential negative impact on the eradication outcome (increased logistical complexity, financial cost, and lost time from managing deer carcass collection and meat processing (please refer to *Section 3.7.4 Options for Carcass Disposal* for more information).

Engaging the community and facilitating participation at all stages of project implementation—from information gathering, to consultation, to decision making, to eradication work, and to final evaluation—avoids 'top-down' implementation of a project and is most likely to result in public ownership of an eradication project. Public ownership can in turn lead to tasks, such as maintaining high biosecurity standards, to be carried out and enforced by the community over the long term.

3.5.2 Logistical & Technical Challenges

There are many technical and logistical challenges faced by conservation managers when implementing an island eradication operation that may affect the success and/or duration of the project. On Sidney Island potential challenges include but are not limited to the following:

- The long history of fallow deer culls. As stated previously not educating animals while a population is being reduced is perhaps the most important means of limiting the risk of failure

[19] Please refer to the following link for additional information: http://www.cbc.ca/news/canada/british-columbia/story/2012/01/19/bc-opposition-deer-cull.html

(Macdonald and Walker 2006). The ongoing deer culls on the island have likely resulted in a general wariness of humans which could make detections at low densities challenging.

- Some private land owners on Sidney Island may not permit access to their property. These properties could then act as a source population that would eventually lead to recolonization of the island.
- The eradication team would need to either live on the island during the operation or have access to boats capable of travelling to/from Sidney Island in all weather conditions. Inclement weather could prevent teams from accessing the island.
- Crown closure on certain portions of the island as well as inclement weather may make it difficult to locate and hunt animals from a helicopter. However, several eradication techniques would be utilized during the operations, therefore, the influence of these factors on the eradication outcome are likely nominal.
- Limited road networks. The eradication team would need to use all terrain vehicles or travel by foot to access certain portions of the island. This would limit the amount of equipment each team member could carry and possibly increase the time needed to complete the operation.
- The coastline is dominated by sandy beaches, dunes, and steep eroding bluffs. There is a large lagoon, as well as rocky shoreline, particularly along the southern and eastern aspects and at Eagle Islet, in the lagoon (Golumbia 2008). The lagoon, rocky shoreline, and steep bluffs may present a challenge in terms of access by the eradication team. However, as stated above several eradication techniques would be used during the operations. Therefore the influence of topography on the eradication outcome is likely nominal.
- Disposal of deer carcasses. Ungulate removal techniques have sometimes come under attack for being wasteful. In particular, there has been public criticism of land managers who leave behind animal carcasses killed at remote sites (Jenkins et al. 1994). However, there is significant logistical complexity and financial cost associated with processing fallow deer meat for human consumption. We anticipate increased logistical complexity and financial cost of the operation if Parks Canada Agency and/or Sallas choose to process the fallow deer carcasses for human consumption[20]. Furthermore, having to recover deer carcasses for processing could also impact the success of the operation by distracting the eradication team from their primary task – to eradicate fallow deer from Sidney Island.

3.5.3 Financial Challenges

Eradication operations are financially challenging, often costing in the millions of dollars to complete if all aspects of the project are included (e.g. planning, pre- and post-eradication surveys, on-island implementation, etc.). It is therefore imperative to secure sufficient resources to fund the campaign to its conclusion. The development of a detailed operational plan will help conservation managers identify project-related costs and aspects of the operation where contingency funds may be required (e.g. additional helicopter and personnel time due to challenges with removing the last animals on the island).

[20] Conservation managers have generally concluded that it is in far greater public interest to leave animal carcasses for nutrient recycling in the natural areas being protected. Indeed, this nutrient recycling is regarded as ecologically wise, not wasteful (Jenkins et al. 1994, G. Howald pers. comm.)

Obtaining funding for projects of this size and nature can be challenging although there are several options available for the Sidney Island project. Please refer to *Section 3.14 Potential Funding Sources* for more information.

3.5.4 Personnel Challenges & Effort

During the initial phases of the eradication operation it is anticipated that a large number of animals will be eradicated with relatively little hunting effort. Typically, approximately 90% or 95% of the target animal will be removed within the first third of the operational time, the remaining 5% or 10% of animals will be removed in the second third of the operation, and the remaining third will be spent searching for the last one or two animals and confirming eradication success. As fallow deer numbers decline hunting effort per animal increases and far fewer deer are removed. No definite trend towards fewer deer removed may be evident, which may result in a realization that on-going control or eradication will require an increased and sustained effort. Institutional support may falter as there is "no end in sight" in terms of completion of the project and this in turn may trigger a drop in project personnel morale. There is a risk of project abandonment or declaration of failure at this stage.

Often, the reasons for an eradication failure is because insufficient effort is spent searching for the last few animals and the project is declared complete too early when a few animals still remain.

3.5.5 Potential Negative Ecosystem Response

Successful invasive species eradications on islands have generally benefited biological diversity. However, there is also evidence that without sufficient planning, successful eradications can have unwanted and unexpected impacts on native species (including plants) and ecosystems (

Figure 6**Error! Reference source not found.**, North et al. 1994; Priddel et al. 2000).

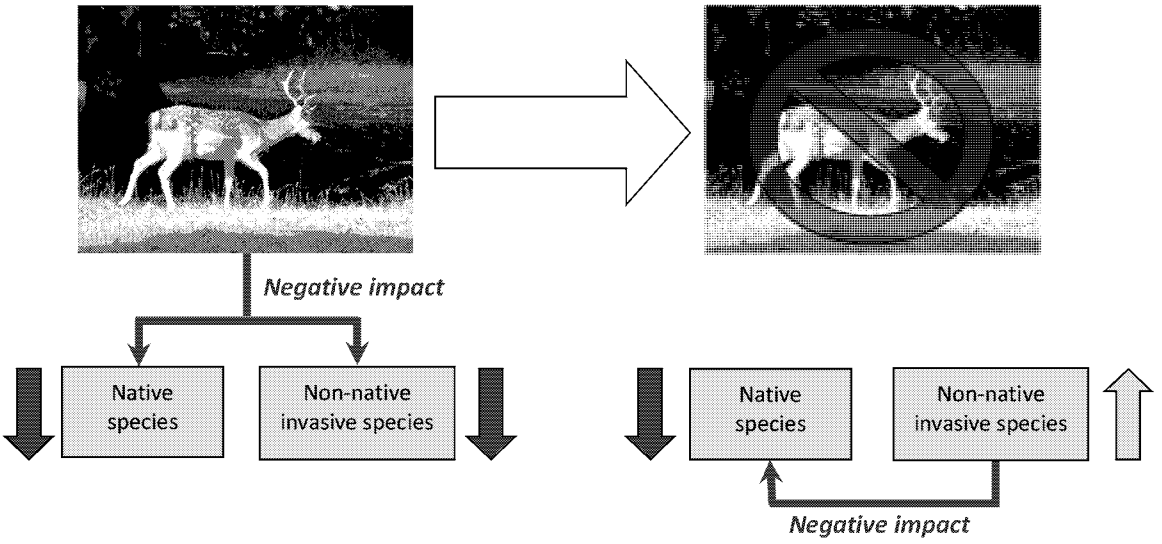

Figure 6. Possible negative result of a targeted species removal on native and non-native invasive species

Because eradication efforts are usually targeted at species posing substantive threat to island resources,

their removal can cause a fundamental and negative shift in community dynamics and even ecosystem function. While some undesired effects might be predictable, others may not be anticipated. For example, the removal of a habitat modifying herbivore increases food resources for smaller herbivores which may lead to an increase in their abundance and: 1) continued suppression of native plant species, and/or 2) a consequent release of predators from food limitation, with an adverse effect on other native prey species. Eradication managers must therefore be prepared to detect and manage the undesired, and sometimes unanticipated, effects of an eradication operation. Secondary effects of invasive species eradication become more likely as the number of interactions among non-native species increases, and as other non-target invasive species that were previously suppressed by the target invasive species begin to outcompete native wildlife (Zalvetta et al. 2001; Bullock et al 2002; Donlan et al. 2002).

Several eradication projects completed to date on islands around the world have reported on undesirable side effects of invasive species removal. For example, feral herbivore removal from Santa Catalina Island, Channel Island National Park, led to an increase in native species richness, but also to large absolute and relative increases in cover by exotic plants (Laughrin et al. 1994). Rabbit eradication on Round Island, Mauritius, led to strong recovery of three endemic tree species in addition to six reptile species. However, rabbit removal also released grazing pressure on a previously sparse exotic grass *Chloris barbata*, resulting in this species quickly overtaking the island (North et al. 1994).
Exotic herbivore removal can potentially lead to cascading changes in entire ecosystems. After eliminating rabbits from Monunau Island, Australia, Boxthorn (*Lycium ferocissimum*) became abundant and the shrub's long thorns resulted in mortalities of Fairy Prions (*Pachyptilla turtur*) and White-faced Storm-petrels (*Pelagodroma marina*, Taylor 1968). The most dramatic exotic plant release involved a single species whose presence was unknown prior to exotic mammal eradication. Following removal of feral goats and pigs from Sarigan Island in the Commonwealth of the Northern Mariana Islands, the exotic vine *Operculina ventricosa* rapidly became abundant and now covers much of the island (Kessler 2011). Subsequently, the invasion by *O. ventricosa* stabilized possibly due to competition with two other exotic vine species, drought, and the effects of storms.

Following a rabbit and goat eradication on Round Island, vegetation responses were predictable in the short term, but some long-term changes were dramatic and unpredictable, particularly the increase in non-native plant species ((North & Bullock 1986; North, Bullock & Dulloo 1994; Bullock et al. 2002). The undesirable increase in abundance and influence of exotic plants after exotic herbivore removal has also been observed following the completion of eradication operations on Carnac Island, Australia (Abbott et al. 2000) and the Channel Islands, USA (Halvorson et al. 1988; Klinger et al. 1994). However, the interaction between exotic herbivores and invasive plants remains largely unstudied and examples are mostly anecdotal (Driesche & Driesche 2000).

Vegetation monitoring and assessment prior to implementing an eradication operation on Sidney Island can help avoid unexpected negative consequences of introduced herbivore removal. For example, on Guadalupe Island, Mexico, goat exclosures were constructed to assess the non-native plant response from herbivore release before the eradication campaign (Campbell and Donlan 2005). The current exclosures on Sidney Island, as well as the exclosures that are proposed on the Islands Trust Fund land covenants (J. Ralph pers. comm.) should be monitored to assess both the positive and negative response of the island if fallow deer are removed.

3.5.5.1 Invasive Plants

Introduced species (both plants and vertebrate animals) are prevalent on Sidney Island both as a result of accidental and intentional introductions (Golumbia et al. 2011). The distribution of several invasive

plant species on the island is likely underestimated due to heavy herbivore pressure and many would likely increase rapidly if grazing pressure by fallow deer was removed (Table 15, Fairburns 2005). Release of grazing pressure could also lead to an increased fire hazard resulting from increased forest litter, shrubby vegetation and grass thatch.

The response of invasive plants to the removal of fallow deer is a complex situation and resurgence of plant biomass following fallow deer removal should be closely monitored. Some introduced plant species may quickly establish themselves, but over the long term other invasive plant species may outcompete these 'pioneer' species (succession). The goal, therefore, is to determine how best to managed invasive plants both on a species by species basis, but also as succession takes place. For example, the initial resurgence of certain non-native plants may be less of a concern from a conservation perspective compared to invasive plant species that in turn, outcompete these pioneer species (succession). Because of this restoration efforts on Sidney Island may focus on the later successional invasive plants. Prior to undertaking a fallow deer eradication several questions need to be addressed including: what invasive plant species can we expect short term versus the long term? What invasive plant species should be addressed in terms of natural succession?

Table 15. Potential impact of fallow deer removal on introduced invasive plant species known to occur on Sidney Island. Note: Data on invasive species present on Sidney Island is limited to surveys from Sidney Spit by Fairbarns (2005).

Common Name	Scientific Name	Current Population Size or Distribution	Impact from Fallow Deer Removal
English Hawthorn	*Crataegus monogyna*	Not currently abundant	May spread to open deciduous forests and woodlands throughout the island, which may also encourage the establishment of other invasive species that English hawthorn shelters
Scotch Broom, English Broom	*Cytisus scoparius*	Widespread	Possible rapid distribution expansion[21]
European Beach Grass, Marram Grass	*Ammophila arenaria*	Widspread on Sidney Island Spit	Possible distribution expansion[22]
Himalayan Blackberry	*Rubus armeniacus*	Widespread	Rapid distribution expansion
English ivy	*Hedera helix*	Widespread	Rapid expansion of ivy could outcompete native plant species
Moist Meadow Complex (multiple species)	-	Abandoned livestock pastures and/or hayfields	Rapid expansion of introduced grasses and forbs but limited by the availability of moist open areas on the island

3.5.5.1 Introduced Vertebrates

The reduction in of heavy grazing pressure through fallow deer eradication may also result in population increases in several native and introduced vertebrate species (Table 16). Therefore, unless all potential

[21] Fallow deer are currently controlling the distribution of broom on Sidney Island. The current exclosure plots show this on the dunes in particular but also on the open fields (T. Golumbia pers. comm.).
[22] There is an interesting dynamic on the island between native Leymus (dunegrass) vs. Ammophila (European beach grass, marram grass). It is anticipated that a resurgence of native dunegrass will occur in certain areas where Ammophila does not grow well. There may also be an increase in Ammophila because it is not clear if deer eat the new shoots (this species expands distribution through rhizome production, T. Golumbia pers. comm.).

aspects of how these species may interact are assessed, the eradication of fallow deer may prove equally or more detrimental to native species found on the island compared to their continued presence.

Table 16. Potential impact of fallow deer removal on native and introduced invasive vertebrate species known to occur on Sidney Island. Source: T. Golumbia pers. comm. This list does not include introduced species thought to be extirpated, not currently observed, or confirmed absent from the island.

Common Name	Scientific Name	Native to Sidney Island?	Current Population Size or Distribution	Impact from Fallow Deer Removal
Deer Mouse	*Peromyscus keeni prevostensis*	Yes	Unknown	Possible increase in population with plant regeneration
Little Brown Bat	*Myotis lucifugus alascensis*	Yes	Unknown	Possible increase due to increase in insects as a result of vegetation regeneration
Mink	*Mustela vison energumenos*	Yes	Unknown	Possible increase in population based on increase of prey items (rodents, amphibians, salamanders, and rabbits)
River Otter	*Lontra Canadensis peroclyzomae*	Yes	Unknown	No change
European Rabbit	*Oryctolagus cuniculus*	No	Unknown	Possible increase in population with plant regeneration
Sitka Black Tailed Deer	*Odocoileus hemionus sitkensis*	Considered native	Unknown	Possible increase in population with plant regeneration
Red Squirrel	*Tamiasciurus hudsonicus*	No	Unknown	No significant change based on diet (feeds primarily on cones)
Turkey	*Meleagris gallopavo*	No	Unknown	Possible increase in population based on increase of dietary items (insects, forbes, small vertebrates)
Ring-necked Pheasant	*Phasianus colchicus*	No	Unknown	Possible increase in population based on diet (weed and grass seeds, succulent shoots and insects, cultivated grains)
Peacock	*Pavo cristatus*	No	Unknown	Possible increase in population based on diet (weed and grass seeds, succulent shoots and insects, cultivated grains)
Canada Goose	*Branta canadensis*	Yes	Unknown	Possible increase in population based on diet (grasses when on land)
Rock Dove	*Columba livia*	Yes	Unknown	Possible increase in population based on diet (grain, green leaves, invertebrates, etc.)
Western Toad	*Bufo boreas*	Yes	Unknown	Possible increase in population based on increase of prey items (flying insects, ants, beetles, sowbugs, crayfish, spiders, centipedes, slugs, and earthworms)
Pacific Tree Frog	*Hyla regilla*	Yes	Unknown	Possible increase in population based on increase of prey items (insects and spiders)
European Starling	*Sturnus vulgaris*	No	Unknown	Possible increase in population based on increase of prey items (centipedes, spiders, moths, beetles and earthworms)

Black-tailed deer are considered native to the gulf islands but often occur at hyper abundant levels resulting from the lack of natural predators and limited hunting (Golumbia 2008). Currently dietary overlap and resource competition with fallow deer is suppressing black-tailed deer populations on Sidney Island. If fallow deer are removed from Sidney Island it is possible that the black-tailed deer population may expand leading to impacts on native plants and ecosystems. Although native vegetation on the Gulf Islands has co-evolved with this species this potential negative ecosystem response to fallow deer removal requires further consideration (e.g. controlling black-tailed deer numbers in order to allow the ecosystem to recover).

Based on the potential for population and/or distribution expansion of several invasive plant and vertebrate species it is imperative that a risk management strategy and response plan is developed prior to initiating a fallow deer eradication operation. The plan should outline strategies to manage potential negative response from other invasive species and include (adapted from Environment Canada 2004):

1. Development of regular, carefully designed and targeted monitoring surveys to assess population changes in the invasive species outlined in tables 12 and 13 and an effective reporting system. Key species to monitor are those that may be impacted by fallow deer removal including but not limited to Sitka black-tailed deer and invasive plant species. In terms of invasive plant species, the existing exclosure plots on Sidney Island can be used to help determine species of concern immediately following a fallow deer eradication (pioneer invasive plant species) compared to successional invasive plant species. Monitoring activities may also include detailed botanical surveys for Species at Risk (provincially listed and federally designated) as well as native and non-native vertebrate surveys (abundance and/or breeding success for birds, small mammals, reptiles and amphibians);
2. Development indicators for monitoring impacts of introduced invasive species;
3. Prioritization of other introduced invasive species, as well as native species (black-tailed deer) on Sidney Island for eradication, containment, and/or control based on their threat to the island's native species in the absence of fallow deer;
4. Development of clear eradication, containment, and/or control protocols and procedures for priority invasive alien species.
5. Development of protocols and procedures for rapid decision-making (adaptive management), communication and implementation of emergency response plan to address population expansion in priority invasive species. Include clear delineation of lead, coordination and other responsibility/authority;
6. Establishment of an emergency fund and ensure it can be accessed in a timely fashion to respond rapidly if population expansion of other introduced species on the island occurs post fallow deer eradication;
7. Development of education and outreach initiatives that are targeted to ensure public support for rapid response measures.

3.6 Project Partners

Typically eradication program partners fall into one or more of four categories:

1. Those that share a common mission /objectives or conservation goal;
2. Landowners/Stakeholders;
3. Financial supporters (government agencies, foundations, corporations, private philanthropists);

4. Strategic – some partners are simply strategic in that they may not have a direct, vested interest in the project outcome, but may be able to assist with overcoming bureaucratic hurdles, or assist dealing with adversarial opposition to projects.

An important step in planning a successful fallow deer eradication on Sidney Island is the formation of a formal partnership and working relationship between Parks Canada Agency and Sallas. This partnership will enable access to all parts of the island and allow the project to apply for federal grants that are not available to Parks Canada (e.g. Habitat Stewardship Program, Interdepartmental Recovery Fund, Invasive Alien Species Partnership Program).

In addition to this partnership there are other governmental and non-governmental organizations that may be engaged during the planning phase to: enable collaboration (e.g. ecosystem recovery monitoring), provide input on project implementation, assist with eradication activities, support permit applications, and access potential funds.

3.6.1 Federal Governmental Agencies

In addition to Parks Canada Agency's involvement in the project, other federal government agencies such as Environment Canada may be involved indirectly primarily through potential funding opportunities (Habitat Stewardship Program, Interdepartmental Recovery Fund, Invasive Alien Species Partnership Program). Based on several conversations with individuals at Environment Canada (Dave Smith, Moyra Lemon, and Kathleen Moore[23]) it is unlikely that this agency would be directly involved in a particular aspect of the project (e.g. ecosystem monitoring). However, if the project moves forward it would be beneficial to re-contact the agency to see if a strategic partnership can be developed, primarily to provide credibility to the project, assist with addressing challenging political hurdles and managing opposition to the project.

3.6.2 Provincial Governmental Agencies

The British Columbia Ministry of the Environment is supportive of the Sidney Island fallow deer eradication operation and could be involved in several aspects of the project. In terms of permits, the Ministry of Environment can assist with the acquisition of the general permit application from the Provincial Permit Authorization and Service Bureau, which is required for eradication fallow deer off the private portion of Sidney Island (T. Chatwin and S. Pendergast pers. comm.).
The Wildlife Branch of the Ministry of Environment has been previously involved in fallow deer culls on Sidney Island (S. Pendergast pers. comm.) because the private lands on Sidney Island fall under the jurisdiction of the provincial Wildlife Act. Fallow deer are scheduled as wildlife under the Act hence, any fallow deer management actions on the island are controlled by this legislation. Conversely, on National Park lands, wildlife is governed under the National Parks Act and is managed as such. Under a collaborative deer eradiation program on Sidney Island both national and provincial jurisdictions need to be considered. Therefore, provincial jurisdiction and provincial agency involvement in this project is critical.

3.6.3 Non-governmental Organizations

There are several non-governmental organizations that could potentially be involved in the fallow deer eradication (Table 17). Some, like Native Range, Inc. and Coastal Conservation could be involved in various aspects of the project including planning, coordination, and implementation. Others such as

[23] Phone conversations with these individuals occurred on January 31, 2012.

universities and/or the Gary Oak Ecosystem Recovery Team could undertake ecosystem monitoring activities to provide an unbiased opinion on the affect (both positive and potentially negative) of fallow deer removal from Sidney Island.

Table 17. Organizations that could be involved in a fallow deer eradication from Sidney Island.

Organization Name	Project Role	Willing to participate?
Islands Trust Fund	Holds covenants over significant parts of the private land on Sidney Island to protect their natural character. Islands Trust Fund is financing the construction of exclosures on the covenants. They will be developing an ecological monitoring program once the exclosures are built. They may be able to provide some funds for additional monitoring or actual eradication activities although the funding pool is small.	Yes. See Appendix C for additional details.
Dr. Peter Arcese, University of British Columbia, Centre for Applied Conservation Research	Monitoring ecosystem response (bird, mammal and plant populations) to fallow deer removal.	Yes. See Appendix C for additional information.
Gary Oak Ecosystem Recovery Team Society	Monitoring ecosystem change, specifically native plants and plant communities associated with Garry oak ecosystems. Also participating in the location and monitoring of exclosure plots.	Yes, ecosystem monitoring, letters of support, background research, etc.
Coastal Conservation and Native Range, Inc.	Planning and implementation of the project, coordinating eradication teams, and other project logistics, obtaining funding.	Yes
University of Victoria, faculty in the School of Environmental Studies and the Restoration of Natural Systems Program (Dr. Janet Pivnick)	Monitoring ecosystem change.	Contacted via email. No response as of March 5, 2012
Dr. Tom Sullivan, University of British Columbia, Department of Forest Sciences	Monitoring ecosystem response (small mammal and/or vegetation) to fallow deer removal.	Contacted via email. No response as of March 5, 2012
David Clements, Biology Department Trinity Western University, Biology and Environmental Studies	Invasive plant response to fallow deer removal.	Contacted via email. No response as of March 5, 2012

3.7 Recommended Approach

3.7.1 Eradication Technique

The eradication of fallow deer from Sidney Island can be accomplished by employing several techniques and technologies (e.g. GIS) at different stages of the operation: trapping, aerial hunting from a helicopter, and ground hunting. Hunting data collected during previous herbivore and ungulate eradications by Native Range, Inc. and other organizations will be used to estimate hunter effort and helicopter hours that will be required to achieve a fallow deer eradication on Sidney Island. Ultimately, the goal is to accomplish eradication in the shortest time frame possible. Shortening the project

duration reduces the probability of financial or legal issues either temporarily or permanently halting the project. In addition to the use of trained hunting personnel a suite of GIS technologies would be applied to facilitate an adaptive management strategy enabling the eradication team to adjust to conditions encountered during the eradication operation (e.g. deer response to different hunting methods, influence of forest cover and topography on hunting success, etc., Lavoie et al. 2007b).

Upon initiation of the eradication operation trapping and ground hunting (including spot lighting) would be employed first. Aerial hunting, in combination with ground hunting and trapping will be implemented once the deer population and individual herds have been reduced. The length of time each hunting technique is used would be determined by fallow deer density, forest cover, and anticipated inclement weather during the eradication operation.

During eradication operations it is critical to keep the target animal naive to the eradication techniques at all population densities. The eradication tools that will be applied early in the project are selected based on their effectiveness on the group sizes likely to be encountered, and those tools applied towards the end of the project selected on their effectiveness to detect and remove animals at low densities. Each of these tools must be deployed in a manner that minimises the opportunity for any animal or group of animals to escape and become wary.

The professional hunting team must be willing to forgo a deer dispatch if the situation does not meet the following criteria: 1) there was certainty that the deer could 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 hunters to dispatch the deer. Not only is this approach more humane, it also avoids conditioning the deer to the eradication techniques employed during the project. This will be instrumental in reducing population replacement and consequently project duration.

3.7.1.1 Pre-eradication Planning

Prior to the implementation of the eradication project a minimum of six fallow deer of various ages and sex should be captured from several areas on the island. The animals should be sterilized, fitted with GPS collars and then released. The data collected from these collars will provide home range size and habitat usage which will help to confirm which eradication techniques will place all fallow deer at risk of eradication.

3.7.1.2 Trapping

Trapping should be utilized early in the eradication operation to reduce the deer population, and especially if some carcasses will be utilized for human consumption (please refer to *Section 3.7.4 Options for Carcass Disposal* for additional information). During the ground hunting phase, natural clearings on the island where herds of fallow deer have been seen should be pre-baited before installing drop nets (Figure 7). Small drop nets (~12 m in diameter) can be used to capture smaller herds in limited natural openings while larger drop nets (~30 m in diameter) can be used to capture larger herds in areas such as the airfield on the southern portion of the island.

Figure 7. Example drop net used to capture fallow deer herds (photo: N. Macdonald)

In addition to the drop nets fallow deer herds may be captured by creating a corral trap at an opening in the Parks Canada fencing that divides the island and driving deer towards it. Alternatively, the permanent deer capture facility (corral and paddock on Sallas land) used by Sallas for the deer culls (Columbia 2010, Sallas Strata Forest Corporation 2009) can also be used to reduce the size of the herds before aerial hunting is implemented[24]. During capture operations, bait is placed inside the capture facility. When small groups of deer are inside the facility they can be dispatched with close-range head shots from a small calibre rifle (.223) by experienced marksmen (Columbia 2011). The permanent deer capture facility has been an effective tool to capture and concentrate deer for subsequent culling (T. Columbia pers. comm.).

A third option is a portable corral trap that is currently deployed in the park and used to capture small numbers of deer for immediate culling by rifle. To date the portable corral trap has had limited utility, possibly due to certain design features (e.g. gate sizes, automatic closing system failures).

3.7.1.3 Aerial Hunting

Aerial hunting should be employed during the Sidney Island eradication because it has proven to be a cost effective and efficient method of removing ungulates from islands with similar topography and ground cover when combined with intensive ground hunting (Carrion et al. 2007, Cruz et al. 2009). Implementing aerial hunting after the preliminary intensive ground hunting phase has been completed will maximize the probability of detecting animals at low densities (please refer to section *3.7.1.7 Project Duration & Personnel* for more information). Efficiency of aerial hunting operations requires a pilot with experience in ungulate eradications from helicopters, use of a preferred model of helicopter (e.g. light, 3-4 seat helicopter such as a Robinson R44), experienced, professional marksmen, and the use of

[24] The Sallas Forest Strata Corporation corral trap will be of limited use during the project because of the small number of deer the corral can capture at one time and the potential risk for educating the animals to the eradication operation.

preferred firearms[25].

3.7.1.4 Ground Hunting

Ground hunting will be employed on Sidney Island because it is relatively flat and most if not all areas are accessible on foot. Various specialized hunting strategies have been used successfully on other island eradications including but not limited to a form of team line hunting called rastrillo (originally developed by Prohunt, Inc.), free hunting, tree stand hunting, and strategic spotlight hunting (Cruz et al. 2009). The success of a ground hunting operation will depend on the use of extremely skilled and motivated professional hunters with expertise and experience in eradication operations. However, there is the potential to train and utilize Parks Canada Agency staff or other individuals in the skills needed to support the ground hunting operation.

All relevant operational data should be collected including but not limited to animal sightings, animals removed, animal sex/age, GPS location etc. These data will allow for real-time monitoring of progress, and provide information needed to make adaptive management decisions (Lavoie et al. 2007).

3.7.1.5 Sentinel Deer

A common reason for unsuccessful eradication attempts is the failure to remove the final animals at low densities because of an inability to detect them. The sentinel animal method, which exploits the social nature of many ungulates such as fallow deer, can be a vital tool for detecting the target species at low densities and a monitoring tool to confirm eradication (Taylor & Katahira 1988; Campbell 2002). Radio telemetry collars are fitted to a select number of sterilized fallow deer, which are then released after sterilization and marking (e.g. ear tags) and allowed to seek out other deer. The animals are then radio tracked, either on foot or by helicopter, and accompanying deer are dispatched. Sentinel deer are then allowed to escape to seek out other animals and are then rechecked at a later date. This approach allows the last individuals to be removed (Rainbolt & Coblentz 1999). The sentinel animal technique has been used successfully in a number of goat (e.g. Campbell et al. 2004), as well as fallow deer eradications (N. Macdonald pers. comm.). For example, on San Clemente Island, California, where more than 29,000 goats were removed, a combination of trapping and helicopter shooting failed to remove the remnant population. The utilization of sentinel goats finally enabled the removal of the last 263 individuals (Keegan et al. 1994).

For the Sidney Island project sentinel deer should be employed as the population approaches zero detectable density in order to locate the last remaining individuals. Once the eradication is confirmed the sentinel deer can be used as an effective biosecurity tool to quickly alert Parks Canada Agency and Sallas to any deer reinvasion from nearby islands.

3.7.1.6 GIS & GPS Technologies

Geographic Information Systems (GIS) and GPS data collection methodologies should be integrated with ground-based hunting, aerial hunting by helicopter, and sentinel goat techniques (Lavoie et al. 2007b). These technologies serve three general purposes:

1. They facilitate systematic planning, hunting, and monitoring.
2. They allow critical data to be collected, visualized, and analyzed (e.g., deer killed per hour) on a daily/weekly basis during the eradication campaign. This allows for progress to be monitored

[25] Semi-automatic rifle (e.g. .223) and 12 gauge semi-automatic shotgun (N. Macdonald pers. comm.)

and adaptive decisions regarding techniques and strategies to be made in a timely fashion.
3. They increase the efficiency and cost-effectiveness of the overall campaign.

Archer™ field PCs or similar equipment that incorporates an automatic track logger could be used to record hunting effort, hunter movements and tracks (both ground and aerial), animal encounter locations, and kill sites, including biological data from the animal (i.e. gender, weight, reproductive condition). This data would be downloaded daily and entered into a Geographic Information Systems (GIS) database to analyze hunter tracks (aerial and ground), hunting efficiencies, escape rates, and other pertinent information. This information would enable the eradication team to adjust and integrate hunting methods as required (adaptive management, Lavoie et al. 2007b).

3.7.1.7 Project Duration & Personnel

Some large herbivore eradication projects have taken many years, even decades to complete, but in many cases it was because the short term goal was to control, not eradicate the target population (e.g., Carrion et al. 2007, Cruz et al. 2009, Donlan et al. 2002,). With the development of new technology and expertise, complete eradication of introduced ungulates even from large islands is not only more feasible, but also can be accomplished in a much shorter time period. For example, the Santa Cruz Island (size: >24,000 ha) feral pig eradication required less than two years post-project implementation to successfully eradicate over 5,000 animals (Macdonald and Walker 2009).

The total time required to confirm eradication success depends on deer density, island topography, vegetation, weather, and the ability of the eradication to be completed without major financial or legal delays. We therefore conservatively estimate the time required to complete the actual eradication operation and post-eradication efficacy monitoring at less than 1.5 years: 11 weeks for eradication operations and 1 year of post-eradication monitoring. This does not include planning the operation, preparation time, transit time, completion of phase 3 (efficacy monitoring)[26], or potential work stoppages resulting from public opposition to the project.

A key factor to the success of this project, therefore, is the use of a professional hunting team. Employing professional hunters for the eradication operation can minimize situations where an animal escapes a hunting event which will reduce the likelihood of a naive fallow deer population learning to avoid certain hunting methods (Parkes 1990, Morrison et al. 2007). Because animals at low densities can be difficult to detect (Russell et al. 2005), educated animals increase costs and the probability of eradication failure (Cruz et al. 2009).

For the Sidney Island eradication, a program director, project manager, and technical assistant would be required to plan the eradication and coordinate permitting, equipment and supplies purchases, as well as other project-related activities. The ground hunting operation would require three skilled and experienced hunters in addition to a veterinarian to sterilize the sentinel animals, plus support personnel. The aerial hunting portion of the operation would require a skilled and experienced precision marksman, an experienced helicopter pilot, and a support crew for the helicopter (e.g. engineer, fuel loader, etc). Two ground hunters plus one helicopter pilot and an aerial hunter would be required for follow-up eradication confirmation (Phase 3).

[26] Phase 4 of the operation is ongoing biosecurity monitoring by Parks Canada Agency and Sallas Strata Forest Corporation.

Pre-eradication planning phase

Total time: Approximately one year.
Team size: ~4 (project manager, technical assistant, program director, Native Range, Inc. coordinator) plus representative from Parks Canada Agency and Sallas as required.

Activities:

- Operational plan development
- Equipment and supplies purchase and staging
- Eradication personnel identification
- Managing contracts and obtaining required permits
- General project coordination

Phase 1: target large fallow deer herds on the island.

Total time: 6 weeks, not including preparation time, transiting to and from the island, etc.
Eradication team size: 3 hunters[27].
Activities:

- Pre-baiting sites for drop nets (approximately 10 days to complete) followed by installation of the drop nets (12-30 m) and continued pre-baiting before trapping commences.
- Establish approximately 20 sentinel animals (radio collaring and sterilization) from different areas of the island.
- Begin ground hunting, including spot lighting and tree stand hunting to eradicate small fallow deer herds. Target areas that will be difficult to access with helicopter.

Phase 2: use helicopter (light 3-4 seat helicopter such as a Robinson R44)) with a shooter. Ground hunting continues.

Following an intensive ground hunting phase aerial hunting will be added to maximize the probability of detecting animals at low densities.
Total time: 4-5 weeks, not including preparation time, transiting to and from the island, etc.
Eradication team size: 5 (one helicopter pilot, one aerial hunter, three ground hunters)[27].
Activities:

- Implement aerial hunting
- Continue spot lighting and drop netting (baiting)
- Monitor sentinel animals

Phase 3: efficacy monitoring to confirm eradication success 1, 3, 6, and 12 months post-eradication.

Upon completion of phase 1 and 2 eradication operations, ground and aerial monitoring (phase 3) would be required to detect any remaining animals and would be conducted 3, 6, and 12 months post-eradication to confirm complete removal.
Total time: one week per site visit. Total: ~4 weeks over 3 site visits.
Eradication team size: two ground hunters, one helicopter pilot, one aerial hunter not including support personnel such as the project manager, representatives from Parks Canada Agency and Sallas, etc.

[27] Does not include support staff such as the project manager, veterinarian for sterilizing sentinel/Judas deer, project representatives from Parks Canada Agency and Sallas Forest Strata Corporation, etc.

Activities:

- Monitor sentinel animals
- Conduct ground hunting operations to search for any remaining animals

Phase 4: Biosecurity monitoring (12 months post-eradication onwards)

Total time: indefinitely
Team size: variable (Parks Canada Agency representatives, Sallas representatives and the public).
Activity: monitoring and rapid response to fallow deer reinvasion (sightings (primarily), scat, tracks) from nearby islands. Remote cameras may be an effective tool for detecting a potential reinvasion but this option should be investigated further.

3.7.2 Estimated Budget

Estimating the cost of undertaking a fallow deer eradication on Sidney Island using the proposed eradication techniques is a challenging undertaking. As stated above the total time (and thus cost) required to undertake the eradication operation and confirm eradication success depends on deer density, island zone size, topography, vegetation, weather, and the ability of the eradication to be completed without major financial or legal delays. Several assumptions must be made during the budgeting process that can significantly impact project costs.

Assumptions:

- The project is completed by eradication experts with in-kind personnel support from Parks Canada Agency and Sallas;
- Full cooperation and engagement with Parks Canada Agency staff, BC Ministry of Environment staff (permits and regulatory requirements), and Sallas;
- The eradication team has unrestricted access to all parts of Sidney Island;
- The eradication team has permission to use aerial shooting, multiple shot firearms, silencers/suppressors, spot lighting, etc. for the eradication operation. If any of these techniques are prohibited, the time to complete the eradication, as well as the cost increase;
- Public opposition does not impact the eradication operation (e.g. work stoppages);
- During phase 2 (efficacy monitoring) a local helicopter is leased and flown by a pilot experienced with eradications (e.g. Native Range, Inc.)[28];
- Radio/GPS collars for sentinel animals must be purchased and are not available through in-kind donations from other projects;
- Vehicles on Sidney Island, including a flat bed truck and all terrain vehicles are available for use by the eradication team (purchase/lease not required);
- Accommodations are available on-island for the eradication team and are free of charge;
- The costs associated with a veterinarian required to sterilize sentinel animals not included in budget;
- Transportation to the project site, accommodations off island, and fuel costs are based on estimates obtained during the site visit in March 2012.
- Estimate does not include ecosystem monitoring (pre-/post-eradication surveys) and associated

[28] The alternative is Native Range transporting their own helicopter from Ventura, California for each monitoring flight.

materials and supplies;
- Does not include any public relations costs;
- Does not include ongoing biosecurity monitoring following eradication confirmation;
- Does not include development of an Environmental Impact Assessment (EIA) or interim/final reports;
- Personnel costs include WCB and other employee-related costs;
- Includes overhead and administrative costs;

An estimated budget cost associated with the eradication operation was then calculated based on the abovementioned assumptions (Table 18).

Table 18. Estimated costs associated with the eradication operation based on assumptions.

Description	Estimated total
Planning, Coordination & Implementation	
Program director, Project Manager, Native Range project coordinator, and technical assistant assisting with operational plan development, project coordination, permitting, importation/NAFTA requirements, equipment and supply purchasing and staging, permit	$179,130.00
Eradication phase (17 weeks on island)	
Hunting team (6 personnel) including transportation, accommodations on/off island, meals.	$300,208.00
Efficacy Monitoring trips 1, 3, 6, and 12 months post eradication (1 week per trip).	
Hunting team (aerial hunter, pilot) including transportation, accommodations off island, meals.	$43,506.00
Helicopter costs for Eradication	
Helicopter (Robinson R44). Two hours per day plus a 10% contingency. Includes transportation costs from Ventura, CA and all fuel	$101,637.00
Local helicopter lease for efficacy monitoring (~4 weeks total plus a 10% contingency).	$88,704.00
Equipment & Supplies	
Firearms, ammunition, spot lights, radio collars and receivers, vehicle fuel, laptops for data analyses, first aid supplies, binoculars, headlamps/flashlights, gear bags, programmable radios, batteries, GPS, deer bait, storage shed for deer bait, tree stands, trail cameras, sleeping bags, air mattresses, miscellaneous, shipping costs, liability insurance, etc.	$85,665.00
ESTIMATED TOTAL	**$798,850.00**

3.7.3 Eradication Timing

Ideal eradication timing is a function of target species biology and logistical constraints. Rarely do all factors perfectly align. Therefore, eradication timelines often select a subset of the governing factors to direct the project. Eradications should be planned for the period in the target species' annual cycle when population sizes are static or declining as a result of reductions in seasonal food resources or other factors. However, in temperate regions seasonal weather patterns will influence the feasibility and safety of eradication projects, especially when aerial operations are incorporated into the project. Furthermore, management agendas for public presence can also influence when an eradication

operation can occur.

For Sidney Island, an ideal timeline where all eradication constraints may be balanced is during the fall or early spring (October to February) when the population size is static or decreasing. Additionally, the fall timeline coincides with:

- a low public presence near the project area;
- weather patterns that are favourable for ground and aerial operations; and
- the peak rutting time (October) for the territorial bucks.

3.7.4 Options for Carcass Disposal

Estimates of the fallow deer population range from 300-500 animals (Golumbia pers. comm.). However, based on the results of previous ungulate eradications, the final tally is often far greater than expected (e.g. Keegan et al. 1994). For example, during the Guadalupe Island, Mexico feral goat eradication the total number of animals was estimated at approximately 2,000. When the eradication was completed almost 10,000 animals were culled (Campbell and Donlan 2005). The eradication operation on Sidney Island could therefore result in a significant number of deer carcasses.

Generally, conservation managers involved in ungulate eradications recommend leaving an animal where it is dispatched (K. Campbell pers. comm.). In addition to reducing logistical complexity and overall project cost, leaving animals where they are dispatched encourages nutrient recycling (composting) which returns nutrients scavenged by the target species to the environment. Increased soil nutrients provided by the composting carcasses in turn can increase the rate of ecosystem recovery.

The level of carcass handling during the Sidney Island eradication will ultimately be directed by its impact on the eradication operation (logistics and financial costs) and the influence of public optics and pressure on conservation managers. Keeping this in mind there are three main options are available for carcass disposal:

> Option 1: A portion of the deer culled **during the initial eradication operations** may be processed using a mobile abattoir with assistance from organizations such as Two Rivers Meats, Vancouver, BC (Golumbia 2010, 2011). The meat could then be purchased by upscale restaurants to recoup a portion of the costs associated with the processing.
>
> Option 2: A portion of the deer culled **during the initial eradication operations** could be donated to local First Nations as hunted animals, the food bank (meat processing required), or donated to local wildlife recovery centres.
>
> Option 3: The culled deer carcasses are allowed to naturally decompose either in a designated composting site or where the animal is dispatched. This allows a natural recycling of nutrients in the Sidney island ecosystem and would help mitigate the impacts of the fallow deer and likely increase the rate of ecosystem recovery.

Options 1 and 2 are best suited to small scale deer management programs. For medium to large scale eradication operations it is not feasible to collect all deer carcasses because it will distract the eradication team from the ultimate goal, removal of all fallow deer from Sidney Island. This would increase the time required to complete an eradication due to additional processing time, which, in turn will result in an increased project cost and increased risk of eradication failure (please refer to Section

3.4.2 Eradication of Fallow Deer Population for additional information). For example, N. Macdonald (pers. comm.) noted that during the Point Reyes fallow deer eradication the professional meat processors were quickly overwhelmed with the number of deer carcasses resulting from the eradication operation leading. This lead to delays in the operation because eradication team members were forced to help process the meat, which put the eradication operation at risk of delays or even failure. Option 1 and 2 therefore significantly increases the logistical complexity of the project based on the need to process the meat within a specified timeframe as per Canada Food Inspection regulations and/or organize individuals to be present during the eradication operation to process donated meat (e.g. First Nations, wildlife recovery centres). Furthermore, since 2009 Parks Canada and Sallas have processed approximately 1,500 deer for human consumption and other uses which has resulted in a continued loss of nutrients from the Sidney Island ecosystem. Allowing the deer carcasses to naturally decompose during an eradication operation, either in a designated composting site or more preferably, where the animal is dispatched will help recover nutrients scavenged by the deer and make them available to the recovering ecosystem.

3.7.4.1 Estimated Cost of Deer Processing

In addition to the direct impacts to the eradication operation there are also additional costs associated with processing and transporting the meat, as well as other unforeseen costs associated with these activities that are likely very significant. For example, previous attempts at helicopter removal of ungulates from remote areas have revealed that carcass handing and removal incurs costs far greater than purchasing prime cuts of meat from the grocery store (Jenkins et al. 1994).

For the Point Reyes fallow deer eradication approximately 75% of the culled deer were processed and donated to Bay Area food banks, soup kitchens, Native American tribes, and the Condor Recovery Program. The costs associated with the deer processing is not known but Norm Macdonald (pers. comm.) commented that "*it was a significant investment that included purchasing two 40 foot freezer containers; supplying electricity; obtaining materials and taking the time to make the freezer racks; purchasing a skinning machine, a winch, and cleaning gear; in addition to the costs associated with transporting and processing the deer. I think the transporting and processing alone was about $100 per deer. It would have been really expensive meat. It would have been much more cost effective and easier if you took the money that ended up being spent (and also the hunting effort that was lost) to recover those deer and process them and instead went down to the local supermarket and brought T Bone steaks to donate to the food banks. You would have ended up with a lot more food for them.*"

In order to estimate the actual cost per kilogram of deer meat several important assumptions must be made:

- The average weight of a buck and doe (female) is 70kg and 45kg respectively.
- Does comprise 50% of the animals captured, therefore the average live weight equals 57.5 kg.
- All captured deer pass a federal inspection for human consumption.

Using the following formula: *Live Weight X 78% = Field Dress Weight X 75% = Hanging Weight X 75% = Edible Meat Weight*[29], results in 25.2 kg of edible meat per deer captured. This estimate is similar to that provided by K. Poskitt (pers. comm.) for recent culling operations on Sidney Island. Therefore, the cost per kilogram of deer meat ranges from $9.12 to $10.50 per kg, which is greater than the cost of inside round roasts from a local supermarket ($8.73 kg from Askews Foods (www.askewsfoods.com) as of

[29] Source: http://www.askthemeatman.com/estimate_deer_weight.htm

March 12, 2012).

3.7.4.2 Recommended Approach to Managing Deer Carcasses

Although the cost to process deer meat is a significant investment, there are also benefits to utilizing a portion of the meat from a public relations perspective, as long as doing so will not compromise the success of the eradication operation. Therefore, if feasible, a limited portion of the deer culled during the initial phase of the eradication could be made available for either human consumption or donated to local wildlife recovery centres (options 1 and/or 2). Handling and dispersal of culled animals must be pre-organized and occur in a timely efficient manner, with back-up plans for dispersal/storage and /or disposal of meat and by-products (Golumbia 2011). The remainder of the carcasses should be either left *in situ* or placed at a designated composting site to allow natural nutrient recycling to occur. The ultimate deciding factor in how the deer carcasses are managed is the impact of this activity on the eradication outcome.

3.8 Ecosystem Recovery Monitoring

The ultimate goal of removing introduced fallow deer from Sidney Island is to protect the endemic biodiversity and facilitate habitat recovery. In order to demonstrate that this goal has been achieved, pre- and post-eradication biological monitoring of native species is recommended in order to compare changes in species abundance, richness, and distribution. One or more components of Sidney Island's ecosystem that are likely currently being impacted by the presence of fallow deer can be selected for monitoring.

For example:

- Forest cover;
- Native plants and/or plant community diversity, abundance and distribution;
- Seedling recruitment rates;
- Forest songbird species diversity, abundance and breeding success;
- Small mammal abundance;
- Amphibian and reptile abundance; and/or
- Insect diversity and abundance.

Monitoring total vegetation cover, plant community composition, or seedling regeneration would likely demonstrate the effectiveness of deer removal. At least one survey prior to the eradication would be required to establish baseline information. Information on vegetation cover and species composition could be obtained from satellite or other digital aerial images, and may also already exist through Parks Canada Agency's ongoing ecosystem monitoring (e.g. Golumbia 2008)[30]. To document recovery, at least one post-eradication survey is recommended although obvious changes in total vegetation cover detectable with aerial images may take longer. Therefore, long-term post-eradication monitoring of ecosystem recovery is recommended (e.g. four or five years post-eradication).

Parks Canada agency has undertaken a multi-year ecosystem monitoring project on the Federal park reserve portion of Sidney Island that includes:

[30] Although broad systematic surveys have not been undertaken across Sidney Island, there are data from several inventory projects that provide a relatively comprehensive plant list. There have not been any systematic surveys of fauna on Sidney Island although large numbers of naturalists have provided opportunistic data, particularly on birds (Golumbia 2008).

- Forest songbird abundance (point counts initiated 2008);
- Vegetation cover (paired vegetation plots initiated 2007);
- Deer relative abundance (deer pellet plots initiated 2006);
- Eagle Island vegetation surveys (initiated 2008);
- Purple Martin abundance (nest box surveys initiated 2005); and
- Shoreline change (erosion/deposition), shoreline profiles (initiated 2007).

Continued monitoring of these elements on the reserve and also on the Sallas land pre- and post-fallow deer eradication would enable changes in native species abundance and richness to be effectively assessed.

3.9 Potential Impacts & Mitigation of Risk to Non-target Species

The risk to non-target species during an eradication operation is a function of the eradication methodology as well as the species present on the island during the eradication. Applied research can help eradication operations minimize potential non-target impacts of native wildlife (short term) while maximizing probability of eradication success. However, the need to reduce temporary non-target impacts must be balanced with maximizing the probability of eradication success and financial realities (e.g., the lack of funds for a second attempt if the original eradication fails due to the influence of mitigative activities).

While the outcome of the Sidney Island fallow deer eradication will have significant long-term and lasting benefits to native island species and the island ecosystems as a whole, there may be associated short-term impacts to individual non-target flora and fauna. The primary impact to non-target species (both flora and fauna) is temporary disturbance from:

- Helicopter activity (noise disturbance);
- Firearm discharges (noise disturbance);
- Human presence both on and off trail (physical disturbance); and
- Use of vehicles and ATVs both on trail and potentially off trail (noise and physical disturbance).

Timing the eradication to occur between the late fall (October) and early spring (February) will ensure that most non-target fauna have completed their breeding cycles and migratory bird species have departed the island for their wintering grounds. This should minimize the temporary impacts to other species on the island resulting from helicopter activity (noise disturbance) and other eradication team activities (e.g. rifle discharges, off trail hiking and ATV usage, etc.).
Timing the eradication for the winter months also ensures that the majority of Sidney Island flora, including Garry oak ecosystem-related plant species are dormant (Polster 2010), which should limit impacts to these species from foot and ATV traffic. However, the seeds of certain plants species associated with this ecosystem germinate in the fall with the start of the fall rains and the resulting plant grows slowly over the winter before flowering in April and May (Polster 2010). Therefore, some short term impacts to certain plant species may be unavoidable. Wherever possible, the eradication team should utilize trails and roads on the island to minimize physical disturbance to non-target flora and fauna.

3.10 Regulations & Compliance

3.10.1 Federal Permits

Parks Canada Agency will be required to complete an Environmental Assessment (EA) under the Canadian Environmental Assessment Act (CEAA) before undertaking a deer eradication operation within the boundaries of the park reserve on Sidney Island. The EA will identify any necessary permits and/or compliance requirements and be made available for public review and comment.

Parks Canada Agency will be required to obtain an internal animal care permit/review and a non-regulatory research permit because:

1. deer eradication will take place on the federal park portion of the island, and/or
2. ecosystem monitoring work specifically associated with the eradication operation is undertaken.

In addition to the EA, it is possible that other federal permits concerning the use of helicopters for low level aerial hunting would be required because Sidney Island falls within the controlled airspace for the Victoria International Airport (

Figure 8**Error! Reference source not found.**).

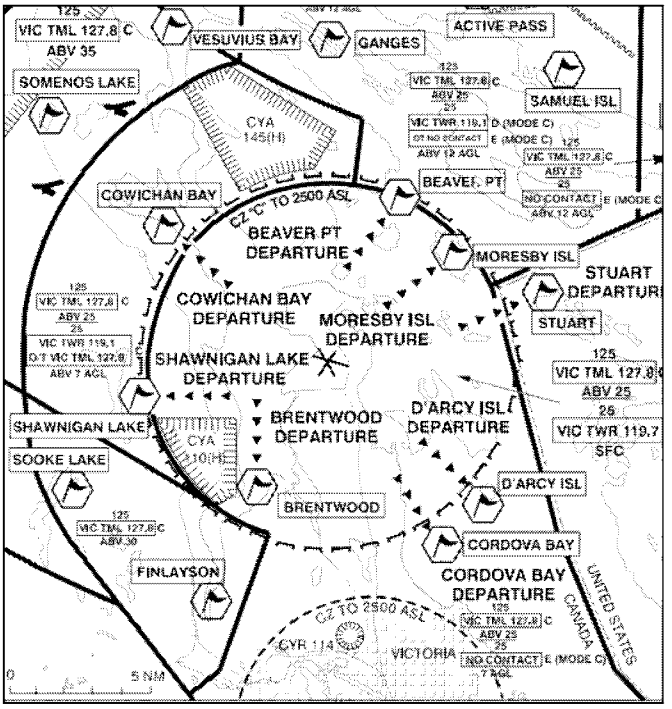

Figure 8. Controlled airspace around the Victoria International airport in relation to Sidney Island.

3.10.2 Provincial Permits & Regulations

A general permit application from the Provincial Permit Authorization and Service Bureau (PASB) is required for the eradication of fallow deer from the private portion of Sidney Island (T. Chatwin and S. Pendergast pers. comm.). Under the activities section the applicant must identify that introduced invasive deer will be eradicated in partnership with Parks Canada and the Ministry of Environment Provincial Wildlife Branch.

A provincial animal care committee application must also be completed and submitted to the PASB if the eradication operation will capture live animals before euthanizing them. No Animal Care Committee application is required if the eradication will be undertaken solely by hunting (S. Pendergast pers. comm.).

Permission is not required for the eradication team to access the land covenants controlled by the Islands Trust Fund (J. Ralph pers. comm.).

3.10.2.1 Eradication Techniques and Provincial Regulations

The success of the eradication operation rests in the ability of the eradication team to employ multiple techniques in order to complete the operation. These techniques include but are not limited to aerial shooting, multiple shot firearms, silencers/suppressors, and spot lighting. Early in the planning phase the appropriate Ministry of Environment representatives (e.g. Sean Pendergast) must be engaged to initiate any regulatory process that will permit the use of these techniques during the project. If the eradication team is unable to use any one of these techniques, the time to complete the eradication, as well as the cost will increase significantly, which in turn, may affect the outcome of the project.

3.11 Public Outreach & Engagement

The success of the eradication operation will depend, in part, on effective communications with Gulf Islands National Park Reserve visitors, the private landowners on Sidney Island, internal Parks Canada Agency staff, and regulatory agencies to ensure continued project support.

The purpose of the communications planning is to:

- support the federal environmental assessment with strategic communications to educate local and regional agencies, decision-makers, non-governmental organizations, and the public about the purpose and need for the project and the expected long-term conservation benefits;
- mitigate any potential opposition to the project by gathering support from key audiences; and
- develop a strategy for handling crisis communications.

A joint communications strategy between Parks Canada Agency and Sallas will be required to support and implement the strategic communications plan[31]. The strategy should include:

1. the development of websites/web pages, printed materials, and presentations (e.g. Microsoft Power Point™) containing key messaging regarding the purpose of the project (rationale), answers to frequently asked questions from the public, and information regarding any closures or restrictions that may be required during the eradication operation to ensure public safety. These communication materials should also be updated post-eradication to document any recovery of native plant species, and other native fauna (e.g. forest songbirds);

2. guidelines for engaging media (e.g. media are not permitted on island during the eradication operations) and responding to media enquiries. This should include planned media trips to the island and press releases fostering the perception of an open and transparent project;

[31] Parks Canada and Sallas have a joint communication strategy that was developed during the capture/cull operations. This would form the basis of a communications strategy for an eradication operation (T. Golumbia pers. comm.)

3. signage installed at strategic sites on the island well in advance of the actual eradication operation (e.g. 1-2 years) explaining the impacts of the deer, the importance of removing them from the island, and anticipated positive outcomes;

4. meetings with the property owners on Sidney Island to explain the project, and provide information in regards to what is to be expected during the eradication operation (e.g. eradication team personnel accessing properties to hunt the deer); and

5. deer exclosures near popular sites visited by the public on the island should be installed along with signage explaining the impact of fallow deer on native plants and why it is necessary to remove them from the island.

Parks Canada Agency staff working on Sidney Island should also be briefed on the eradication operations and conservation goals of the project prior to implementation so that they can educate island visitors appropriately.

Communications planning will include developing key messages and background materials to coincide with release of the Federal Environmental Assessment. The communications team, strategy development and outreach should continue throughout the entire program, including pre-implementation (possibly including an information bulletin distributed locally to media and related environmental groups announcing the eradication and rationale behind it, implementation, eradication confirmation, and recovery monitoring. It will be particularly important to release preliminary, positive ecosystem recovery results to the media as soon as possible to justify the rationale for the project and to promote invasive species removal as a powerful tool for conservation purposes on islands in British Columbia.

3.12 Animal Welfare Considerations

Humane treatment of animals will be the paramount consideration in all operations related to the eradication of fallow deer from Sidney Island. Capture and euthanization protocols[32] must follow the Canadian Council on Animal Care (2003) guidelines and should be reviewed by Parks Canada's Animal Care Committee to ensure the humane treatment of animals.

Frequently, citizens concerned about animal welfare recommend live capture and relocation, or sterilization of the animals and releasing them at the place of capture. This practice is often called trap-neuter-release (TNR) or trap-neuter-abandon (Jessup 2004). However, TNR is not a viable method for eradicating invasive vertebrates from islands except in very rare situations.

Most TNR advocates recommend releasing the animals at the site of capture. This is not an option in eradication programs because the presence of the trapped and sterilized animals will make it exceedingly difficult to detect and trap the remaining individuals. Potentially all animals could be held until the entire population is caught. However, because the captured animals are wild, it is arguably less humane to hold the animals in captivity than to humanely euthanize them with minimal human interaction. Furthermore, if the animals were released after all were sterilized, the damage caused by these animals would continue until they died naturally, which is at odds with the restoration goal of the

[32] Capture and cull operations have already undergone a PCA animal care review and so, a revision would be necessary for this next phase of the operation (T. Golumbia pers. comm.).

project.

3.13 Biosecurity

The eradication of fallow deer from Sidney Island is feasible and should encourage the natural restoration of native wildlife, plants, and plant communities. However, the conservation benefits of eradicating fallow deer from Sidney Island will only be fully realized if reinvasion is prevented. Invasive species biosecurity plans are critical components of successful eradication campaigns. To mitigate the risk of a post eradication fallow deer reinvasion, a biosecurity plan must be put into action prior to the eradication and continued indefinitely

A key component of the biosecurity plan is early detection and rapid response to a potential reinvasion of fallow deer from neighbouring islands such as James Island (Figure 9**Error! Reference source not found.**[33]). Please refer to Appendix D for a summary of discussions with Jason Thrupp regarding fallow deer on James Island.

It is important that the biosecurity plan be maintained and refined as needed in perpetuity because the long-term benefits of fallow deer removal to the biodiversity of Sidney Island will depend on continued project support from Parks Canada Agency, Sallas, and the public to maintain a fallow deer-free island.

[33] Deer (possibly fallow deer) have regularly been observed swimming from Darcy Island to Little Darcy Island, as well as from Sidney Island and the Saanich Peninsula to James Island (J. Thrupp pers. comm.). J. Thrupp (pers. comm.) has also reported seeing fallow deer swimming from Sidney Island to James Island. The owner of James Island is not presently interested in undertaking a fallow deer eradication on that island. Given the ability of deer to access Sidney Island, there is a significant risk of reinvasion if an eradication operation is undertaken.

Figure 9. Islands surrounding Sidney Island that may be potential fallow deer source populations. This species is present on James Island but may or may not be present on the other islands indicated on this map.

There are two basic aspects to a fallow deer biosecurity plan: early detection and rapid response.

3.13.1 Early Detection

Early detection of a potential reinvasion is critical to the ongoing success of the project. Several methods and techniques should be assessed for their utility in detecting a fallow deer reinvasion from neighbouring islands including:

- Remote motion-sensing cameras are an efficient means of documenting deer presence (Crouchley et al. 2011); however, they cannot reliably confirm deer absence due to the small area sampled by each camera. The probability of detecting deer with motion-sensing cameras can be enhanced by placing a favoured food item or a lure within the camera's field of view (Macdonald and Walker 2009). Remote cameras could be installed at key coastal sites on Sidney where deer would likely arrive from neighbouring islands such as James Island. The cameras should be checked on a regular basis so that conservation managers can rapidly respond to a confirmed reinvasion.
- Sentinel animals that are used during the eradication operation are marked to distinguish them from other non-sentinel animals (e.g. fluorescent radio collars, ear tags, etc.). The sentinel animal method, which exploits the social nature of many ungulates such as fallow deer, can be a vital monitoring tool to confirm eradication and also to detect reinvasions (Taylor & Katahira 1988; Campbell 2002). Radio telemetry collars are fitted to a select number of sterilized fallow deer, which are then released after sterilization and marking and allowed to seek out other deer. Based on the successful deployment of sentinel goats during the Isla Isabela goat eradication in the Galapagos (Carrion et al. 2011), a minimum of 1:100 ratio of sentinel deer to wild deer should be appropriate for the Sidney Island project. The animals are then radio tracked, either on foot or by helicopter, and accompanying deer are dispatched. Sentinel deer are then allowed to escape to seek out other animals and are then rechecked at a later date. Parks Canada and Sallas personnel should monitor the sentinel deer on a regular basis post-eradication confirmation using radio telemetry and quickly remove any non-sentinel deer found with the sentinel animals.
- Frequent formal and non-formal ground surveys for fallow deer and deer sign by Parks Canada Agency and Sallas.
- Formal surveys of the distribution and abundance of fecal pellet groups are useful in establishing habitat preference and population densities for fallow deer (Elliott and Longhurst 1984, Forsyth et al. 2007). It may be difficult to distinguish individual fallow deer pellets from individual black-tailed deer pellets; however, the number of pellets per grouping might be a discriminating factor. Fallow deer fecal groupings contain 64 pellets (Massei et al. 1998), and black-tailed deer groupings contain 150-200 pellets (Alton and Bunnell 1987).
- Establish signage at key landing sites for visitors to the island that outlines the project including a description of the sentinel deer, fallow deer and black tailed deer distinguishing characteristics, the anticipated outcome of the project (ecosystem recovery), and who to

contact if a fallow deer is seen on the island for rapid follow up by Parks Canada and/or Sallas personnel.

- Establish regular communications with individuals on James Island and other islands adjacent to Sidney Island with known fallow deer populations and request that they alert Parks Canada Agency and Sallas if any deer are observed swimming towards Sidney Island.
- Remote surveys of adjacent islands (such as D'Arcy) for presence of fallow deer using remote cameras on bait stations and actual surveys (human observers).

3.13.2 Rapid Response

If there is a report of a fallow deer on Sidney Island Parks Canada and Sallas should quickly take steps to confirm or refute the existence of the animal by conducting an interview with the individual reporting the sighting and also undertake a detailed search of the island for the animal. Because there are black-tailed deer on the island as well as sentinel fallow deer, it is possible that visitors to the island may mistake the identity of the animal. However, all reports should be carefully investigated as a precaution. Similarly, if a fallow deer is recorded on a remote camera installed on the island or an untagged animal is found with a sentinel animal, steps should be taken to rapidly mobilize a trained eradication team[34] to dispatch the animal.

3.14 Potential Funding Sources

Eradication operations are financially challenging, often costing in the millions of dollars to complete if all aspects of the project are included (e.g. planning, pre- and post-eradication surveys, on-island implementation, etc.). It is therefore imperative to secure sufficient resources to fund the campaign to its conclusion.

Unlike the United States and elsewhere in the world (e.g. New Zealand), invasive vertebrate eradications are a new conservation tool in Canada and thus funding for such projects can often be challenging to secure. For the Sidney Island fallow deer eradication project there are several funding sources that should be investigated including the Parks Canada Agency *Action on the Ground* program (internal), the Habitat Conservation Trust Foundation, private donations from the Sallas land owners (possibly via Tides Canada Initiatives in exchange for a tax deductable receipt), Federal funds including Habitat Stewardship Program and Invasive Alien Species Partnership Program, as well as other foundations.

3.14.1 Habitat Stewardship Program

Website: http://www.recovery.gc.ca/hsp-pih/index.cfm?fuseaction=home.login&lang=E

Grant size: $10,000 to $100,000 (average grant size in 2005: $55,000)

Contact information:
You will need to contact Kin Mak (Canadian Wildlife Service, Ladner, BC) to receive a username and password to apply for the fund.
Email: Kin.Mak@ec.gc.ca
Phone: (604) 940-4700

[34] It is imperative that trained hunters are used to dispatch the animal. A strategic hunting approach is required to avoid the most common causes of failure in ungulate eradication projects - not educating the target animal to the eradication techniques

Background: The goal of the Habitat Stewardship Program is to contribute to the recovery and protection of habitat for priority listed species at risk, and for other species of special concern. Habitat stewardship activities must take place on private lands, provincial Crown lands, Aboriginal lands, or in aquatic and marine areas across Canada. Non-federally designated species are also eligible but are lower priority.

3.14.2 Habitat Conservation Trust Foundation

Website: http://www.hctf.ca/Application/Application.html

Grant size: $2,000-$200,000 (average: $36,000 for 2011-2012)

Contact information:
Phone: 1-800-387-9853
Email: hctf@hctf.ca

Background: HCTF is looking for projects that:

- focus on freshwater wild fish, native wildlife species and their habitats;
- have the potential to achieve a significant conservation outcome;
- best represent the interests of the trust Foundation's contributors, and
- maintain or enhance opportunities for fishing, hunting, trapping, wildlife viewing and associated outdoor recreational activities.

3.14.3 Invasive Alien Species Partnership Program

Website: www.ec.gc.ca/eee-ias/default.asp?lang=En&n=A49893BC-1

Grant size: Up to $50,000

Contact information:
Natasha Ziolek
IASPP Program Administrator
Phone: 819-934-8783
Email: Natasha.Ziolek@ec.gc.ca

Background: The goal of the IASPP is to engage Canadians in actions to prevent, detect, and manage invasive alien species in order to minimize the risk the species pose to Canada's natural capital.

Applicants are eligible for up to $50,000 in funding. Projects are chosen based on their ability to reduce the introduction and spread of invasive alien species, leverage partnerships and funds, create lasting benefits, enable Canadians to become actively involved in projects that address related threats, and improve the understanding and awareness of the issue in Canada.

3.14.4 Canadian Wildlife Federation

***Website*:** http://www.cwf-fcf.org/en/what-we-do/foundation

***Grant size*:** $10,000-?

Contact information:
Cathy Hurd, Foundation Funding Officer
Phone: 613.599.9594 ext 260
Email: cathyh@cwf-fcf.org
Background: Canadian Wildlife Foundation's Funding Program provides financial assistance to conservation programs and educational programs related to wildlife and research. To be eligible for funding you must be affiliated with a registered charitable nonprofit organization.

3.14.5 EcoAction Community Funding Program

Website: http://www.ec.gc.ca/ecoaction

Grant size: Up to $100,000, but need matching funds. NOTE: Half of their budget is earmarked for Climate Change

Contact information:
email: ecoaction@ec.gc.ca

Background: EcoAction (Environment Canada) encourages project submissions that will protect, rehabilitate or enhance the natural environment, and build the capacity of communities to sustain these activities into the future. Projects require matching funds or in-kind support from other sponsors.

Nature section - projects focusing on protecting wildlife and plants, and protecting and improving the habitat where they live (e.g., grasslands, rivers, forests, etc.).

Funding is available through the EcoAction Community Funding Program for projects that address Environment Canada's priority issues of Clean Air and Climate Change, Clean Water, and Nature. At this time, *funding priority may be given to eligible projects that address Clean Air and Climate Change issues.*

3.14.6 John & Pat McCutcheon Charitable Foundation

Website: http://www.jpmcf.org

Grant size: Unknown.

Contact information:
Address: 16 Doncliff Drive, Toronto, Ontario, CANADA M4N 2E6
Email: info@jpmcf.org
Background: The John & Pat McCutcheon Charitable Foundation supports projects that will help to establish and maintain ecological balance by protecting or reclaiming wildlife and its habitat. Applicants are asked to file a brief letter of intent (up to two pages), including organizational information (legal name, address, phone number and charitable registration number), a brief description of the project and how it will meet the priority areas and criteria overview of budget and amount requested.
If the project is considered viable based on the letter of intent the applicant will be asked to make a more detailed proposal (up to six pages), including

- A detailed project plan with description of the activities to be undertaken.
- What the organization's own criteria are for judging the success or failure of the project.

- Detailed project budget itemizing all potential and confirmed expenditures and revenue including time framed for completion.
- Amount requested from the Foundation and why.
- Name of contact person.
- Authorized signatures.

3.14.7 McLean Foundation

Website: http://mcleanfoundation.ca/applications.htm

***Grant size*:** $5,000-$50,000 (for 2007 grants)

Contact information:
Letters of Inquiry should be addressed to:

s.19(1)

The McLean Foundation
2 St. Clair Ave. W., Suite 1008
Toronto, Ontario
Canada M4V 1L5
Tel: (416) 964-6802
Fax: (416) 964-2804
Email: info@mcleanfoundation.ca

Background: The McLean Foundation provides grants for the arts, wildlife conservation, education, and health and welfare. The McLean Foundation will only accept applications from organizations that have first submitted a letter of inquiry and then been asked to submit a full proposal.

The letter of inquiry should be no more than two pages, written on organization letterhead, signed by a member of the organization's executive, and should include the following information:

- A brief description of who the applicant organization is and what the applicant does
- A brief description of the project if the request is for project-based support
- The budget for the project, or the organization's overall budget if the request is for general support
- The applicant's website address, if one is available
- A contact name, full street address, telephone number and e-mail address
- Canada Revenue Agency charitable number
- The applicant's legal name.

Letters of inquiry should be sent via regular mail and not by fax or e-mail. Form letters and mass mailings will NOT be regarded as letters of inquiry. A selections committee will review letters of inquiry and decide whether or not to invite a full proposal. If your organization is invited to submit a full proposal, please follow the guidelines for full proposals.

3.15 Next Steps

The development of a feasibility plan is another major step towards making the restoration of Sidney Island a reality. However, there are still many hurdles and issues to address before a fallow deer

eradication can be implemented including the following action items:

- Secure funding to continue planning and preparations;
- Identify a project manager to oversee all project activities;
- Identify project lead from Parks Canada Agency and also from Sallas;
- GPS collar several animals (male, female, young) from different areas of the island to determine home range, daily movements, and key game trails on the island. This is needed to determine the projected effort needed to complete the operation, both ground based and potential aerial operations;
- Initiate provincial government discussions regarding policy to discuss the use of multiple tools for removal of fallow deer as well as ongoing management of native species populations (black tailed deer) through sustained pressure to keep the populations low;
- Confirm which islands near Sidney Island have fallow deer and distance to those islands to determine reinvasion risk; and
- Begin the planning process for development of a public outreach strategy/plan and a plan for managing potential black-tailed deer and invasive plant population expansion.

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APPENDIX A. BIRD SPECIES FOUND ON SIDNEY ISLAND

Adapted from Golumbia (2008).

COMMON NAME	SCIENTIFIC NAME	NATIVE/NON-NATIVE
American Goldfinch	*Spinus tristis*	Native
American Avocet	*Recurvirostra americana*	Native
American Robin	*Turdus migratorius*	Native
Bald Eagle	*Haliaeetus leucocephalus*	Native
Bank Swallow	*Riparia riparia*	Native
Barn Swallow	*Hirundo rustica*	Native
Belted Kingfisher	*Megaceryle alcyon*	Native
Black Oystercatcher	*Haematopus bachmani*	Native
Black-bellied Plover	*Pluvialis squatarola*	Native
Black-throated Warbler	*Setophaga* sp.	Native
Blue Grouse	*Dendragapus obscurus*	Non-native
Bonaparte's Gull	*Chroicocephalus philadelphia*	Native
Brant**	*Branta bernicla*	Native
Brandt's Cormorant*	*Phalacrocorax penicillatus*	Native
Brown Creeper	*Certhia americana*	Native
Buff Breasted Sandpiper	*Tryngites subruficollis*	Native
Bushtit	*Psaltriparus minimus*	Native
California Gull	*Larus californicus*	Native
California Quail	*Callipepla californica*	Non-native
Canada Goose	*Branta canadensis*	Non-native
Caspian Tern**	*Hydroprogne caspia*	Native
Chestnut-backed Chickadee	*Poecile rufescens*	Native
Common Loon	*Gavia immer*	Native
Common Murre*	*Uria aalge*	Native
Common Yellowthroat	*Geothlypis trichas*	Native
Common Merganser	*Mergus merganser*	Native
Common Raven	*Corvus corax*	Native
Cooper's Hawk	*Accipiter cooperii*	Native
Dark-eyed Junco	*Junco hyemalis*	Native
Double-crested Cormorant**	*Phalacrocorax auritus*	Native
Downy Woodpecker	*Picoides pubescens*	Native
Dunlin	*Calidris alpina*	Native
European Starling	*Sturnus vulgaris*	Non-native
Glaucous-winged Gull	*Larus glaucescens*	Native
Golden-crowned Kinglet	*Regulus satrapa*	Native
Great Blue Heron, *fannini* ssp.**	*Ardea herodias fannini*	Native
Greater Yellow leg	*Tringa melanoleuca*	Native
Green Javanese Pheasant	*Pjasianus sp*	Non-native
Hairy Woodpecker	*Picoides villosus*	Native
Harlequin Duck	*Histrionicus histrionicus*	Native

COMMON NAME	SCIENTIFIC NAME	NATIVE/NON-NATIVE
Heermann's Gull	*Larus heermanni*	Native
House Wren	*Troglodytes aedon*	Native
Hudsonian Godwit	*Limosa haemastica*	Native
Killdeer	*Charadrius vociferus*	Native
Least Sandpiper	*Calidris minutilla*	Native
Long-billed Curlew**	*Numenius americanus*	Native
Long-billed Dowitcher	*Limnodromus scolopaceus*	Native
Long-tailed Duck**	*Clangula hyemalis*	Native
Mallard	*Anas platyrhynchos*	Native
Marbled Murrelet*	*Brachyramphus marmoratus*	Native
Mew Gull	*Larus canus*	Native
Northern Flicker	*Colaptes auratus*	Native
Northwestern Crow	*Corvus caurinus*	Native
Pacific Golden Plover	*Pluvialis fulva*	Native
Pacific Slope Flycatcher	*Empidonax difficilis*	Native
Pelagic Cormorant	*Phalacrocorax pelagicus*	Native
Peregrine Falcon*	*Falco peregrinus anatum*	Native
Pigeon Guillemot	*Cepphus columba*	Native
Pileated Woodpecker	*Dryocopus pileatus*	Native
Purple Martin**	*Progne subis*	Native
Red-breasted nuthatch	*Sitta canadensis*	Native
Red-necked Grebe	*Podiceps grisegena*	Native
Reeve's Pheasant	*Syrmaticus reevesii*	Non-native
Red-tailed Hawk	*Buteo jamaicensis*	Native
Ring-necked Pheasant	*Phasianus colchicus*	Non-native
Rhinoceros Auklet	*Cerorhinca monocerata*	Native
Rock Dove	*Columba livia*	Non-native
Ruby-crowned Kinglet	*Regulus calendula*	Native
Ruddy Turnstone	*Arenaria interpres*	Native
Sanderling	*Calidris alba*	Native
Sandhill Crane	*Grus canadensis*	Native
Savannah Sparrow	*Passerculus sandwichensis*	Native
Semipalmated Plover	*Charadrius semipalmatus*	Native
Semipalmated Sandpiper	*Calidris pusilla*	Native
Short-billed Dowitcher	*Limnodromus griseus*	Native
Snowy Plover	*Charadrius nivosus*	Native
Song Sparrow	*Melospiza melodia*	Native
Spotted Sandpiper	*Actitis macularius*	Native
Surf Scoter**	*Melanitta perspicillata*	Native
Tree swallow	*Tachycineta bicolor*	Native

COMMON NAME	SCIENTIFIC NAME	NATIVE/NON-NATIVE
Turkey	*Meleagris gallopavo*	Non-native
Turkey Vulture	*Cathartes aura*	Native
Violet-green Swallow	*Tachycineta thalassina*	Native
Western Sandpiper	*Calidris mauri*	Native
Western Screech-owl, *kennicotti* subspecies**	*Megascops kennicottii kennicottii*	Native
Whimbrel	*Numenius phaeopus*	Native
White Peacock	*Pavo* sp.	Non-native
White Pelican*	*Pelecanus erythrorhynchos*	Native
White-crowned Sparrow	*Zonotrichia leucophrys*	Native
White-winged Scoter	*Melanitta fusca*	Native
Wilson's Warbler	*Cardellina pusilla*	Native
Winter Wren	*Troglodytes troglodytes*	Native
Yellow-rumped Warbler	*Setophaga coronata*	Native

* red-listed species ** blue-listed species

APPENDIX B. PLANT SPECIES OBSERVED ON SIDNEY ISLAND

Adapted from Golumbia (2008).

COMMON NAME	SCIENTIFIC NAME	NATIVE/NON-NATIVE
arbutus	*Arbutus menziesii*	Native
balsam poplar	*Populus balsamifera*	Native
bigleaf maple	*Acer macrophyllum*	Native
Garry oak	*Quercus garryana*	Native
Pacific crab apple	*Malus fusca*	Native
red alder	*Alnus rubra*	Native
trembling aspen	*Populus tremuloides*	Native
Douglas-fir	*Pseudotsuga menziesii*	Native
grand fir	*Abies grandis*	Native
lodgepole pine	*Pinus contorta*	Native
western redcedar	*Thuja plicata*	Native
baldhip rose	*Rosa gymnocarpa*	Native
common snowberry	*Symphoricarpos albus*	Native
Douglas maple	*Acer glabrum*	Native
hairy honeysuckle	*Lonicera hispidula*	Native
Nootka rose	*Rosa nutkana*	Native
oceanspray	*Holodiscus discolor*	Native
red-osier dogwood	*Cornus stolonifera*	Native
trailing snowberry	*Symphoricarpos hesperius*	Native
western trumpet	*Lonicera ciliosa*	Native
willow	*Salix* sp.	Native
common hawthorn	*Crataegus monogyna*	Non-native
Himalayan blackberry	*Rubus discolor*	Non-native
Scotch broom	*Cytisus scoparius*	Non-native
Menzies' pipsissewa	*Chimaphila menziesii*	Native
prince's pine	*Chimaphila umbellata*	Native
trailing blackberry	*Rubus ursinus*	Native
dull Oregon-grape	*Mahonia nervosa*	Native
salal	*Gaultheria shallon*	Native
tall Oregon-grape	*Mahonia aquifolium*	Native
bracken fern	*Pteridium aquilinum*	Native
sword fern	*Polystichum munitum*	Native
Wallace's selaginella	*Selaginella wallacei*	Native
American glehnia**	*Glehnia littoralis*	Native
American vetch	*Vicia americana*	Native
American wild carrot	*Daucus pusillus*	Native
annual agoseris	*Agoseris heterophylla*	Native
big-leaved sandwort	*Moehringia macrophylla*	Native
broad-leaved starflower	*Trientalis borealis*	Native
broad-leaved stonecrop	*Sedum spathulifolium*	Native
chocolate lily	*Fritillaria affinis*	Native
cleavers	*Galium aparine*	Native

COMMON NAME	SCIENTIFIC NAME	NATIVE/NON-NATIVE
coast boykinia	*Boykinia occidentalis*	Native
common camas	*Camassia quamash*	Native
common mitrewort	*Mitella nuda*	Native
contorted-pod evening-primrose*	*Camissonia contorta*	Native
few-flowered shootingstar	*Dodecatheon pulchellum*	Native
field chickweed	*Cerastium arvense*	Native
field mint	*Mentha arvensis*	Native
fireweed	*Epilobium angustifolium*	Native
fleshy jaumea**	*Jaumea carnosa*	Native
graceful arrow-grass*	*Triglochin concinna*	Native
green sorrel	*Rumex acetosa*	Native
harvest brodiaea	*Brodiaea coronaria*	Native
large-flowered agoseris	*Agoseris grandiflora*	Native
large-flowered blue-eyed Mary	*Collinsia grandiflora*	Native
little buttercup	*Ranunculus uncinatus*	Native
miner's-lettuce	*Claytonia perfoliata*	Native
nodding onion	*Allium cernuum*	Native
northern starwort	*Stellaria calycantha*	Native
Pacific sanicle	*Sanicula crassicaulis*	Native
Puget Sound gumweed	*Grindelia integrifolia*	Native
rattlesnake-plantain	*Goodyera oblongifolia*	Native
redstem springbeauty	*Claytonia rubra*	Native
roseroot	*Sedum integrifolium*	Native
sea blush	*Plectritis congesta*	Native
Siberian miner's-lettuce	*Claytonia sibirica*	Native
slender plantain	*Plantago elongata*	Native
slender woolly-heads	*Psilocarphus tenellus*	Native
small bedstraw	*Galium trifidum*	Native
small-flowered birds-foot trefoil	*Lotus micranthus*	Native
small-flowered blue-eyed Mary	*Collinsia parviflora*	Native
small-flowered nemophila	*Nemophila parviflora*	Native
stinging nettle	*Urtica dioica*	Native
sweet-scented bedstraw	*Galium triflorum*	Native
tomcat clover	*Trifolium willdenowii*	Native
western buttercup	*Ranunculus occidentalis*	Native
western meadowrue	*Thalictrum occidentale*	Native
white fawn lily	*Erythronium oregonum*	Native
white triteleia	*Triteleia hyacinthina*	Native
yarrow	*Achillea millefolium*	Native
yellow sand-verbena**	*Abronia latifolia*	Native
Western bittercress	*Cardamine oligosperma*	Native
alsike clover	*Trifolium hybridum*	Non-native
bull thistle	*Cirsium vulgare*	Non-native
Canada thistle	*Cirsium arvense*	Non-native
common chickweed	*Stellaria media*	Non-native

COMMON NAME	SCIENTIFIC NAME	NATIVE/NON-NATIVE
common stork's-bill	*Erodium cicutarium*	Non-native
curled dock	*Rumex crispus*	Non-native
dovefoot geranium	*Geranium molle*	Non-native
field bindweed	*Convolvulus arvensis*	Non-native
field parsley-piert	*Aphanes arvensis*	Non-native
hairy cat's-ear	*Hypochaeris radicata*	Non-native
mouse-ear chickweed	*Cerastium fontanum*	Non-native
poisionn-hemlock	*Conium maculatum*	Non-native
purple cudweed	*Gnaphalium purpureum*	Non-native
ribwort plantain	*Plantago lanceolata*	Non-native
small hop-clover	*Trifolium dubium*	Non-native
wall lettuce	*Lactuca muralis*	Non-native
Alaska brome	*Bromus sitchensis*	Native
bearded fescue	*Festuca subulata*	Native
big-headed sedge	*Carex macrocephala*	Native
blue wildrye	*Elymus glaucus*	Native
Columbia brome	*Bromus vulgaris*	Native
common rush	*Juncus effusus*	Native
common spike-rush	*Eleocharis palustris*	Native
creeping wildrye*	*Leymus triticoides*	Native
crinkle-awned fescue	*Festuca subuliflora*	Native
dune wildrye	*Leymus mollis*	Native
foothill sedge*	*Carex tumulicola*	Native
hair bentgrass	*Agrostis scabra*	Native
hairy wildrye	*Elymus hirsutus*	Native
Kentucky bluegrass	*Poa pratensis*	Native
Pacific brome	*Bromus pacificus*	Native
red fescue	*Festuca rubra*	Native
sedge	*Carex sp.*	Native
slender hairgrass	*Deschampsia elongata*	Native
slender sedge	*Juncus tenuis*	Native
slough sedge	*Carex obnupta*	Native
tall trisetum	*Trisetum canescens*	Native
tufted hairgrass	*Deschampsia cespitosa*	Native
western fescue	*Festuca occidentalis*	Native
barren brome	*Bromus sterilis*	Non-native
cheatgrass	*Bromus tectorum*	Non-native
colonial bentgrass	*Agrostis capillaris*	Non-native
common velvet-grass	*Holcus lanatus*	Non-native
creeping bentgrass	*Agrostis stolonifera*	Non-native
crested dogtail	*Cynosurus cristatus*	Non-native
early hairgrass	*Aira praecox*	Non-native
European beachgrass	*Ammophila arenaria*	Non-native
perennial ryegrass	*Lolium perenne*	Non-native
rough bluegrass	*Poa trivialis*	Non-native

COMMON NAME	SCIENTIFIC NAME	NATIVE/NON-NATIVE
sweet vernalgrass	*Anthoxanthum odoratum*	Non-native
Liverwort	*Lophocolea cuspidata*	Native
grey reindeer	*Cladina rangiferina*	Native
coastal leafy moss	*Plagiomnium insigne*	Native
curly heron's-bill moss	*Dicranum fuscescens*	Native
dented silk-moss	*Plagiothecium denticulatum*	Native
electrified cat's-tail moss	*Rhytidiadelphus triquetrus*	Native
flat-moss	*Plagiothecium undulatum*	Native
golden short-capsuled moss	*Brachythecium frigidum*	Native
grey rock-moss	*Racomitrium canescens*	Native
heron's-bill moss	*Dicranum* sp.	Native
juniper haircap moss	*Polytrichum juniperinum*	Native
lanky moss	*Rhytidiadelphus loreus*	Native
Oregon beaked-moss	*Eurhynchium oreganum*	Native
palm tree moss	*Leucolepis acanthoneuron*	Native
slender beaked-moss	*Eurhynchium praelongum*	Native
step moss	*Hylocomium splendens*	Native
variable moss	*Isothecium myosuroides*	Native
Contorted *pogonatum* moss	*Pogonatum contortum*	Native
eelgrass	*Zostera marina*	Native

*red-listed species **blue-listed species

APPENDIX C. EMAIL CORRESPONDENCE WITH POTENTIAL PARTNERS

Islands Trust Fund Correspondence

From: Jeff Ralph [mailto:jralph@islandstrust.bc.ca]
Sent: February 1, 2012 10:12 AM
To: Chris Gill
Subject: RE: Sidney Island restoration project

Hello Chris,
I have attached a map that shows where our covenants are (the areas marked conservancy), a restoration recommendation from Dave Polster, a Powerpoint and application for a presentation I made at last year's Restoration Institute. I have lots, and you are welcome to come by anytime and access info. Let me know if I can send you something else. From 2008-10, we contributed $3000 to the deer management and last year we spent $3133 on the exclosures. We have a vested interest in the project and as a restorationist, I quite excited about the possibilities. We plan on setting up and ecological monitoring program once the exclosures are built.

Jeff.

From: Chris Gill [mailto:chris@coastalconservation.ca]
Sent: January-31-12 4:25 PM
To: Jennifer Eliason
Cc: Jeff Ralph
Subject: RE: Sidney Island restoration project

Thanks very much Jennifer. Should I be speaking with you or Jeff in terms of the type of involvement Islands Trust may have in such a project (e.g. strategic, political, scientific)?
Cheers,
Chris

From: Jennifer Eliason [mailto:jeliason@islandstrust.bc.ca]
Sent: January 31, 2012 4:22 PM
To: Chris Gill
Cc: Jeff Ralph
Subject: RE: Sidney Island restoration project

Hi Chris,
Yes, you are correct. We have been involved, and remain very supportive of any eradication efforts. By way of CC I am connecting you with Jeff Ralph, our Property Management Specialist, who can tell you more about our involvement to date.

Thanks for getting in touch with us.

Jennifer Eliason
Manager
Islands Trust Fund
tel: (250) 405-5191
www.islandstrustfund.bc.ca

From: Chris Gill [mailto:chris@coastalconservation.ca]
Sent: January-31-12 4:19 PM
To: Jennifer Eliason
Subject: Sidney Island restoration project

Dear Jennifer;

My organization (Coastal Conservation) is currently working with Parks Canada Agency, Sallas Strata Forest Corporation, and Native Range, Inc. to investigate the feasibility of removing introduced fallow deer on Sidney Island, BC. The ultimate goal of our project is to release the island from overgrazing pressure in order to encourage the natural recovery of the native species. I came across a report on fallow deer control by Sallas Strata Forest Corporation that mentioned Islands Trust may be interested in being involved in the project at some level. Unfortunately I don't have any further information so I am starting from scratch again!

We are currently drafting a feasibility plan for the project that includes identification of potential partners. Partnerships may scientifically oriented (e.g. pre- and post-eradication ecosystem monitoring to assess native ecosystem recovery), strategic (organizations that may not have a direct, vested interest in the project outcome, but that may be able to assist with overcoming bureaucratic hurdles, publically supporting the project, etc.), or financially-based. My reason for contacting you is to assess Island Trusts' interest in being involved as a partner on the project if does indeed move forward.

Please do not hesitate to contact me if you have any questions.
Cheers,
Chris

COASTAL
CONSERVATION

Chris Gill, MSc
Registered Professional Biologist
C: (250) 253-0298

University of British Columbia, Centre for Applied Conservation Research (Dr. Peter Arcese) Correspondence

From: Arcese, Peter [mailto:peter.arcese@ubc.ca]
Sent: January 31, 2012 5:29 PM
To: Chris Gill
Subject: RE: Sidney Island restoration project

Hi Chris,

I don't know if I could contribute a grad student because I don't have funding for this, and I'm a bit

uncertain about this as a thesis project given that I'd expect that 'recovery', though it should of course be monitored from from the start, will take some time to show meaningful results. However, it might be excellent project for a UBC class, or a student with a larger project that includes Sidney. We also have many undergrads with excellent knowledge of local plants, and I can imagine using 2-3 undergrads to do annual monitoring in spring/summer.

So, yes I am interested. Indeed, I've been suggesting this to the province and feds for years. The BC Ministry of Agriculture helped in the release of fallow deer of Mayne Island many years ago, and they've now escaped to Galiano, Curlew and Samuel. They've abdicated responsibility to Min of Environment, who have no funds/will to follow up. However, as you can appreciate, they need to be stopped as soon as possible, and its great that there is some momentum to at least explore how it might be done on Sidney as a first step.

Re: monitoring, we have a few papers in the works, one nearly done demonstrates some very straight forward approaches to monitoring condition of shrub (and by extension bird) communities by monitoring shape of Ocean Spray, a palatable and ubiquitous spp in the region.

Cheers, p

From: Chris Gill [chris@coastalconservation.ca]
Sent: Tuesday, January 31, 2012 1:43 PM
To: Arcese, Peter
Subject: Sidney Island restoration project
Dear Peter,

My organization (Coastal Conservation) is currently working with Parks Canada Agency, Sallas Strata Forest Corporation, and Native Range, Inc. to investigate the feasibility of eradicating introduced fallow deer on Sidney Island. The ultimate goal of our project is to release the island from overgrazing pressure in order to encourage the natural recovery of the native species. I thought that this project may be of interest to you given your current areas of research, as well as the recent paper you co-authored with Tara Martin and Nanda Scheerder on impacts of deer overgrazing.

My reason for contacting you is to gauge your interest in being involved in the pre- and post-eradication ecosystem monitoring (e.g. graduate research project?) if the project does indeed move forward. I am not seeking a formal commitment at this stage but identifying potential project partners in the feasibility plan that should be contacted if the project is implemented.

Please do not hesitate to contact me if you have any questions.
Cheers,
Chris

Gary Oak Ecosystems Recovery Team (GOERT)

From: Shyanne Smith [mailto:Shyanne.Smith@goert.ca]
Sent: March 12, 2012 4:13 PM
To: Chris Gill
Cc: Chris Junck

Subject: RE: Sidney Island restoration project

You're welcome Chris, it's great to hear that work is going ahead on the island. I've attached the report I mentioned. It's just a short summary and recommendations from a site visit made by a couple staff a few years back but it might be useful.
Cheers,
Shyanne

From: Chris Gill [mailto:chris@coastalconservation.ca]
Sent: Monday, March 12, 2012 4:07 PM
To: Shyanne Smith
Subject: Sidney Island restoration project

Hi Shyanne;

Thanks for taking the time to speak with me today. It would be great to get GOERT involved to some degree on the Sidney Island restoration project.

Please don't hesitate to contact me if you have any questions.

Sincerely
Chris

APPENDIX D. DISCUSSION WITH JASON THRUPP REGARDING FALLOW DEER ON JAMES ISLAND

On January 25, 2012 Chris Gill and Jason Thrupp discussed the fallow deer issue on James Island (follow up emails are included below). Jason is the land manager for James Island, which is a private island located approximately 1.8 kilometres southwest of Sidney Island. James Island is 780 hectares in size and includes some land covenants controlled by the Nature Conservancy Canada. Active restoration of the island has been ongoing over the past 20 years and includes managing the local fallow deer population on the island. Currently the population is estimated at 250-300 and is managed through regular, controlled culls. His goal is to reduce the population to approximately 100-150 animals in order to manage their impact on the native plants and plant communities on the island. When asked about the feasibility of eradicating the remaining fallow deer from the island, Jason stated that although he has not had that conversation with the land owner to date, he is aware that the owner enjoys having the deer on the island from a visitor experience perspective and plans to continue regular culls but to not completely eliminate the population.

James Island staff have regularly seen deer (it is unknown whether they are fallow deer or black-tailed deer) swimming to James Island from Sidney Island as well as from the Saanich Peninsula. Therefore, there is a potential risk of reinvasion from James Island if a fallow deer eradication is undertaken on Sidney Island. Further discussions with the private land owner would be prudent to explore the possibility of eradicating fallow deer from the island if James Island is the only land mass in close proximity to Sidney Island with a fallow deer population.

From: Jason Thrupp [mailto:jason.thrupp@jamesisland.ca]
Sent: January 25, 2012 4:57 PM
To: Chris Gill
Cc: todd.golumbia@pc.gc.ca; 'Gregg Howald'; 'Norm Macdonald'
Subject: RE: Site visit to Sidney Island re: deer eradication feasibility

Hi Chris,

Nice talking to you. Swimming deer have been of interest to me since we saw one approx. 2 years ago crossing comfortably from Cordova Spit (off Island View beach) to Melanie Bay Spit on James Islands Western shore just before 8am one morning. As mentioned staff have historically seen a couple of animals each year arrive on our Eastern or Western shores and I have seen on more than one occasion footprints up the beach on our Northern spit and Eastern shore (arrivals?). I suspect also that deer leave our shores, despite our inviting 18 hole golf course (especially in November with the culling activity/pressure) and reach either Saanich or Sidney Island, temporarily or permanently?

As mentioned the owner of Little Darcy Island observes regular passage of deer between his island and neighboring Darcy Island.

Unfortunately my activities in the US are likely to span the 15th to the 22nd Feb at this time. However these are not yet confirmed so if the situation changes I will be available to attend. Perhaps contact me closer to the time to confirm. If it doesn't work out I would be happy to meet up and arrange access to James Island for you on another convenient occasion.

Look forward to meeting with you sometime.
Kind Regards
Jason.

Jason Thrupp BVSc(dist.) MVS MACVSc
General Manager James Island
British Columbia, Canada.

From: Chris Gill [mailto:chris@coastalconservation.ca]
Sent: Wednesday, January 25, 2012 4:27 PM
To: Jason Thrupp
Cc: todd.golumbia@pc.gc.ca; 'Gregg Howald'; 'Norm Macdonald'
Subject: Site visit to Sidney Island re: deer eradication feasibility

Hi Jason,

Thanks for taking the time to speak with me today about the work you have been doing on James Island with the fallow deer control. It was very informative, especially the information about the staff on the island regularly seeing deer swimming from Sidney Island and the Saanich Peninsula to James Island.

As we discussed, it would be wonderful if you could join us for our discussions concerning the feasibility of eradicating deer from Sidney Island. Right now it looks like we will be visiting Sidney Island on February 20 (probably heading over in the morning) but I need to confirm the agenda with Todd.

Also, thank you for your invitation to check out James Island during our site visit. Let me speak with Todd, Gregg, and Norm to see what they think about that (it will likely depend on how time-limited we are) but I think it might be a good opportunity to look at the results of your culling operations and assess the risk of reinvasion from James Island if an eradication on Sidney Island is undertaken.

Feel free to call me if you have any questions (see contact information below).

Cheers,
Chris **s.19(1)**

Appendix 2: Example Documentation Recording Major Decisions during an Eradication Operation

Rationale & Decision Regarding Application Rate Increase for the Murchison & Faraday Islands Eradication Based on Forest Canopy Bait Interception Trials

August 20, 2013

Based on the results of Murchison and Faraday Islands biomarker and bait uptake trials (Parks Canada Agency 2012. See Appendix for report) the Eradication Management Group[35] concluded that the application rates should be comprised of a baseline application rate equaling approximately 7 kg/ha[36] for the first application and approximately half of this for the second application, plus an additional 2 kg/ha for variations in rat density and rat bait uptake rates on the target islands, 5 kg/ha to account for bait completion from non-target species, and 2 kg/ha to account for forest canopy interception of bait during an aerial broadcast. This resulted in proposed application rates for the Murchison and Faraday Islands eradication of 16 kg/ha and 12 kg/ha on the ground (first and second broadcast respectively, Table 1). It is important to note, however, that the biomarker and bait uptake trials were undertaken using hand broadcast which did not allow us to accurately determine actual bait interception rates by the forest canopy.

In July 2013 forest canopy interception trials were conducted in Homer, Alaska using a helicopter and non-toxic bait that was physically identical to the bait which would be used for the Murchison and Faraday Islands eradication. The forest canopy closure in the experimental site was very similar to that present on the project islands (Coastal Conservation 2013. See Appendix for report). The results of this experiment suggested a mean forest canopy interception rate of 22% (Table 2). If this interception rate is applied to the proposed application rates it would increase them to 18 and 13 kg/ha on the ground (first and second broadcast respectively) if we first subtract the 2 kg/ha that was originally added to account for forest canopy interception based on the biomarker and bait uptake trial recommendations.

Table 1. Biomarker and bait uptake trial summary table (Parks Canada Agency 2012)

Application	*Baseline application rate (kg/ha)*	*Contingency for differing rat density (kg/ha)*	*Contingency for bait competition by deer (kg/ha)*	*Contingency for forest canopy interception (kg/ha)*	*Proposed application rates (kg/ha)*
First	7	2	5	2	16
Second	3	2	5	2	12

[35] Laurie Wein, Project Manager, Parks Canada Agency, Gregg Howald, North American Regional Director, Coastal Conservation, Chris Gill, Program Director, Coastal Conservation, and Pete McClelland, eradication consultant.
[36] This is the average 99% CI surrounding the mean bait uptake for all bait uptake plots in the application rate trial on Murchison island, which we believe provided an accurate estimate of the bait application rate (Parks Canada Agency 2012)

Table 2. Percent canopy interception from Alaska calibration trials and revised application rates to account for forest canopy interception (Coastal Conservation 2013)

Application	*% canopy interception from Alaska trials*	*Proposed application rate from biomarker trials (kg/ha)*	*Amount of bait intercepted by forest canopy during trials (kg/ha)*	*Subtotal minus 2kg/ha already added for canopy interception (kg/ha)*	*Proposed new application rate to account for canopy interception (kg/ha)*
First	22%	16	3.5	1.5	**18**
Second		12	2.6	0.6	**13**

The Eradication Management Group supports the decision to increase the first and second broadcast application rates to 18 and 13 kg/ha on the ground as indicated by the signatures below.

_____
Signature

Laurie Wein
Project Manger
Parks Canada Agency

_____
Signature

Gregg Howald
North America Regional Director
Coastal Conservation

_____
Signature

Pete McClelland
Eradication Consultant

_____
Signature

Chris Gill
Program Director
Coastal Conservation

Signed this _____day of_____, 2013

Literature Cited

Parks Canada Agency. 2012. Night Birds Returning: Eradication of Norway Rats (*Rattus norvegicus*) from Bischof and Arichika Islands: Technical report. Gwaii Haanas National Park Reserve and Haida Heritage Site, Skidegate, BC.

From: Jay Zakaluzny
Sent: March 8, 2018 12:02 PM
To: Cuthbert, Joanne (PC)
Cc: Cardinal, Nathan (PC)
Subject: Re: Consensus tech bid
Attachments: Consensus Eval_17-5313A Final.pdf; 17-5313A signatures.pdf

---

Full evaluation document.

(See attached file: Consensus Eval_17-5313A Final.pdf)(See attached file: 17-5313A signatures.pdf)

Jay Zakaluzny

Acting Manager, Resource Conservation I Gestionnaire, Fonction de conservation des resources

Gulf Islands National Park Reserve | Réserve de parc national du Canada des Îles-Gulf
Parks Canada Agency | L'Agence Parcs Canada
2220 Harbour Road, Sidney, BC, V8L 2P6 | 2220 chemin Harbour, Sidney (C.-B.) V8L 2P6
Telephone | Téléphone: 250-654-4081

Government of Canada | Gouvernement du Canada

Nathan Cardinal---07/03/2018 10:50:48 PM---Hi Joanne, Here is the summarized consensus bid, with input and scoring from all of us.

From: Nathan Cardinal/NOTES/PC/CA
To: Joanne Cuthbert/NOTES/PC/CA@PC
Cc: Jay Zakaluzny/NOTES/PC/CA@PC, Sibylla Helms/NOTES/PC/CA@PC
Date: 07/03/2018 10:50 PM
Subject: Consensus tech bid

Hi Joanne,

Here is the summarized consensus bid, with input and scoring from all of us.
Jay - would you and Sibylla be able to sign it and send it to Joanne and leave it on my desk?

Joanne - I'm out of the office tomorrow, but I'm hoping we can go ahead in the interest of time with it pending my signature? I can sign it when back in the office on Friday. I approve it by way of this email, if that helps in the interim. If you really need me to sign it, I may be able to make something work around 3 or 4 pm.

Thank you very much to you all for helping with this, and thanks to Joanne for being flexible and efficient!
Regards,
Nathan

[attachment "Consensus Eval_17-5313A Final.docx" deleted by Jay Zakaluzny/NOTES/PC/CA]
Senior Advisor, Indigenous Guardians Program / Conseiller Principal, Programme des gardiens autochtones
Pathway to Canada Target 1 Secretariat / Secrétariat En route pour l'objectif 1 du Canada
Natural Resource Conservation Branch / Direction de la conservation des ressources naturelles
Parks Canada Agency | L'Agence Parcs Canada
2220 Harbour Road, Sidney BC V8L 2P6 |2220 chemin Harbour, Sidney C-B V8L 2P6

Nathan.Cardinal@pc.gc.ca
Telephone | Téléphone 250-654-4076
Facsimile | Télécopieur 250-654-4014
Government of Canada | Gouvernement du Canada

Jay Zakaluzny

Acting Manager, Resource Conservation I Gestionnaire, Fonction de conservation des resources

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Telephone | Téléphone: 250-654-4081

Government of Canada | Gouvernement du Canada

Joanne Cuthbert----08/03/2018 11:52:12 AM----Hi Jay, Please provide the entire evaluation, I need the scoring.

From: Joanne Cuthbert/NOTES/PC/CA
To: Jay Zakaluzny/NOTES/PC/CA@PC
Cc: Nathan Cardinal/NOTES/PC/CA@PC
Date: 08/03/2018 11:52 AM
Subject: Re: Consensus tech bid

Hi Jay,

Please provide the entire evaluation, I need the scoring.

Thanks,

Joanne S. Cuthbert
Acting Advisor, National Contracting Services Unit
Parks Canada Agency / Government of Canada
1300 - 635 8th Ave SW Calgary, AB T2P 3M3
Email: joanne.cuthbert@pc.gc.ca / Tel. : (403) 292.4558
Facsimile: 1-866-246-6893
2017 - Your Free Pass to Discovery / 2017 - Votre Entrée libre vers la découverte

Conseillère par intérim, Service national de passation de marchés Unité
Agence Parcs Canada / Gouvernement du Canada
Pièce 1300 - 635 8ième avenue SW, Calgary, AB T2P 3M3
Email | Courriel: joanne.cuthbert@pc.gc.ca / Tél. : (403) 292.4558
Télécopieur: 1-866-246-6893

Jay Zakaluzny---08/03/2018 10:14:53 AM---Good Morning Joanne, Here is the signed scoring. Nathan has approved via email below and will sign a

From: Jay Zakaluzny/NOTES/PC/CA
To: Joanne Cuthbert/NOTES/PC/CA@PC
Cc: Sibylla Helms/NOTES/PC/CA@PC, Nathan Cardinal/NOTES/PC/CA@PC
Date: 08/03/2018 10:14 AM
Subject: Re: Consensus tech bid

Good Morning Joanne,

Here is the signed scoring. Nathan has approved via email below and will sign as soon as he is back in the office.

Regards,

Jay

[attachment "techbid.pdf" deleted by Joanne Cuthbert/NOTES/PC/CA]

Jay Zakaluzny

Acting Manager, Resource Conservation I Gestionnaire, Fonction de conservation des resources

Gulf Islands National Park Reserve | Réserve de parc national du Canada des Îles-Gulf
Parks Canada Agency | L'Agence Parcs Canada
2220 Harbour Road, Sidney, BC, V8L 2P6 | 2220 chemin Harbour, Sidney (C.-B.) V8L 2P6
Telephone | Téléphone: 250-654-4081

Government of Canada | Gouvernement du Canada

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To: Joanne Cuthbert/NOTES/PC/CA@PC
Cc: Jay Zakaluzny/NOTES/PC/CA@PC, Sibylla Helms/NOTES/PC/CA@PC
Date: 07/03/2018 10:50 PM
Subject: Consensus tech bid

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Jay - would you and Sibylla be able to sign it and send it to Joanne and leave it on my desk?

Joanne - I'm out of the office tomorrow, but I'm hoping we can go ahead in the interest of time with it pending my signature? I can sign it when back in the office on Friday. I approve it by way of this email, if that helps in the interim. If you really need me to sign it, I may be able to make something work around 3 or 4 pm.

Thank you very much to you all for helping with this, and thanks to Joanne for being flexible and efficient!
Regards,
Nathan

[attachment "Consensus Eval_17-5313A Final.docx" deleted by Jay Zakaluzny/NOTES/PC/CA]
Senior Advisor, Indigenous Guardians Program / Conseiller Principal, Programme des gardiens autochtones
Pathway to Canada Target 1 Secretariat / Secrétariat En route pour l'objectif 1 du Canada
Natural Resource Conservation Branch / Direction de la conservation des ressources naturelles
Parks Canada Agency | L'Agence Parcs Canada
2220 Harbour Road, Sidney BC V8L 2P6 |2220 chemin Harbour, Sidney C-B V8L 2P6

Nathan.Cardinal@pc.gc.ca
Telephone | Téléphone 250-654-4076
Facsimile | Télécopieur 250-654-4014
Government of Canada | Gouvernement du Canada

Total Evaluated Score	**65.5/ 75**
Minimum Points Required	**57**

Each evaluation must be signed and dated upon completion. Please scan and return to the Contracting Authority.

Evaluator's Name: Nathan Cardinal Signature: _____ Date: _____

Evaluator's Name: Jay Zakaluzny Signature: _____ Date: March 8, 2018

Evaluator's Name: Sibylla Helms Signature: _____ Date: March 8, 2018

CONSENSUS
Technical Evaluation

Bidder/ Firm Name: COASTAL CONSERVATION

INSTRUCTIONS:

Reference the section(s) and/ or page(s) of the bidder's proposal that address the evaluated criterion, and for the point rated evaluation criteria to record the strengths and weaknesses of the bidder's proposal in addressing the evaluated criterion. Attach separate sheets if additional room is needed for remarks. All decisions must be justified and defensible.

REMINDERS TO THE BID EVALUATION TEAM:

- Record consensus remarks, strengths, weaknesses, and justifications for the scores awarded on the evaluation template. Do not record on the bids.
- Treat all bids fairly and do not give any bid an unfair advantage over another.
- Bids are confidential. Respect bid confidentiality.
- Ensure everyone on the evaluation team is following the same ranking system for scoring and don't switch scoring techniques midstream.
- Evaluate each bid solely on its contents and on the extent to which it addresses the stated evaluation criteria. Evaluation scores must be based only on the criteria that is listed in the bid. Bids must not be evaluated comparatively.
- Do not obtain or consider information outside of the bid package.
- Evaluators must be able to justify all decisions. Proper notes are invaluable in debriefing unsuccessful bidders.
- Keep all records and comments to an objective and professional level. All records are subject to release under the Access to Information Act.
- Closely review scoring especially that of any bids which are scored just below the upset values to be certain evaluation of these bids is based upon a fair and defensible process.

NOTES:

- To avoid duplication, bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

Mandatory Technical Criteria

The technical bids will be evaluated against the mandatory technical criteria below.

For a bid to be declared responsive to the solicitation requirements it must demonstrate and meet all of the mandatory technical criteria. Bids declared non-responsive to the mandatory technical criteria will be given no further evaluation.

Item No.	Evaluation Criteria	Met	Not Met	Remarks
3.1	The bidder must provide three relevant project examples, including a brief summary of each project no more than two (2) pages in length in demonstration of their experience	**X**		**Reference(s) / Notes:** 3 eradication projects featuring island ungulate eradication (pp.56-61). All ungulates are introduced • Night Birds Returning (Gwaii Haanas), 2010-2013: rats, deer • Restoring Balance (Gwaii Haanas), 2015-current: deer • Santa Cruz Island, 2005-2007: feral pigs
3.2	The Bidder must have a minimum of 5 years' experience in eradication of IAS from island ecosystems from introduced wildlife species.	**X**		**Reference(s) / Notes:** • As in 3.1 above • Significant combined team experience, as described in Project Team Experience (pp.51-56)
3.3	The Bidder must have a minimum of 5 years' experience in data collection, analysis and summarizing of technical information.	**X**		**Reference(s) / Notes:** • As for projects listed above: each project involved data collection of ungulate population and efficacy of methods (e.g. Phase 1 – Night Birds Returning). Displayed responsive ability to adapt methods based on data collected (e.g. Restoring Balance, p.59) • Significant combined team experience, as described in team description (Gregg Howald, p.53; Pete McClelland, p.53; Norm Macdonald, p. 54)
3.4	The bidder must have a minimum of 5 years' experience working with stakeholders and/or Indigenous groups on IAS eradication projects from island ecosystems.	**X**		**Reference(s) / Notes:** • For projects listed above, experience working with Haida (Night Birds Returning, Restoring Balance) as well as other stakeholders and jurisdictions: Parks Canada Agency, US National Parks Service, TNC, BC Government, BC Parks. • Team members (Gill) displays experience working

Item No.	Evaluation Criteria	Met	Not Met	Remarks
				with other First Nations in BC (p.52) • Team members display experience working with other various stakeholders (McClelland, de Nicola, Howald, Macdonald, pp.53-55); display skills in complex, value-driven discussions on eradication (Howald, p.53)

Point Rated Technical Criteria

The technical bids will be evaluated against the point rated technical criteria below.

For a bid to be declared responsive to the solicitation requirements it must meet or exceed the minimum weighted points required for the point rated technical criteria. Bids that do not meet or exceed the minimum weighted points required for the point rated technical criteria will be given no further evaluation.

Item No.	Evaluation Criteria	Point Criteria	Points Awarded
4.1	**Understanding of Requirement and Work Plan**		
4.1.1	**Understanding of Scope and Objectives** In their proposal the bidder should clearly demonstrate an understanding of the scope and objective of the work required to complete all tasks and deliverables identified in the RFP by including but not limited to the following: • **Proposed Work Plan;** • **Approach; and** • **Methodology**	**0 points: Not addressed or not acceptable** • No details provided • Demonstrates lack of understanding of the requirement • Evaluated as not meeting the requirement or the requirement's intent **1-3 points: Limited** • Major deficiencies exist • Demonstrates a limited understanding of the requirement • Insufficient for the effective performance of the work **4-6 points: Good** • Minor deficiencies exist • Demonstrates the capability to meet most of the requirement • Demonstrates a good understanding of the requirement **7-9 points: Excellent** • Demonstrates a complete and accurate understanding of the requirement • Demonstrates a clear understanding and appreciation of the work **10 points: Outstanding** • Demonstrates a clear, accurate and in-depth understanding of the requirement • Demonstrates a very good understanding and appreciation of the work • Details provided are original, specific and innovative for exhibits of similar size, scope and complexity.	9/ 10 x .05 = **4.5/ 5**

Item No.	Remarks
4.1.1	**Reference(s):** • As listed in Table of Contents (TOC);Proposed Work Plan (pp.12-24); Stated Scope and Objectives (pp.9-11)
	Strengths: • Demonstrates clear understanding of the scope and objectives of the project as described in the SoW. Goals of eradication and management options are reflected in report (e.g. proposed methods, working with partners, Feasibility Study). Outlines specific objectives, with further detail and reflection and recommendations (pp.10-11). • Displays adaptability, projects subject to change • Demonstrates a solid understanding of both the complexities of eradication operation generally (risk management, p.24; operational considerations, p.35) as well as the socioeconomic & geographical realities of Sidney Island (as in description, proposed methods, working with owners; pp.24-29, Conservation Conflict Training, public meetings), as displayed by: varied methods (pp.15-23), adaptive management approach (p.29), incorporation of past project successes and failures (e.g. 4.3.2 Efficacy Trials for Proposed Eradication Methods, pp.41-44). • Demonstrated understanding of black-tailed deer concerns (e.g. p.34)
	Weaknesses: • Less consideration of/detail on behavioural differences of fallow deer (e.g. s.2.2.2 gives little consideration to fallow deer behaviour) • Not substantial understanding of complexities of local Indigenous relations (e.g. between WSANEC and Hul'q'u'mi'num)

Item No.	Evaluation Criteria	Point Criteria	Points Awarded
4.1.2	**Proposed Work Plan, Approach and Methodology: ecological and social considerations** In their proposal the bidder should demonstrate understanding **ecological and social considerations** and a proposed methodology to address these areas. The proposed methodology should: • outline sufficient detail to demonstrate a clear understanding of ecological restoration principles; • present, scientifically sound and logistically reasonable methods of Invasive Alien Species (IAS) eradication and control of ungulate species from island ecosystems; • an understanding of community, stakeholder, and First Nation rights and perspectives.	**0 points: Not addressed or not acceptable** • No details provided • No approach or methodology proposed or insufficient • No mention of principles, challenges of island ecosystems, stakeholder perspectives, ungulate species or major deficiencies exist • No demonstration of understanding and appreciation of anticipated problems or options for resolution • Does not meet the requirement or the requirement's intent **1-3 points: Limited** • Demonstrated very few principles and/ or methods for ecological restoration, unique challenges of island ecosystems, recognition of logistical challenges, stakeholder perspectives, and/ or ungulate species and some elements were not clearly addressed • Major deficiencies exist with the methods provided • Unclear or insufficient detail provided of understanding and appreciation of anticipated problems or options for resolution • Limited description of challenges and risk mitigation **4-6 points: Good** • Demonstrates sufficient understanding of ecological principles, logistical challenges, stakeholder perspectives, unique challenges of island ecosystems, and methods for ungulate control and eradication • The approach and methodology are structured and coherent and most of the necessary details are provided • Demonstrates a clear understanding and appreciation of anticipated problems with detailed options for resolution • Minor deficiencies exist with the methods • All the necessary details were provided including challenges and risk mitigation with some additional insights regarding methods and principles **7-9 points: Excellent** • Demonstrates a clear understanding of ecological principles, logistical challenges, stakeholder perspectives, unique	8/ 10 x 1.5 = **12/ 15**

		challenges of island ecosystems, and methods for ungulate eradication and control • Approach and methodology are structured, coherent and all necessary details are provided, no deficiencies exist • Demonstrates a clear understanding and appreciation of anticipated problems with detailed options for resolution • Demonstrates clear detailed challenges and risk mitigation with some additional insights regarding methods and principles **10 points: Outstanding** • Demonstrates a superior understanding of ecological principles, logistical challenges, stakeholder perspectives, unique challenges of island ecosystems, and methods for ungulate eradication and control • Demonstrates a creative and innovative approach and methodology, coherent with in-depth and specific details provided. no deficiencies exist • Demonstrates appreciation of anticipated challenges and risk mitigation with keen insight regarding methods and principles and creative options for resolution	

Item No.	Remarks
4.1.2	**Reference(s):** Operational considerations (pp.24-29); ecological and social considerations (pp.12-23); partner collaboration (pp.47-51)
	Strengths: • Good assessment of techniques; clear understanding of IAS eradication for deer • Clear understanding of ecological principles and rationale for eradication (p.29-34). Ecological principles are reflected in proposed methodology and techniques (species abundance, richness, distribution). Discusses both positive and negative (e.g. *Potential negative ecosystem* response, p.30), highlights need for comprehensive pre-planning (*Pre-eradication planning and preparations*, *proposed baseline research & trials*), good study design (e.g. BACI); awareness that veg change could take longer to see effects • Clear understanding of complex landowner situation (2.1.4 stakeholder perspectives; 3.1.1 sociopolitical challenges) • Some understanding of First Nation considerations (p.14)
	Weaknesses: • Some scientific references rather dated; could use some more recent and local studies (e.g. Martin et al. 2011; Arcese, etc). • Further reference to purple martin, understory bird spp. • Lack of substantial understanding regarding First Nation complexities

Item No.	Evaluation Criteria	Point Criteria	Points Awarded
4.1.3	**Proposed Work Plan, Approach and Methodology**: r**isk management** In their proposal the bidder should demonstrate understanding **risk management** and an approach for risk management to mitigate such risks. The proposed risk management approach should: • propose an approach based on sound principles and methods for risk management; • include risk management for non-native species and ecosystem components; • identify logistical and environmental risks, and other project risks	**0 points: Not addressed or not acceptable** • No details provided • No approach or methodology was proposed or insufficient • No mention of challenges and risk mitigation or major deficiencies exist • Does not meeting the requirement or the requirement's intent **1-3 points: Limited** • Limited explanation of how the bidder will manage risk management • Very few elements are provided and some elements were not clearly addressed • Major deficiencies exist with risk identification and approach to management • Minimal, unclear or insufficient detail provided • Limited description of risk identification and mitigation **4-6 points: Good** • Good explanation of how the bidder will manage risk this requirement • Risks outlined and approach to management detailed • Minor deficiencies exist with risk management • Clear and sufficient detail provided • All necessary details are provided including risks identified and mitigation with some additional insights **7-9 points: Excellent** • detailed and specific explanation on how the bidder will manage risk this requirement • The approach to risk identification and management is structured, coherent and all necessary details are provided; no deficiencies exist • Demonstrates a clear understanding and appreciation of risks with detailed options for resolution	8/ 10 x 1.0 = **8/ 10**

		10 points: Outstanding • Demonstrates a creative and innovative approach to managing risk with in-depth and specific details provided; no deficiencies exist • The approach to risk identification and management is well structured and coherent, great details are provided Demonstrates a clear and in-depth understanding and appreciation of risks with detailed options for resolution, including creative options for mitigation and management	

Item No.	Remarks
4.1.3	**Reference(s):** s.3, Risk Management
	Strengths: • Clear understanding of risks – technical (e.g. propose methods in s.2.2, logistical challenges pp.27-29), logistical (pp.27-29), financial (p.29), socio-economic (pp.24-27), with suggestions on how to overcome (e.g. meat recovery, invasive plant management, biosecurity) • Risk management reflective of understanding of local stakeholder, jurisdictional, and geographic (pp.27-29) realities • Proposed risk management methods highlight need for pre-management (p.39, 41) • Discussion of ecological risks (e.g. invasive plants, black-tailed deer, pp.31-34)
	Weaknesses: • Further information regarding proposed mitigation / consideration to incorporate non-supportive elements on Sidney Island is needed (e.g. acknowledgement/involvement of local landowner's knowledge) • Need to adapt to reality of continued recreational hunting, and need to describe how this can be mitigated. • Long-term sustainability of bio-security?

Item No.	Evaluation Criteria	Point Criteria	Points Awarded
B.	**Examples of Previous Work**		**90**
4.1.4	**Proposed Work Plan, Approach and Methodology: operational considerations** In their proposal the bidder should demonstrate understanding of **operational considerations** and a proposed approach to address these. The proposed **operational considerations** should include: • an appropriate work plan, • timelines for completion of the work. • outline appropriate resources and their capabilities • logistical considerations • risk mitigation	**0 points: Not addressed or not acceptable** • No details provided • No work plan, timelines proposed • No mention of challenges and risk mitigation • Does not meeting the requirement or the requirement's intent **1-3 points: Limited** • Limited detailed operational considerations provided, some elements not clearly addressed • Major deficiencies exist with work plan, timelines, resources, and logistics. • Level of effort and availability of logistics and resources was poorly outlined for the tasks • Limited description of challenges and risk mitigation **4-6 points: Good** • Good operational considerations and most of the necessary details are provided • Minor deficiencies exist with work plan, timelines, resources, and logistics • Level of effort and availability of logistics and resources was outlined for most of the tasks • All the necessary details were provided including challenges and risk mitigation with some additional insights **7-9 points: Excellent** • Detailed work plan, appropriate timelines, resources, and logistics, no deficiencies exist • Level of effort and availability of logistics and resources was outlined for all of the tasks • Demonstrates a clear understanding and appreciation of anticipated problems with detailed options for resolution • Demonstrates clear understanding of logistical and resource requirements, capabilities, and limitations	9/ 10 x 1.0 = **9/ 10**

		10 points: Outstanding • Clear, in-depth work plan with specific details provided, no deficiencies exist • Level of effort and availability of logistics and resources was well detailed and outlined for all of the tasks • Appropriate timelines and clear understanding and appreciation of anticipated problems with creative options for resolution Demonstrates in-depth understanding of logistical and resource requirements, capabilities, and limitations	

Item No.	Remarks
4.1.4	**Reference(s):** Operational Considerations (s.4)
	Strengths: • Operational considerations are excellent. Provide clear range of options and phases, prioritized to Sidney (proposed phases, pp.37-41). Clear understanding of benefits, challenges, risks. Able to put it into a cohesive, integrated approach. • Discussion on trials to test methods and develop baseline studies of deer movement and home range establishment; reference to previous projects where techniques used • Strong consideration of timeline, geography, seasonality, etc • Timelines are reasonable (s.4.3 and s.4.4) • Recognition of strengths and limitations of project team (s.4.5.1. personnel needs), proposed methods, etc.
	Weaknesses: • Further operation involvement with Indigenous Nations as partners is important • Need for more collaborative approach with landowners.

Item No.	Evaluation Criteria	Point Criteria	Points Awarded
4.1.5	**Proposed Work Plan, Approach and Methodology: partner collaboration** In their proposal the bidder should demonstrate understanding of **partner collaboration** and a proposed approach to address these. The Bidder should demonstrate: • a commitment to work in close consultation and collaboration with the Parks Canada Agency (PCA) during project planning and in field operations. • an understanding of applicable federal and provincial regulations, directives and policies for natural and cultural resource management.	**0 points: Not addressed or not acceptable** • No or few details provided • Demonstrates lack of commitment and/ or understanding of partner collaboration, regulatory requirements and policies. • Does not meeting the requirement or the requirement's intent. **1-3 points: Limited** • Major deficiencies exist • Demonstrates a limited commitment and/ or understanding of partner collaboration, regulatory requirements and policies. • Poor detail demonstrating effective performance measures and capability in partner collaboration to meet the complete requirement **4-6 points: Good** • Minor deficiencies exist • Demonstrates good commitment and understanding of the regulatory requirements, policies and the capability to meet most of the requirement. • Good detail demonstrating effective performance measures and capability in partner collaboration to meet the complete requirement **7-9 points: Excellent** • Demonstrates commitment and a complete and accurate understanding of regulatory requirements and policies. • No deficiencies exist • In-depth detail demonstrating effective performance measures and capability in partner collaboration to meet the complete requirement **10 points: Outstanding** • Demonstrates a clear, accurate and in-depth understanding of the regulatory and policy requirements and commitment. • No deficiencies exist • Excellent detail demonstrating effective performance measures and capability in partner collaboration to meet the complete requirement	9/ 10 x .05 = **4.5/ 5**

		Details regarding collaboration with PCA provided are original, specific and innovative.	

Item No.	Remarks
4.1.5	**Reference(s):** Partner collaboration (s.5)
	Strengths: • Clearly stated roles, abilities, challenges for stakeholders and partners, including First Nations, landowners, PCA. • Experience working with Parks Canada – training and support • Shows considerations, proposed methods for complex, sensitive consultations (socio-political challenges); challenges anticipated. • Strong understanding of Sallas and importance of working together (p.47) • Propose interesting solutions, innovative and adaptive (e.g. socio-political challenges, p.24) • Clear outline of potential partners, need for collaborative approach (e.g. establishment of partnerships with Sallas), consideration or regulations, legislation, permits for different jurisdictions.
	Weaknesses: • Consideration of conservancy lands (Islands Trust Fund) needs to be considered. • Further partnerships with First Nations?

Item No.	Evaluation Criteria	Point Criteria	Points Awarded
4.2	**Project Team Experience**		
4.2.1	Bidder should demonstrate their experience in eradication of IAS from island ecosystems from introduced wildlife species. **The bidder must provide three relevant project examples, including a brief summary of each project no more than two (2) pages in length in demonstration of their experience.** **The examples provided should:** • be of similar scope and scale of this project. • demonstrate successful track record of ungulate eradication and control of IAS from island ecosystems. **NOTE: For the purpose of this evaluation the definition of successful track record is 75% or more of ungulate eradications projects, if failed, for reasons resulting outside of the control of the contractor.**	**1-4 points:** 5 years' experience or more in eradication of IAS from island ecosystems from introduced wildlife species. **5-7 points**: 5 years' experience or more in eradication of IAS from island ecosystems from introduced wildlife species that includes ungulate populations. **8-10 points:** 5 years' experience or more in eradication of IAS from island ecosystems, solely with introduced ungulate populations.	9/ 10 x 2.0 = **18/ 20**

Item No.	Remarks
4.2.1	**Reference(s):** Night Birds returning – rats, deer; Restoring Balance – deer; Santa Cruz Island – feral pigs Team members have additional, extensive experience
	Strengths: • Previous working experience with Parks Canada (Night Birds Returning, Restoring Balance) • Previous work experience with Indigenous peoples (Night Birds Returning, Restoring Balance) • Experience with island ecosystems somewhat similar to GINPR (work in Gwaii Haanas) • Experience and capacity with sensitive issues management • Experience with projects of similar scale (Santa Cruz, Night Birds Returning) • Santa Cruz project held as strong example for eradication projects. • Most team members with >5 years experience
	Weaknesses: • Some projects not totally successful, but due to factors outside of their control

Item No.	Evaluation Criteria	Point Criteria	Points Awarded
4.2.2	Bidder experience in data collection, analysis and summarizing of technical information.	**8 points:** More than 5 years of experience in data collection, analysis and summarizing of technical information **9 points:** More than 5 years of' experience in data collection, analysis and summarizing of technical information that includes invasive alien species. **10 points:** More than 5 years of experience in data collection, analysis and summarizing of technical information that specifically includes introduced ungulate populations.	10/ 10 x .05 = **5/ 5**

Item No.	Remarks
4.2.2	**Reference(s):** Night Birds returning – rats, deer; Restoring Balance – deer; Santa Cruz Island – feral pigs Team members have additional, extensive experience
	Strengths: • Experience analysing projects on islands (as mentioned in Project examples, Eradication Theory and Techniques) • Experience with ungulate eradication (Night Birds Returning, Restoring Balance, Santa Cruz) • Experience developing eradication operation plans (Restoring Balance) • Plans consist of repeated analysis and adaptive management • Data collections and analysis described (GIS, SQL DB, Excel, remote cameras) • Tech report for rat project
	Weaknesses: Minimal statistical analysis displayed Data collection and management for Sidney methods?

Item No.	Evaluation Criteria	Point Criteria	Points Awarded
4.2.3	Bidder experience working with stakeholders and/or Indigenous groups on IAS eradication projects from island ecosystems.	**8 points**: More than 5 years of experience working with stakeholders and/or Indigenous groups on IAS eradication projects from island ecosystems **9 points**: More than 5 years of experience working with stakeholders and/or Indigenous groups on IAS eradication projects from island ecosystems that includes invasive alien species. **10 points**: More than 5 years of experience working with stakeholders and/or Indigenous groups on IAS eradication projects from island ecosystems that includes introduced ungulate populations.	9/ 10 x .05 = **4.5 / 5**

Item No.	Remarks
4.2.3	**Reference(s):** Night Birds returning – rats, deer; Restoring Balance – deer; Santa Cruz Island – feral pigs Team members have additional, extensive experience
	Strengths: • Experience in working on eradication projects with First Nations (Night Birds Returning, Restoring Balance) • Experience in working with similar partners (e.g. BC Government, BC Parks, Sallas landowners) • Experience with a variety of stakeholders • Additional exp with other First Nations
	Weaknesses: • No displayed experience in working with multiple First Nations on a single project

Total Evaluated Score	**65.5/ 75**
Minimum Points Required	**57**

Each evaluation must be signed and dated upon completion. Please scan and return to the Contracting Authority.

Evaluator's Name: Nathan Cardinal Signature: _____ Date: _____

Evaluator's Name: Jay Zakaluzny Signature: _____ Date: _____

Evaluator's Name: Sibylla Helms Signature: _____ Date: _____

Re: Question from Helen: Funding commitments in proposal document
Nathan Cardinal to: Helen Davies 20/03/2018 11:09 PM

Hi Helen,

No problem. I hope your meetings go well too!
Your questions are definitely valuable, and you are not the first to ask about it as well. I also have a call in with national office staff to confirm.

All the best,
Nathan

Senior Advisor, Indigenous Guardians Program / Conseiller Principal, Programme des gardiens autochtones
Pathway to Canada Target 1 Secretariat / Secrétariat En route pour l'objectif 1 du Canada
Natural Resource Conservation Branch / Direction de la conservation des ressources naturelles
Parks Canada Agency | L'Agence Parcs Canada
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Government of Canada | Gouvernement du Canada

Helen Davies Hi folks, We did include concepts of cross-island... 20/03/2018 11:07:40 PM

From: Helen Davies/NOTES/PC/CA
To: Nathan Cardinal/NOTES/PC/CA@pc, Laura Judson/NOTES/PC/CA@pc
Date: 20/03/2018 11:07 PM
Subject: Re: Question from Helen: Funding commitments in proposal document

Thanks for clarifying Nathan. I appreciate my question may have been a bit 'frustrating', but I felt it was important to clarify, given some of the challenges we have had on the marine file.

Appreciate you providing the context.

I hope you have a great meeting on Thursday & later in April.

Helen

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Nathan Cardinal
Sent: Tuesday, March 20, 2018 8:22 PM
To: Laura Judson
Cc: Helen Davies
Subject: Re: Question from Helen: Funding commitments in proposal document

Hi folks,

We did include concepts of cross-island work in the RPA, most notably in terms of island-wide eradication and restoration work. From previous experience on other RPAs, the conservation and restoration folks aren't overly concerned with work occurring on non-PCA property if it contributes to overall restoration on PCA properties, which this does. The work to occur on non-PCA funds would be directly related to work occurring on PCA properties and would

essentially just be an extension of PCA properties (e.g. removal of hawthorn). I honestly also think that the support we can provide to landowners will likely be critical in gaining support for eradication.

I would also say we regularly use PCA funds to support work on non-PCA lands, often in the form of contribution agreements. We are doing that now as part of the clam garden restoration project (which is supported by the organization), and also have been doing such work regarding bullfrog work on Pender - the idea being that undertaking action on non-PCA lands is critical for successful conservation on PCA lands. Furthermore, the work of IPCAs and Guardians will occur well separate from PCA lands and is another example of work funded by PCA occurring on non-PCA lands.

In summary, I would say this project cannot go forward without providing support to landowners to contribute to island-wide restoration, and there is support and structures in place for this.

Regards,
Nathan

From: Laura Judson
Sent: Tuesday, March 20, 2018 4:52 PM
To: Nathan Cardinal
Cc: Helen Davies
Subject: Question from Helen: Funding commitments in proposal document

Hi Nathan,
Helen is reviewing the proposal document and is supportive of it in general but she put forward these two questions for clarification. Can you address them? I have cc'd her here as she is currently boarding a plane. Feel free to respond to her directly if you prefer!
Thanks,
Laura

1. Is this work outside of Park land included in the approved RPA?

2. Is there organizational understanding and approval of using PCA funding for work not on PCA lands?

Contract # 5P420-17-5487 (Follow up dog hunting on Faraday Island)

Basis of payment statement:
The Contractor will be paid for its costs reasonably and properly incurred in the performance of the Work, in accordance with the Basis of Payment in annex B, to a limitation of expenditure of $122,900.00. Customs duties are included and Applicable Taxes are extra.

Limitation of Expenditure
Canada's total liability to the Contractor under the Contract must not exceed $122,900.00. Customs duties are included and Applicable Taxes are extra.

No increase in the total liability of Canada or in the price of the Work resulting from any design changes, modifications or interpretations of the Work, will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been approved, in writing, by the Contracting Authority before their incorporation into the Work. The Contractor must not perform any work or provide any service that would result in Canada's total liability being exceeded before obtaining the written approval of the Contracting Authority. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:

a. when it is 75% committed, or
b. four months before the contract expiry date, or
c. as soon as the Contractor considers that the contract funds provided are inadequate for the completion of the Work,

whichever comes first.

Progress Payments:
Canada will make progress payments in accordance with the payment provisions of the Contract, no more than once a month, for cost incurred in the performance of the Work, up to a hundred (100%) percent of the amount claimed and approved by Canada if:

a. an accurate and complete claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
b. the amount claimed is in accordance with the basis of payment;
c. the total amount for all progress payments paid by Canada does not exceed ninety (90) percent of the total amount to be paid under the Contract;
d. all certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives.

The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of all work required under the Contract if the Work has been accepted by Canada and a final claim for the payment is submitted.

Progress payments are interim payments only. Canada may conduct a government audit and interim time and cost verifications and reserves the rights to make adjustments to the Contract from time to

time during the performance of the Work. Any overpayment resulting from progress payments or otherwise must be refunded promptly to Canada.

Contract # 5P420-14-5203 (Restoring Balance Project)

Basis of payment statement:
The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work, as determined in accordance with the Basis of Payment in Annex B, to a limitation of expenditure of $1,088,000.00 Customs duties are included and Applicable Taxes are extra.

Canada's total liability to the Contractor under the Contract must not exceed $1,088,000.00. Customs duties are included and Applicable Taxes are extra.

No increase in the total liability of Canada or in the price of the Work resulting from any design changes, modifications or interpretations of the Work, will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been approved, in writing, by the Contracting Authority before their incorporation into the Work. The Contractor must not perform any work or provide any service that would result in Canada's total liability being exceeded before obtaining the written approval of the Contracting Authority. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:

(a) when it is 75 percent committed, or
(b) four (4) months before the contract expiry date, or
(c) as soon as the Contractor considers that the contract funds provided are inadequate for the completion of the Work, whichever comes first.

Amended agreement: Limitation of Expenditure
The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work to the total limitation of expenditure as identified below. Canada's liability to the Contractor under the Contract must not exceed the below identified total limitation of expenditure.

Monthly Payment
Canada will pay the Contractor on a monthly basis for work performed during the month covered by the invoice in accordance with the payment provisions of the Contract if:

(a) an accurate and complete invoice and any other documents required by the Contract have been submitted in accordance with
the invoicing instructions provided in the Contract;

(b) all such documents have been verified by Canada; and

(c) the Work delivered has been accepted by Canada.

Invoicing Instructions
The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions.

Invoices cannot be submitted until all work identified in the invoice is completed.

Invoices must be distributed as follows:

(a) The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.

Mcpherson, Michèle (PC)

From: Michael Janssen/NOTES/PC/CA
Sent: Tuesday, May 1, 2018 5:54 AM
To: Chris Gill
Cc: 'Gregg Howald'; michael.janssen@pc.gc.ca
Subject: RE: Owners Questions with respect to the actual eradication process

Thanks Chris!
I completely agree. We already have inherent trust issues to overcome in that a) we are outsiders, and b) I believe I heard some grumbling about parks having left them hanging in the past. Building trust is key, and making promises is a good way to erode that right at the start. People can tell when they're being sold something.

A key issue we have to address is there is a fundamental conflict (wrong word) between us and land owners in that the landowners would like as much information on the table as possible before they vote, but we have budget, schedule, logistic and capacity constraints that limit our ability to completely plan the project before we establish that there is support for the project. For example, I would love for them to have a long term black tailed management plan and native forest restoration plan in front of them before they vote, but those planning processes have not been initiated yet.
It's a fun challenge, and frankly I'm extremely happy you two are on the team. You have way more experience in this realm than I do.

very best,
Mike

Michael Janssen, MSc, PMP

Project Manager, Natural Resource Conservation Branch
Parks Canada / Government of Canada
2220 Harbour Road, Sidney, BC, V8L 2P6
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"Chris Gill" ---30/04/2018 03:45:18 PM---Hi Mike,

From: "Chris Gill" <chris@coastalconservation.ca>
To: <michael.janssen@pc.gc.ca>
Cc: "'Gregg Howald'" <gregg.howald@islandconservation.org>
Date: 30/04/2018 03:45 PM
Subject: RE: Owners Questions with respect to the actual eradication process

---

Hi Mike,

Keep in mind that answers to these questions could change based on what techniques are ultimately selected and what constraints are placed on the operation.

I would caution trying to answer them until we have a firm plan (e.g., eradication trials and expert site visit completed, Sallas vote on whether the eradication occurs on the entire island or just PCA's side, any constraints on techniques or land access, etc.).

It would be good to chat about this further during our Wednesday meeting with Gregg and Nathan. Basically, we need to avoid setting expectations with the residents before we have a good sense of what is going to happen – we don't want to create any trust issues by appearing that we have gone back on our word or changed our minds once they agreed to a particular plan/method, etc.

Best,
Chris

COASTAL CONSERVATION

Chris Gill, MSc, RPBio, *Program Director*
Coastal Conservation
www.coastalconservation.ca
Ph: (250) 253-0298

From: michael.janssen@pc.gc.ca <michael.janssen@pc.gc.ca>
Sent: Monday, April 30, 2018 10:11 AM
To:
Cc: Chris Gill <chris@coastalconservation.ca>; michael.janssen@pc.gc.ca; laura.judson@pc.gc.ca; nathan.cardinal@pc.gc.ca
Subject: Re: Owners Questions with respect to the actual eradication process

Thanks this is extremely valuable and exactly the type of information we need.

One thing for us to discuss when Laura and I come over on the 10th, is what format to use to best communicate the answers to these questions.

very best,
Mike

Michael Janssen, MSc, PMP

s.19(1)

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Parcs Canada - 450 000 km^2 de souvenirs / Parks Canada - 450 000 km^2 of memories

From:
To: michael.janssen@pc.gc.ca, Chris Gill <chris@coastalconservation.ca>
Date: 30/04/2018 10:04 AM
Subject: Owners Questions with respect to the actual eradication process

---

Mike

A number of questions which have arisen. I am sure there will be lots more but thought I would send these as a heads up.

s.19(1)

Mcpherson, Michèle (PC)

From: Michael Janssen/NOTES/PC/CA
Sent: Tuesday, June 5, 2018 10:12 AM
To: Chris Gill
Subject: Re: Clarification re: permits and exemptions

Thanks Chris!
My interpretation is the same as yours. It doesn't make sense for us to ask you to list required internal Parks Canada permits. When you outline the additional permit requirements, would it be possible to please explicitly state that those requirements do not include internal Parks Canada requirements? Just so it's clear to whoever reads it down the line :)
very best,
Mike

Mike Janssen, MSc, PMP

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michael.janssen@pc.gc.ca, Tel: 250-654-4015

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"Chris Gill" ---05/06/2018 09:46:17 AM---Hi Mike,

From: "Chris Gill" <chris@coastalconservation.ca>
To: <michael.janssen@pc.gc.ca>
Date: 05/06/2018 09:46 AM
Subject: Clarification re: permits and exemptions

Hi Mike,

When I review the contract, it appears that we need to identify permits/exemptions only for non-Parks Canada Agency regulations based in the statement on page 8 of the contract (attached): "Permitting – in cooperation with Parks Canada staff, determine necessary permitting requirements additional to internal Parks Canada permits". The proposed table of contents for the scoping document (page 13 of the contract) includes only one subsection for the regulatory considerations section, which appears to support my interpretation: "Compliance with non-Parks Canada Regulation".

I assume that Parks already knows what their internal process is (DEIA, Animal Care Committee application, research permit, etc.) or do we need to list them? Either option is fine by me.

Best,
Chris

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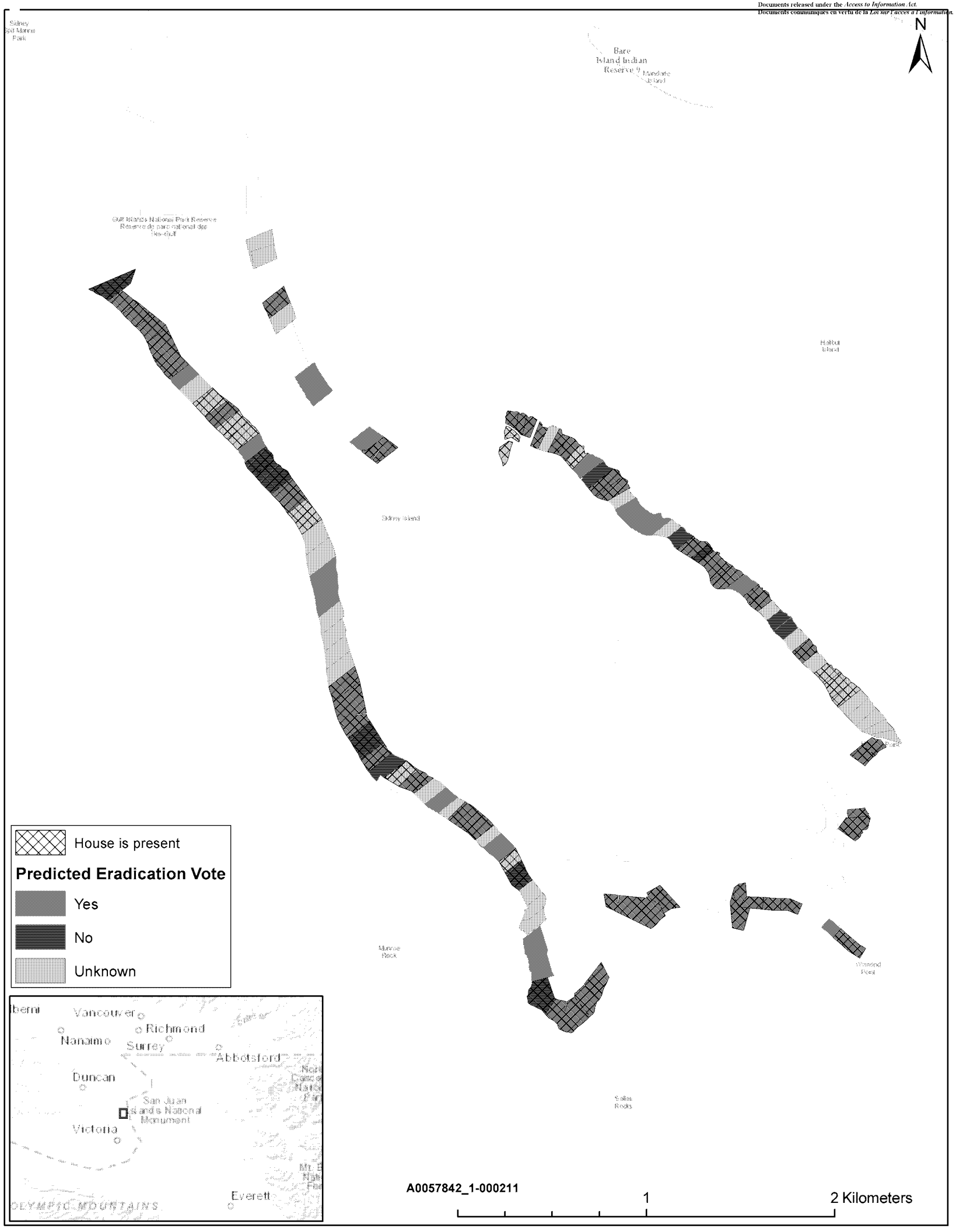
[attachment "Contract_17-5313 executed.pdf" deleted by Michael Janssen/NOTES/PC/CA]



Mcpherson, Michèle (PC)

From: Tony Gatt/NOTES/PC/CA
Sent: July 27, 2018 8:27 AM
To: Michael Janssen/NOTES/PC/CA
Subject: Re: Insurance for Fur to Forest Project

Looks good to me.

Tony Gatt, CD, BComm

Acting Manager - Finance & Administration, Coastal BC Field Unit
Parks Canada / Government of Canada
2220 Harbour Road, Sidney, BC, V8L 2P6
tony.gatt@pc.gc.ca / Tel: 250-654-4039 / Fax: 250-654-4014

Intérimaire Gestion financière, Unité de gestion, Côte de la Columbie Britannique
Parcs Canada / Gouvernement du Canada
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tony.gatt@pc.gc.ca / Tél : 250-654-4039 / Télécopieur: 250-654-4014

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Michael Janssen---26/07/2018 04:29:39 PM---Hi Tony and Jay, Some landowners are asking about how to report property damage during operations.

From: Michael Janssen/NOTES/PC/CA
To: Jay Zakaluzny/NOTES/PC/CA@PC, Tony Gatt/NOTES/PC/CA@PC
Cc: Laura Judson/NOTES/PC/CA@PC, Nathan Cardinal/NOTES/PC/CA@PC
Date: 26/07/2018 04:29 PM
Subject: Insurance for Fur to Forest Project

Hi Tony and Jay,
Some landowners are asking about how to report property damage during operations. We are in the process of replying to landowner questions, as a key piece of our engagement prior to voting.

Would you be willing to please review what I have come up with and provide approval to share this response with landowners?

Q. What is the procedure in the event of damage to private property?
A. By hiring world experts in deer eradication, and involving experienced Sidney Island hunters in the planning process, Parks Canada will take every step to ensure the probability of damage to private property is extremely low. In the event of damage to private property that is a result of eradication activities, the landowner would need to submit a claim to the Gulf Islands National Park Reserve at gulf.islands@pc.gc.ca. The Park Reserve would then review the claim and determine the best course of action, depending on the nature of the claim. Parks Canada underwrites it's own risk and has the ability to compensate for damage where appropriate. Eradication experts contracted by Parks Canada will be required to have elevated levels of commercial general liability coverage, and every member of the eradication team will have personal liability insurance coverage. A claim that puts a member of the eradication team at fault, will be processed by their insurance provider. Parks Canada will work to ensure that any submitted claims are processed as quickly as possible.

Thank you very much!!!
Mike

Mike Janssen, MSc, PMP

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michael.janssen@pc.gc.ca , Tel: 250-654-4015

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Mcpherson, Michèle (PC)

From: Michael Janssen/NOTES/PC/CA
Sent: Friday, August 3, 2018 11:14 AM
To: Chris Gill
Cc:
Subject: RE: Question about Commercial General Liability insurance claims

Hi Chris,
Just got off the phone with

Just to paraphrase:
There is no easy quick answer as it is totally case dependent. In general the insurer works with the claimant to determine the best way forward. If the damage is extensive or requires coordination of professionals to fix, the insurer can provide an adjuster who can coordinate the repairs. In minor cases that do not require professional repair expertise, the claimant may be able to fix/replace the damage themselves and the insurer could work with the claimant to determine the process for payment for time and expense. In other cases, when the property has it's own insurance policy, it can be beneficial to the claimant to include their own insurer, who would work with the CGL provider to determine the best way forward.

Just so it's written down :)

Thanks very much appreciate very much your time.

s.19(1)

Mike

Mike Janssen, MSc, PMP

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Parks Canada / Government of Canada
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"Chris Gill" ---03/08/2018 11:00:08 AM---Thank you I expect Mike will have some follow up questions!

From: "Chris Gill" <chris@coastalconservation.ca>
To: ' [redacted]djmins.com>, <michael.janssen@pc.gc.ca>
Date: 03/08/2018 11:00 AM
Subject: RE: Question about Commercial General Liability insurance claims

Thank you I expect Mike will have some follow up questions!

Have a great long weekend.

Chris

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Chris Gill, MSc, RPBio, *Program Director*
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Ph: (250) 253-0298

From jmins.com>
Sent: Friday, August 3, 2018 8:28 AM
To: michael.janssen@pc.gc.ca; Chris Gill <chris@coastalconservation.ca>
Subject: RE: Question about Commercial General Liability insurance claims

Good Morning,

This question does not really have a straight forward answer.
It would depend on what type of damage was caused and repairs required.

In some instances the Insurance Company can pay the Property Owner directly to carry out the debris removal or Repairs depending on the situation. In some cases, if the Property Owner has someone they prefer to use the Insurance Company Will allow them to arrange or an Adjuster can be in charge of the Project. Landowners can also take a Cash Payout to complete Repairs on their own accord or if they wish not to rebuild.

Depends on the extent of damage and scope of repairs required.
Every claim is reviewed on a case to case basis. **s.19(1)**

Please feel free to give me a call to discuss or review – I am in the office all day today.
I look forward to hearing from you,
Thanks,

Licensed Insurance Broker, CIP
Johnston Meier Insurance Agencies Group
140 Alexander St NE, PO Box 2890, Salmon Arm BC V1E 4R7
Tel: 250-832-8103 or 1-888-288-2141
Fax: 250-832-1132
Email: jmins.com
Web: www.jmins.com

From: michael.janssen@pc.gc.ca [mailto:michael.janssen@pc.gc.ca]
Sent: Thursday, August 02, 2018 4:34 PM
To: Chris Gill <chris@coastalconservation.ca>
Cc: ∂jmins.com>
Subject: Re: Question about Commercial General Liability insurance claims

Hi
I have what I hope is a relatively straight forward and quick question, if that's ok.

The scenario is that Parks Canada will contract an external organisation to conduct an operation on private property. The contractor would be required to have commercial general liability coverage. Written approval from landowners will be obtained to access private property. In the event that property damage occurs to private property as a result of activities conducted by the contractor, I assume the financial cost of repair would be covered the CGL insurance provider. My question is, whose responsibility is it *arrange* the repair of private property? Would the responsibility fall to the landowner, the insurance provider, or the contractor?

I ask because the site is a little bit remote and it can be difficult to get trades-people on site. Landowners are more concerned about the hassle of arranging repair, than the actual cost of repair.

Thanks very much I appreciate you help. I'd be happy to follow up with a phone call at your convenience if that is easiest.

Thanks again!
Mike Janssen

Mike Janssen, MSc, PMP

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s.19(1)

From: "Chris Gill" <chris@coastalconservation.ca>
To: ∂jmins.com>
Cc: <michael.janssen@pc.gc.ca>

Date: 02/08/2018 04:17 PM
Subject: Question about Commercial General Liability insurance claims

---

Hi

I wanted to take a moment to introduce you to Mike Janssen who is cc'd on this email. Mike is with Parks Canada Agency - we are working with them on a proposed deer eradication on Sidney Island (I may have mentioned this one to you when we were renewing our CGL insurance).

Mike has some questions from landowners on Sidney Island that he is trying to answer as it pertains to insurance claims against a company with CGL insurance that I was hoping you could answer. If possible, please keep me cc'd on the emails so I can also understand how claims (and repairs) would take place.

Thanks!

Chris

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Ph: (250) 253-0298

s.19(1)

Aug 7 Steering Committee and Aug 8 Site visit. Notes from Gregg Howald – Island Conservation

Just to capture a few things from my side for consideration by PCA, the Steering Committee and/or just in general. I would welcome full on discussion, dismissal, or plain old ignoring of some of these thoughts and early ideas...

Steering Committee:

That was a robust meeting with really good facilitation allowing the flexibility to move around the agenda dealing with items. It was really good to see the interest, and stuff bubbled up.

Everyone seemed to me to get into it pretty quick, and understand the gist of where this St.Committee could go and how we might want it to work, and I would just encourage we continue on the path we are on - I dont think we need to belabour the process of a steering committee. If you dont see it yourself yet, feel free to call, but from what I saw in meeting, you all "got it".

And, thank you kindly for providing lunch and coffee. I would be happy to contribute next round.

On the frequency of the meeting, I would be happy to join monthly but not sure if best use of resources for me to travel in for face to face. Every 6-8 weeks, yes happy to travel in.

On site visit:

1. is a generous host, and clearly enthusiastic about the project, and supportive. His insight needs to be tapped more, as well as the others.

2. On hearing his perspective about the landowners and private properties he shared a very important perspective that we would be wise to pay attention to and figure out messaging:

a. The number of deer removed over last number of years has been very high, and the numbers left to be removed is insignificant relative to the past efforts.

b. The number of "shots" required to finish the job is smaller than what the community has been exposed to in the past. However, what will be different is...

C. the amount of EFFORT using a DIVERSITY of tools to identify, and remove the last few individual deer.

d. The issue with the community appears that they are confusing the EFFORT and DIVERSITY of tools to be used as an INCREASE in RISK, when in reality it will not be. In fact it will be less when considering number of deer left and the number of "shots" taken in the past.

e. Thus, it appears that people are equating a heightened risk from using tools like helicopters, dogs, aerial herding, etc. Etc. When in reality there will be way, way way more time spent just searching and confirming absence of deer than actual hunting.

F. Communicating this to the community in some form (my thoughts above are rough and could use your insight into if you agree or not) that makes sense to them is important. i.e., that a helicopter flying over the island does not necessary equal to heightened risk (They have been referred to as "helicopter gunships").

g. It seems that a structured dialogue around what risk is (risk = hazard (flying bullets)+ exposure (where they are shooting and how often) could really help.

h. Finally, the numbers of deer on the island have been reduced dramatically and the impacts of fallow deer are not really obvious and it is unlikely that the BENEFIT of the eradication efforts will be clear on implementation. We need to consider how to bring out the BENEFIT side of the equation with the community, and loook at how to demonstrate robustly, the ecological change on the island to CLEARLY, DEFENSIBLE (at least pass the red face test) make the effort worth it to the community.

i. One way we could do that is a mix of citizen science, or very targetted restoration potential from absence of fallow deer (eg. Arbutus planting's, or other high value trees or shrubs that the community values). Maybe it is using peoples vegetable gardens or flower beds...(it counts, not what we want as conservationists, but it does count to make the point).

3. In line with the risk discussion, it might help with some members of the community if we consider individual property plans, systematically work through each property to identify how any hunting might actually happen on their property and identify risks/concerns and share with each owner how a hunter would or would not actually work their property. It is clear that shooting lanes from road toward houses is not acceptable, but the other way around may be. It COULD facilitate a dialogue with each landowner that for sure some would come around and allow full access, while others would not. Unfortunately, I dont see a targetted property owner approach - if you do it for one, we need to do it for each (or at least give them the right to decline a consultation) FWIW - THIS IS ONLY AN IDEA, BUT TO ME THIS IS ONE MECHANISM TO REACH OUT TO INDIVIDUALS IN A RESPECTFUL, CONSIDERED MANNER. IT IS ALOT OF WORK (112 lots?) YES.

4. Coffee Klutch: I was a little surprised by the meeting attendance yesterday, was not expecting that many, but pleasantly it was a good meeting that identified some new issues and have a few observations from that meeting:

a. It is abudantly clear that Sallas is struggling how to perceive this project. They bounce between detailed questions of the project, to throwing rocks at PCA for not being clear or to Coastal Conservation for not considering enough of the local expertise on the island.

b. They seemed to rally around the idea of the Steering Committee as that was perceived as a good process to get it strarted, but are clearly a team of people that want this project to happen, and faster.

c. They identified that the community is talking a lot about this project and indicted that they ARE FILLING A VOID in the communications by choice. Ie., in the absence of information flow from the project, they are filling it with their thoughts, ideas,and strategies, including promoting the project with the community. It is also abundantly clear that our credibility with them would go up if we show clearly HOW WE ARE CONSIDERING the communities expertise, history, and understanding of the island into the project.

d. I would suggest that we start CLEARLY and CONSISTENTLY communicating with the community. We dont have to react to their specific questions or insistence on details, but rather share the process we are in, so that they can see their questions or need for details will come. It is clear to me the lack of clarity on process leads to questions on details. In other words, we are mismatched between what WE ARE DOING, vs. WHAT THEY THINK WE ARE DOING.

e. I would suggest we take advantage of the next couple of meetings with the community to communicate PROCESS and DETAILS (What we know and dont know - and what we are going to be doing to get it he information). I would suggest that the Steering Committee (which includes Sallas) be clear and demonstrate that we have command of the situation and the project in space and time, and demonstrate we have a process moving forward.

f. For the August 28 meeting, I spoke with Mike about some thoughts about this meeting, and discussing what we want to demonstrate to the community, what we want to move them from to where, and how we are going to do that with the presentations from Mike, Peter A, Emily, and Chris. It would be good for us to clearly articulate what we want to demonstrate to the community - ie, my proposal is that we want them to see us as credible, organized, and capable to drive this project forward. We COULD MAYBE do that by demonstrating knowledge and understanding of deer eradication, uniqueness of the Sidney Island and accounting for their experience, and demonstrating our PROCESS for moving forward. Sorry for the process word, but in the absence of knowledgeable details that we cant share, we can point to process for how we are planning and accounting for details is the way to deflect to answer questions with "i dont know" which erodes confidence if we dont qualify "I dont know" with "I dont know but this is where we are at in the planning, with who, and where, and when to get to it as part of overall planning process, and they can expect that ####"

Mcpherson, Michèle (PC)

From: Michael Janssen/NOTES/PC/CA
Sent: Thursday, September 13, 2018 4:24 PM
To: Chris Gill
Subject: RE: COASTAL CONSERVATION

Would you be willing to reply all to that one email with myself, Heather and Joanne, and request that the issue be sorted quickly, and point out that you can't keep invoicing for one amount but be reimbursed for a different amount? It will have more weight coming directly from you than from me. Please feel free to let me have it, but best to stay respectful with Joanne and Heather as they both have gate keeper status.

Just one idea. I'm also happy to convey that message if that's a more appropriate route.

very best,
Mike

Mike Janssen, MSc, PMP

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"Chris Gill" ---13/09/2018 03:23:54 PM---Ugh. Sorry for both of us.

From: "Chris Gill" <chris@coastalconservation.ca>
To: <michael.janssen@pc.gc.ca>
Date: 13/09/2018 03:23 PM
Subject: RE: COASTAL CONSERVATION

Ugh. Sorry for both of us.

As you guessed, we aren't getting reimbursed what our invoicing states, which is very challenging from an accounting perspective. Attached is a comparison of what we invoiced vs what we were paid.

As you said, the form is the challenge but I'm not sure how to get around it. I can't keep invoicing for one amount but be reimbursed for a different amount.

Chris

From: michael.janssen@pc.gc.ca <michael.janssen@pc.gc.ca>
Sent: Thursday, September 13, 2018 2:51 PM
To: Chris Gill <chris@coastalconservation.ca>
Subject: Fw: COASTAL CONSERVATION

Apologies. This is an effing nightmare. Joanne and Heather have already been to war over this.
They are telling me different things. The form doesn't match what Heather says. Finance and contracting don't agree.
Brutal.

Just forwarding so you have the spreadsheet in case there is discrepancies between payment and what was submitted. And so you have some insight on this background battle being waged.
very best,
Mike

Mike Janssen, MSc, PMP

Project Manager, Gulf Islands National Park Reserve
Parks Canada / Government of Canada
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----- Forwarded by Michael Janssen/NOTES/PC/CA on 13/09/2018 02:47 PM -----

From: Heather Goring-Goodfellow/NOTES/PC/CA
To: Michael Janssen/NOTES/PC/CA@PC
Date: 11/09/2018 08:10 AM
Subject: COASTAL CONSERVATION

Hi Michael,

As I have said, the formula for holdbacks is:
GROSS - HOLDBACK +TAX
So here is a picture of what has been allocated so far.
This pay out (#6) will be $26,709.43 not $26,816.22.

In future, if you provide me with the gross claim amount, I can confirm with you, what the breakdown will be before you fill out the form.
Thanks

Heather Goring-Goodfellow

Accounting Assistant, Comptroller Branch / Aide-Comptable, direction de la fonction de contrôleur
Chief Financial Officer Directorate / Direction Générale de la Dirigeante Principale des Finances
Parks Canada Agency / Agence Parcs Canada
111 Water St. E
Cornwall, ON K6H 6S2
T: (613) 938-5756
F: (613) 938-5824

Parks Canada – 450 000 km^2 of memories / Parcs Canada - 450 000 km^2 de souvenirs. [attachment "COASTAL CONSERVATION PROGRESS PAYMENTS paid vs invoiced differences Sept 13 2018.xlsx" deleted by Michael Janssen/NOTES/PC/CA]

PP1	$2 528,98
HB	$252,90
SUB	$2 276,08
TAX	$113,80
PAID	$2 389,89

PP2	$6 543,88
HB	$654,39
SUB	$5 889,49
TAX	$294,47
PAID	$6 183,97

PP3	$17 750,38
HB	$1 775,04
SUB	$15 975,34
TAX	$876,43
PAID	$16 851,77

PP4	$8 455,00
HB	$845,50
SUB	$7 609,50
TAX	$380,48
PAID	$7 989,98

PP5	$11 132,73
HB	$1 113,27
SUB	$10 019,46
TAX	$500,97
PAID	$10 520,43

PP6	$28 263,95
HB	$2 826,40
SUB	$25 437,56
TAX	$1 271,88
PAID	$26 709,43

Sidney Fallow Deer Eradication: Coastal Conservation

Before Vote (prior to March 31, 2019)		
Existing Contract Deliverables (ends Nov 30 2019)	*$196k*	
Scoping Document		
Eradication Operational Plan	$61 028	
Partnering agreements, letters of support	$8 450	
Permitting: Determine Requirements	$0	
Site Visits (2)	$0	
Stakeholder Workshops (3)	$0	
FN Engagement (4 trips)	$19 572	
Additional Deliverables (end Mar 31, 2019)		
Permitting: develop and submit permits for trials	$0	
Co-develop Landowner Proposal Document	$10 780	$6 468
Proposal feedback workshop (1)	$22 880	
Landowner Proposal revision	$2 570	$1 542
Communications documents for SI Landowners (2)	$32 850	$19 710
Stakeholder communications (e.g. phone calls, emails etc)	$16 900	$10 140
Determine EIA requirements	$1 880	$2 500
Develop initial EA documentation	$30 000	$0
Develop Stakeholder Register		
Identify organisations, key individuals, roles, and their contact information	$3 880	
Guide and Develop Stakeholder Engagement Strategy		
Influence/Impact, current and desired support level, comms method, timing, responsibility	$13 450	$5 000
Resource requirements (Personnel, Budget)	$4 070	
Plan Meat Recovery (getting meat to the abbatoir)		
Resource requirements (ppl, gear,$)	$8 498	$5 000
comms betw hunters and meat recovery team	$6 428	
Steering committee meetings	$18 390	$17 300
Subtotal	***$261 625***	
$ Remaining in contract	***$69 739***	
Total	**$191 885**	

Planning Phase 1(April - Oct 2019)		
Obtain landowner permission for trials		$690
Design, coordinate and carry out trials		
	bait pref, 1 way gate, passive capture	$17 545
Continued revision of operational plan		$22 198
External review of operational plan		$10 000
Permits for eradication: Develop and submit		
	Incl EIA	$11 900
EA prepararion		$30 000
Co-develop risk management Plan		$17 530
Co-Execute stakeholder engagment strategy		
	communications and outreach	$10 450
Additional site visits (?)		$12 260
Hunt planning for private property		$26 323
Continued landowner engagement		$14 900
Prepare for eradication implementation		$150 138
recruitment/training of staff/volunteers		$40 465
Work permits including lawyer fees		$56 428
Purchase Equipment & Supplies		$306 025
Travel for personnel and dogs.		$262 609
Biosecurity plan		**$32 875**
	Subtotal	$1 022 334
	Contingency (15%)	$153 350
	TOTAL	**$1 175 684**

Planning Phase 2 (April - Oct 2019)		
Obtain landowner permission for trials		$690
Design, coordinate and carry out trials		
	bait pref, 1 way gate, passive capture	$17 545
Continued revision of operational plan		$22 198
External review of operational plan		$10 000
Permits for eradication: Develop and submit		
	Incl EIA	$11 900
EA preparartion		$30 000
Co-develop risk management Plan		$17 530
Co-Execute stakeholder engagment strategy		
	communications and outreach	$10 450
Additional site visits (?)		$12 260
Hunt planning for private property		$26 323
Continued landowner engagement		$14 900
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Travel for personnel and dogs.		$262 609
Biosecurity plan		**$32 875**
	Subtotal	$1 022 334
	Contingency (15%)	$153 350
	TOTAL	**$1 175 684**

Operations Phase (Nov 2019 - April 2022)

Implement Fallow Deer Eradication
Biosecurity Implimentation
Confirming Success

$2 841 325

	Time	Flights	Accomodat	Food	Taxi	Parking
Chris	$1 380	$600	$500	$174	$40	$100
Tony	$8 543	$1 000	$500	$261	$40	$200
Mike	$1 600	$800	$500	$174	$40	
Beth	$1 600	$800	$500	$174	$40	
Gregg	2000	$600	500	174	$40	

Travel

	# Units	Estimated Cost per unit
Aerial shooter and ground hunter/dog teams (6 plus helicopter pilot and engineer)		
Flights (NZ to Sidney)	6	$4 000
Excess baggage charges	6	$200
Dog transportation for 8 dogs	8	$22 000
Food for aerial hunter and ground hunters during travel & staging ($86.80/day/ person)	48	$87
Accomodations for aerial hunter and ground hunters during travel & staging	48	$250
Accomodations for helicopter pilot and engineer accomodations during staging	6	$250
Food for helicopter pilot and engineer during staging ($86.80/day/ person)	12	$87
Taxi/rental car	2	$200
Miscellaneous	1	$1 000
Bait station shooters (5)		
Flights	5	$1 200
Excess baggage charges	5	$200
Mileage (1,000 km @ $0.75/km)	1000	$1
Food during travel and staging ($86.80/person)	40	$87
Accomodations during travel & staging	40	$250
Taxi/rental car	1	$200
Miscellaneous	1	$1 000
Parking	1	$300
Eradication planning chief		
Flights	9	$600
Excess baggage charges	2	$200
Mileage (2,000 km @ $0.75/km)	2000	$1
Food during travel and staging ($86.80/day)	27	$87
Accomodations during staging	27	$250
Taxi	9	$45
Miscellaneous	1	$1 000
Parking	1	$1 500
		Total

Estimated Subtotal	*Notes*
$24 000	
$1 200	
$176 000	
$4 166	*8 days per person*
$12 000	*8 days per person*
$1 500	*6 days during staging*
$1 042	*6 days during staging*
$400	*Two rental cars needed for 8 people.*
$1 000	
$6 000	*Assuming for now that Tony would be bringing his own team rather than using Gwaii Haanas (to be safe)*
$1 000	
$510	
$3 472	*8 days per person*
$10 000	*8 days per person*
$200	
$1 000	
$300	
$5 400	*Estimating that I am on site for two weeks then home for one week throughout the operation.*
$400	
$1 020	
$2 344	*Assuming three days per trip to account for weather or other delays during staging*
$6 750	*Assuming three days per trip to account for weather or other delays during staging*
$405	
$1 000	
$1 500	
$262 609	

Equipment & Supplies
Firearms & Associated Equipment
AR15
AR15 scope
AR15 High Capacity Magazines
.223 bolt action firearms with scopes
Suppressors
Benelli shotgun
Bipods
Rifle covers
Hunting packs (42L)
Firearm cleaning kits
Hornady 223 55gr Vmax
Federal fusion 62gn
0.308 ammunition
Shotgun ammunition
Communication
Parks Canada Agency VHF handheld radios for dog hunters, bait station marksmen, carcass recovery team, eradication field manager, boat operators, etc. including chest harnesses
Motorolla external microphone (PMMN4040A) for hunter/dog teams
Garmin Astro GPS reciever & tracking collar for dogs
Helicopter tablet (to monitor position of ground hunters and dogs using the Garmin GPS units)
Helicopter UHF Radio plus installation (comms for pilot to dog teams)
Explorenet satellite communications (internet at camp)
GPS units
GPS collars for Judas deer & subscription
VHF collars for biosecurity post eradication
Radio receiver to track Judas deer includes Yagi antenna, adaptor for headset and coaxial cable from ATS
Laptop for data analyses with Arcview GIS licenses plus printer ($300)
Miscellaneous
Basic tool box containing sockets, screwdrivers etc.
Deer drags
Work gloves (size large & XL)
Pole saws for removing branches at bait station sites

Number/quantity	Cost per unit plus	Estimated Subtotal
1	$3 000	$3 000
1	$1 000	$1 000
3	$100	$300
11	$2 000	$0
7	$1 500	$10 500
4	$3 000	$12 000
4	$200	$0
5	$60	$300
5	$575	$2 875
2	$50	$100
500	$1,60	$800
500	$1,60	$800
500	$1,60	$800
500	$1,60	$800
15	$1 500	$0
7	$150	$1 050
9	$1 500	$13 500
1	$1 500	$1 500
1	$6 500	$6 500
1	$10 000	$10 000
5	$500	$2 500
10	$4 000,00	$40 000
10	$500,00	$5 000
2	$1 500,00	$3 000
1	$4 000,00	$4 000
1	$1 000	$1 000
8	$30	$240
10	$25	$250
2	$450	$900

Notes
Gwaii Haanas has one. Can we borrow it?
Gwaii Haanas has these. Can we borrow them?
CC personnel will bring their own firearms
One spare. Gwaii Haanas has 6. Maybe we can borrow them?
For targeting deer in thick salal
Tony's team has bipods. If Gwaii Haanas personnel are used, they have their own bipods as well.
For bait station marksmen. Gwaii Haanas has good rifle covers. Can we borrow them?
Gwaii Haanas has good packs. Can we borrow them?
For Tony's team. Cost is an estimate. Verify ammunition type and amount before ordering
For AR15. Cost is estimated. Verify ammunition type and amount before ordering
Several dog hunters use a .308. Cost is estimated. Verify ammunition type and amount before ordering
Cost is estimated. Verify ammunition type and amount before ordering
Can we use Parks radios? The other option are Handheld Motorolla XPR 7550e and external microphone (PMMN4040A) for hunter/dog teams. Gwaii Haanas used them. Maybe we can borrow them?
This was a critical piece of equipment during the Gwaii Haanas project
One spare. We had one malfunction in Gwaii Haanas. May be able to borrow Gwaii Haanas' collars?
Gwaii Haanas has one of these. Can we borrow it?
Confirm need with Mike/Beth
Internet is critical for eradication team. They cannot participate in the project if they are unable to manage their buisinesses remotely.
Can we use Parks' GPS units? For carcass recovery team locating deer, etc. Ground hunters use the Garmin Astro GPS units
Estimate. Gwaii Haanas has several collars. We may be able to use them if we get the batteries replaced.
Estimate.

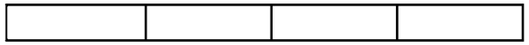
Parks may have one that we can use.

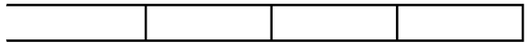
Parks should have at least one of these
Professional Series 179-39 Telescopic Landscaping Pole Saw HAYAUCHI 390, 21-Feet

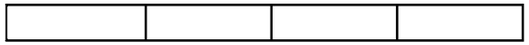
Small chainsaw for removing branches at bait station sites
Hand pruners for removing branches at bait station sites
Deer bait: whole kernel corn or other appropriate bait (kgs)
Mouse/ Rat proof storage shed for deer bait
70L dry bags for carrying bait
Trail cameras
Dog food ($2/day/dog for 8 dogs)
Dog kennels on island
Dog travel kennels
Food for eradication team
Yellow safety vests (for staff that aren't hunting but working on island. E.g. carcass recovery team)
Coin envelopes printed with sample labels for DNA analysis (tissue and hair samples)
Waterproof field notebooks
Headlamps
Stanley fat max spotlights
AA batteries for GPS and remote cameras, AAA batteries for headlamps, etc.
Sharpies/Mechanical Pencils
Flagging tape
Miscellaneous
Transportation on island
Side by sides (UTVs)
PCA trucks for carcass recovery
Accomodations on island
Atco trailer rentals for field team including barge and tug to move them to Sidney Island
Sleeping bags
Fuel
Small vessels for crew transport to/from island and for night hunting
Helicopter Fuel - Jet A
Side by side fuel (~5 L/100km for an average of 30 km/day for 120 days plus a fuel contingency per vehicle)
PCA truck fuel? (~15 L/100km for an average of 30 km/day for 120 days plus a fuel contingency per vehicle)
Housing fuels
Generator
propane for appliances
Carcass processing

1	$500	$0
3	$50	$150
3 500		$3 000
1	$1 000,00	$1 000
4	$120	$480
15	$300,00	$4 500
1120	$2	$2 240
6	$500	$3 000
8	$150	$1 200
1800	$25	$45 000
20	$50	$1 000
1000		$400
20	$10	$200
10	$75	$750
6	$100	$600
500	$3	$1 500
50	$2	$120
20	$6	$120
1	$10 000,00	$10 000
		$0
2	$15 000,00	$0
1	$0	$0
		$0
1	$50 000	$0
11	$200	$2 200
		$0
?	*?*	*?*
50 000	$2	$100 000
660	$1,50	$990
840	$1,50	$1 260
2 000	$1,50	$3 000
800	$0,75	$600

use pca's
Estimated amount including cost of bulk bags and delivery.
Shipping container rental?
Gwaii Haanas has these. Can we borrow them?
12 cameras for bait station sites plus 3 additional cameras for miscellaneous use.
120 days on island plus 20 days of staging/kennelling time
Uptown 4x8 ft kennel. Another option is two 10x10 ft kennels
Please refer to Food worksheet for a total number of days estimate. This is a best guess.
If we want to collect samples for DNA analysis. 1000 is the minimum order
Quantity and price is estimated. INCLUDES BATTERIES FOR REMOTE CAMERAS
Need at least two mechanical pencils per data sheet binder
Parks should have lots of flagging tape
Use what we have with PCA. Two Polaris Ranger four-seaters would be idea. Electric ones would be preferrable.
One vehicle may be required for carcass recovery unless we can order trailers for the side by sides.
Estimate. PCA to cover, not CC. I have not looked into the cost of housing very deeply. We may need to house up to a maximum of ~15 people at one time.
If required for Tony's team and the dog hunting team. Or we could get fewer sleeping bags and purchase bag liners
Mike to estimate
This is an estimate based on 28 gallons/hr and 4 hours flight time per day for 120 days.
These are very rough estimates. It depends on what the acommodations are.
These are very rough estimates. It depends on what the acommodations are.







Refrigerated reefer fuel
Vehicle fuel for carcass recovery team
First Aid
WCB Level 2 First-Aid Kit
Spine board
S.K.E.D litter or comparable
Cold compresses
Inflatable splints (all limbs)
Survival blankets
Crash Rescue Kit (suggested items)
20 pound 40-B:C fire extinguisher
Axe
Bolt cutters (24")
Rescue knife (seat belt type)
Miscellaneous tools (i.e. adjustable pliers, hammers, chisels, etc.)
Rope (at least 1/4" x 30m)
Heavy duty crowbar
Flameproof gloves
Fire blankets
Metal ladder
stretcher/spineboard

38	??	??
191	??	??
1		$0
1		$0
1		$0
10		$0
1 set		$0
3		$0
1		$0
1		$0
1		$0
2		$0
1 of each		
2		$0
2		$0
2		$0
2		$0
1		$0
1		$0
	Estimated Total	**$306 025**

If a Parks vehicle is used.
Parks likely has all this equipment already
Parks likely has all this equipment already

Activity	# days on island	# personnel per phase	Total days per activity
Bait station shooting	30	10	300
Aerial hunting	30	8	240
Aerial hunting and dog hunters	90	14	1260
		Total	**1800**

Notes
5 marksmen, 2 carcass recovery personnel, 1 data manager/safety officer/boat operator, 1 camp cook, 1 eradication field manager
1 helicopter pilot, 1 engineer, 1 aerial hunter, 2 carcass recovery personnel, 1 data manager/safety officer/boat operator, 1 camp cook, 1 eradication field manager
6 dog hunters, 1 helicopter pilot, 1 engineer, 1 aerial hunter, 2 carcass recovery personnel, 1 data manager/safety officer/boat operator, 1 camp cook, 1 eradication field manager

Estimated eradication implementation cost

Activity	Daily rate	Total	Notes
Bait station shooting/drop netting/night hunting	$10 848	$325 425	4 weeks not including staging or prep if we use Tony's team and not Gwaii Haanas personnel
Aerial hunting including helicopter	$9 000	$1 080 000	ESTIMATE! 4 hours/day. 120 days to account for aerial herding, aerial hunting/dog hunter support. Does not include staging or preparation time
Dog hunters + dogs	$8 000	$960 000	120 days not including staging or prep. would act as both the aerial hunter and a sixth dog hunter as required
Final planning/preparations/report writing	$690	$144 900	210 days. Based on Gwaii Haanas time
Carcass recovery/processing	-	$80 000	ESTIMATE!
Camp cook	$500	$105 000	ESTIMATE! 210 days
GIS analyst/data manager/Safety Officer/Boat Operator	$600	$126 000	ESTIMATE! 210 days
Liability insurance	-	$20 000	
	TOTAL	**$2 841 325**	

s.19(1)

Mcpherson, Michèle (PC)

From: Michael Janssen/NOTES/PC/CA
Sent: Tuesday, October 2, 2018 8:35 AM
To: Chris Gill
Subject: Fw: Follow-up_Fw: Coastal Conservation Contract

Hi Chris,
Not to hassle you. I'm not pressuring you, just wanted to mention that I'm being leaned on for an update regarding contract extension. If you have time to do some rough estimates today, that would be fantastic. From my chair, that's more pressing than the landowner scoping document :) I know you're balancing a lot though.
Thanks Chris!!
Have a good one,
Mike

Mike Janssen, MSc, PMP

Project Manager, Gulf Islands National Park Reserve
Parks Canada / Government of Canada
2220 Harbour Road, Sidney, BC, V8L 2P6
michael.janssen@pc.gc.ca, Tel: 250-654-4015

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----- Forwarded by Michael Janssen/NOTES/PC/CA on 02/10/2018 08:33 AM -----

From: Joanne Cuthbert/NOTES/PC/CA
To: Michael Janssen/NOTES/PC/CA@PC
Date: 01/10/2018 03:07 PM
Subject: Re: Fw: Follow-up_Fw: Coastal Conservation Contract

Sounds good Mike. You know where to find me.

Cheers,

Joanne S. Cuthbert
Acting Advisor, National Contracting Services
Parks Canada Agency / Government of Canada
Suite 720, 220 - 4th Ave SE Calgary, AB T2G 4X3
Email: joanne.cuthbert@pc.gc.ca / Tel. : (403) 292.4558
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Michael Janssen---01/10/2018 03:56:41 PM---Thanks Joanne! I appreciate it,

From: Michael Janssen/NOTES/PC/CA
To: Joanne Cuthbert/NOTES/PC/CA@PC
Date: 01/10/2018 03:56 PM
Subject: Re: Fw: Follow-up_Fw: Coastal Conservation Contract

Thanks Joanne!
I appreciate it,
I will have more info for you this week :) and hopefully we can move from there.
MIke

Mike Janssen, MSc, PMP

Project Manager, Gulf Islands National Park Reserve
Parks Canada / Government of Canada
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Joanne Cuthbert---01/10/2018 01:46:15 PM---Hi Mike, Sending this as more of a reminder to both of us. Please let me know when you are ready fo

From: Joanne Cuthbert/NOTES/PC/CA
To: Michael Janssen/NOTES/PC/CA@PC
Date: 01/10/2018 01:46 PM
Subject: Fw: Follow-up_Fw: Coastal Conservation Contract

Hi Mike,

Sending this as more of a reminder to both of us. Please let me know when you are ready for a call to discuss options for moving forward.

Cheers,

Joanne S. Cuthbert
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Parks Canada Agency / Government of Canada
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----- Forwarded by Joanne Cuthbert/NOTES/PC/CA on 01/10/2018 02:44 PM -----

From: Joanne Cuthbert/NOTES/PC/CA
To: Michael Janssen/NOTES/PC/CA@PC
Date: 13/09/2018 03:22 PM
Subject: Re: Fw: Follow-up_Fw: Coastal Conservation Contract

Thanks Mike. Sounds very interesting and productive but I'm assuming that there are still many thing to iron out before your and I continue our discussion. I look forward to hearing from you when you're ready, we can set up a call to discuss moving forward at that time.

Meanwhile, enjoy ; **s.19(1)**

Joanne S. Cuthbert
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Michael Janssen---13/09/2018 02:51:51 PM---Hi Joanne, It's been a busy couple of days and I haven't been in the office. Just catching up. If

From: Michael Janssen/NOTES/PC/CA
To: Joanne Cuthbert/NOTES/PC/CA@PC
Date: 13/09/2018 02:51 PM
Subject: Re: Fw: Follow-up_Fw: Coastal Conservation Contract

s.19(1)

Hi Joanne,
It's been a busy couple of days and I haven't been in the office. Just catching up. If I don't get back to you tomorrow

Just for information as to what we've been up to, I sent this to our comms person:

On Monday eradication professionals from New Zealand, Maine, Alberta, and BC gathered to visit sidney island and assess the operational opportunities and challenges that are presented by the island. We had probably the most experienced urban ungulate control expert in North America (Dr. Tony DeNichola), one of the most highly regarded wildlife capture teams in Canada (Mike Reed, , and two of the top dog and avian hunters in the world Importantly, our team of experts, together with PCA staff were guided around the island by the two Sidney Island Landowners with the most experience in managing their hunting, capture, and cull activities. The information flow was bi-directional.

On Tuesday, the same group gathered at SOC to hash out the methodology and sequence of events that would be recommended to maximise probability of successful fallow deer eradication on sidney Island. This information is critical operationally, but also necessary in order to inform landowners of what an eradication might look like, in order to inform their vote. It also informed the access permissions that would be necessary to obtain from Sallas, for discussion at the steering committee meeting on wednesday.

On Wednesday, we had an all day steering committee meeting, in which representatives of key organisations involved in the project, gathered to discuss issues such as opportunities for first nation's involvement, what the process of approval (from Sallas) may be for the project, and an attempt to come to consensus on the purpose and needs of the project.

my very best,
Mike

Mike Janssen, MSc, PMP

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Joanne Cuthbert---12/09/2018 04:23:54 PM---Hi Mike, Just following up, any more information yet?

From: Joanne Cuthbert/NOTES/PC/CA
To: Michael Janssen/NOTES/PC/CA@PC
Date: 12/09/2018 04:23 PM
Subject: Fw: Follow-up_Fw: Coastal Conservation Contract

Hi Mike,

Just following up, any more information yet?

Joanne S. Cuthbert
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----- Forwarded by Joanne Cuthbert/NOTES/PC/CA on 12/09/2018 05:02 PM -----

From: Joanne Cuthbert/NOTES/PC/CA
To: Michael Janssen/NOTES/PC/CA@PC
Date: 05/09/2018 02:46 PM
Subject: Follow-up_Fw: Coastal Conservation Contract

Hi Mike,

It was nice chatting with you earlier this afternoon. I've spoken with my Manager, could you please give me a call at your convenience for further discussion.

Thanks,

Joanne S. Cuthbert
Acting Advisor, National Contracting Services
Parks Canada Agency / Government of Canada
Suite 720, 220 - 4th Ave SE Calgary, AB T2G 4X3
Email: joanne.cuthbert@pc.gc.ca / Tel. : (403) 292.4558
Facsimile: 1-866-246-6893

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Conseillère par intérim, Service national de passation de marchés
Agence Parcs Canada / Gouvernement du Canada

Pièce 720 - 220 4ième avenue SE, Calgary, AB T2G 4X3
Email | Courriel: joanne.cuthbert@pc.gc.ca / Tél. : (403) 292.4558
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----- Forwarded by Joanne Cuthbert/NOTES/PC/CA on 05/09/2018 02:44 PM -----

From: Joanne Cuthbert/NOTES/PC/CA
To: Michael Janssen/NOTES/PC/CA@PC
Date: 05/09/2018 01:37 PM
Subject: Re: Coastal Conservation Contract

Mike, quick question. What is the estimated value of the contract for executing the work?

Joanne S. Cuthbert
Acting Advisor, National Contracting Services
Parks Canada Agency / Government of Canada
Suite 720, 220 - 4th Ave SE Calgary, AB T2G 4X3
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Michael Janssen---30/08/2018 10:28:23 AM---Hi Joanne, A while ago I contacted you about potentially extending and adding deliverables to the co

From: Michael Janssen/NOTES/PC/CA
To: Joanne Cuthbert/NOTES/PC/CA@PC
Date: 30/08/2018 10:28 AM
Subject: Coastal Conservation Contract

Hi Joanne,
A while ago I contacted you about potentially extending and adding deliverables to the contract with Coastal Conservation. I believe we left it at a point where you were going to check with your supervisor?

I apologise on the delay following up, I am completely overrun.
This contract is critical to the success of the project as a whole, so I wanted to follow up. Especially as it expires in November. Please let me know if there is a good time to call :)
I appreciate your help, as always!
my very best,
Mike

Mike Janssen, MSc, PMP

Project Manager, Gulf Islands National Park Reserve
Parks Canada / Government of Canada
2220 Harbour Road, Sidney, BC, V8L 2P6
michael.janssen@pc.gc.ca, Tel: 250-654-4015

Gestionnaire de Projet, Réserve de parc national des îles-Gulf
Parcs Canada / Gouvernement du Canada
2220 Chemin Harbour, Sidney C-B V8L 2P6
michael.janssen@pc.gc.ca , Tel: 250-654-4015

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Mcpherson, Michèle (PC)

From: Michael Janssen/NOTES/PC/CA
Sent: Thursday, October 4, 2018 8:40 AM
To: Chris Gill
Subject: Re: Estimated budget

Hi Chris,
Thanks very much for putting this together so quickly. I don't yet know how to respond regarding amounts, but I'll think of something :)
I may need to push most of the "planning" expenses to "implementation". I don't know. I'll have to have a think. That budget is more than the entire budget for the whole project, as currently approved (including all salaries). So before I can get anyone to sign any contract requisitions, we would have to resubmit the project to national office for approval with an increased budget. Then once that is approved, we could submit a request for contract for implementation...
Good to have this early on though, so we can start strategizing.
Thanks again, I appreciate it,
Mike

Mike Janssen, MSc, PMP

Project Manager, Gulf Islands National Park Reserve
Parks Canada / Government of Canada
2220 Harbour Road, Sidney, BC, V8L 2P6
michael.janssen@pc.gc.ca, Tel: 250-654-4015

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"Chris Gill" ---03/10/2018 09:47:52 PM---Hi Mike,

From: "Chris Gill" <chris@coastalconservation.ca>
To: <michael.janssen@pc.gc.ca>
Date: 03/10/2018 09:47 PM
Subject: Estimated budget

Hi Mike,

Attached is my estimated budget. I would ideally like to have a bit more time to review this with the team and firm up some costs but we are too crunched for time at the moment. Before you spit out your coffee, faint, and/or start cursing me, please keep in mind that I have been conservative with the cost estimates.

Here are a few thoughts/comments:

- I would recommend considering deferring the cost of the equipment/supplies and travel to the 'implementation' phase because I doubt you can increase the current contract by that much. Plus if Coastal Conservation doesn't get the contract, these costs may change.

- If you look at the equipment tab, you will see that there are a number of line items that Parks may already have, or that Parks would pay for outright, or that you might be able to borrow from Gwaii Haanas. So I recommend that you go through this list and see what you can pull out.

- As for implementation cost (detailed on the implementation tab), I have not had a chance to firm up certain costs such as helicopter rates, helicopter fuel consumption, average number of hours flown per day, etc. but I think I am close, except for costs associated with staging and final preparation time for the team. I recognize that implementation costs have changed considerably but my numbers are based on feedback from the team compared to 'best guess' during the CoRe proposal.

- As for the detailed summary tab, I would recommend keeping the amended contract as generalized (less detailed) as you can so we have the freedom to act and react accordingly as the project progresses and not be caught in the same situation as we are now. But I respect that this may be challenging to do.

I'm happy to walk you through this or chat about anything you have questions on…once you pick yourself up off the floor.

Best,
Chris

COASTAL CONSERVATION

Chris Gill, MSc, RPBio, *Program Director*
Coastal Conservation
www.coastalconservation.ca
Ph: (250) 253-0298

[attachment "CC Contract Extension budget estimate.xlsx" deleted by Michael Janssen/NOTES/PC/CA]

Amendment Justification

Contract 5P420-17-5313: Coastal Conservation

The initial objective of the work was to provide scientific and technical advice to Parks Canada Agency to explore a range of suitable, evidence-based eradication methods and to develop a detailed plan for operations to eradicate fallow deer on Sidney Island. Parks Canada owns a portion of Sidney Island, and much of it is owned by private landowners who are organised under the Sallas Forest Strata Corporation. For a Fallow Deer eradication to occur on private lands, it will be necessary for private landowners to vote on whether or not they are in support of an eradication operation occurring. As this project has evolved, the level of consultation with private landowners that has been required, has expanded beyond what was initially anticipated. It is also necessary to add stakeholder engagement as a key element of this work.

It has become clear that project planning needs to incorporate the values, perspectives and knowledge of private landowners, in order to be acceptable to landowners. In order to ensure the project is built in a collaborative manor, a project steering committee has been established, to ensure that the values, perspectives, and knowledge of key rights-holders and knowledge holders are incorporated in to decision making on the project. Two individuals from Coastal Conservation have been asked to sit on this committee because of their technical expertise. As a result, three steering committee meetings have been added to this amendment.

It has also become clear that a project proposal must be developed in order to provide landowners with a reasonable idea of what an eradication operation would involve. The purpose being to inform landowners decision, prior to a vote. This is a separate document than an operational plan, or scoping document, as these two documents are technical in nature, and not suitable as a means to educate a non-technical audience. The landowner proposal must be drafted, shared with landowners, and then revised based on feedback. This amendment includes the development of the landowner proposal, revision of the proposal, and attendance at a feedback workshop at which landowners can request clarity or express concerns.

Stakeholder engagement is a fundamental element of this project. Given their experience with controversial projects of this nature, Coastal Conservation is also being asked to provide advice on the development of a stakeholder engagement strategy. In addition to the project proposal itself, the technical expertise of members of Coastal Conservation will be required to address many of the questions or concerns that residents pose to Parks Canada project staff. This includes addressing general enquiries but is also a requirement of planning operations such as trials. Communications with landowners, including written documents, email, and phone conversations have been added as an amendment.

Also amended to this contract is the determination of Environmental Assessment requirements. If this project were to occur on Parks Canada land only, this would be an internal Parks Canada requirement. However, because a full island operation would occur over multiple jurisdictions, it will be necessary to determine whether federal or provincial environmental assessment is necessary, and how the two processes can be coordinated.

Finally, landowners have requested eradication plans that are specific to Sidney Island, and in order to inform that level of operational planning, it is necessary to conduct some initial trials. Specifically, it is necessary to conduct a bait preference trial in November and December, in order to determine whether bait is effective in these months. This will inform when operations should commence the following year. For this reason, it is not cost effective to wait until after a vote, to conduct this trial. This trial was not included in the initial contract because it was thought that trials would be conducted after a vote, and there was no desire to commit to the trial before a vote had taken place. Since that time, the timing of the vote has been delayed past the necessary window in which this trial needs to be conducted. In order to avoid a one-year delay to the project, it is now necessary to conduct this trial prior to the vote.

For each of the amendments listed above, there is only one firm that has the ability to carry out this work. The mandatory technical criteria outlined in the initial request for proposals still applies to the work outlined in this amendment. We are not aware of any other organisation in Canada that meets these criteria. Indeed, only one bid was received on the initial request for proposals. Further to this, the elements included in this amendment must integrate seamlessly in to technical planning and stakeholder engagement activities that are already underway. It is not reasonable to expect that an additional organisation could complete this work and integrate it with existing activities in a manner that is logistically or cost effective.

Coastal Conservation Contract Next Steps:

Immediate ammendment: Contract extension plus additional deliverables
- this is doable between Mike and Joanne Cuthbert. Just admin...
  - requires completion of contract ammendment form

1. Work with Chris to determine extension required, and additional deliverables.
2. Work with Joanne to ammend contract.

Ammendment including expensive trials
- Max total ammendment authority is $1M
- Big ammendment requires some caution due to sensitivity of the project
  - need to have very strong justifications in place.
  - need to be sure there really only is one firm that can do the work

1. Deliverables from Mike, Nathan, Gregg.
2. Budgets and timelines from Chris
3. Mike Conversation with Joanne
4. Billy Dixon has requested call with Mike, Joanne and Nathan
   - to better understand requirements
   - Mike and Nathan will want to go in to this call with good information
   - Costs will need to be justified.

Additional contract will be required for full eradication, just because of the cost ceiling
for ammendments of $1M.
- Will likely go out to bid, but could potentially make a case for sole source via public works.

Oct 11 call with Joanne and [redacted]
- Next step: Contract ammendment forms from Joanne.
- ammendment includes "additional deliverables"
- wait until after vote to add "planning phase 1"
- need to ammend statement of work
- Justification:
  - Why trials not included initially
  - why trials are going to be included now

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- Shahina says Jay can sign the sect 32.

  - why no one else can do the work.
  - concern is looks like a sole source being awarded without a competition.

Sidney Fallow Deer Eradication

Outstanding deliverables for current contract	Amount	Chris' Comments
Scoping Document	$0	Completed
Eradication Operational Plan	$61 028	Based on original budget for proposal. Not started yet
Partnering agreements, letters of support	$8 450	Estimated time remaining to meet deliverable
Permitting: Determine Requirements	$0	Completed
Site Visits (2)	$0	Completed
Stakeholder Workshops (3)	$0	Completed
FN Engagement (4 trips)	$15 977	Based on original budget for proposal. Not started yet
Total outstanding deliverables	$85 455	
Balance remaining in current contract	**$69 739**	Existing contract: $195,589. Amount invoiced to date (no GST) $125,850.
Difference	**$15 716**	We are therefore starting with a deficit based on the expanded deliverables scope to date.

Chris' suggested revisions	Amount	Chris' Comments
Deficit based on expanded deliverables scopet to date	$15 716	
Co-develop Landowner Proposal Document	$8 020	Mike's numbers. We will reduce our contribution accordingly
Landowner Proposal revision	$2 570	Mike's/Chris' numbers
Communications documents for SI Landowners (2)	$5 950	Mike's numbers. We will reduce our contribution accordingly
Stakeholder communications (e.g. phone calls, emails etc)	$8 450	Mike's numbers. We will reduce our contribution accordingly
Determine EIA requirements	$1 880	Mike's/Chris' numbers
Bait Preference Trial	$17 545	Chris' numbers. The revised budget isn't feasible given the effort required for the trials.
Guide Development of Stakeholder Engagement Strategy	$5 070	Mike's numbers. We will reduce our contribution accordingly
Steering Committee meetings (3)	$18 390	Chris' numbers. These are hard costs for three in person meetings.
Proposal feedback workshop (1)	$13 338	We can meet your budget only if we omit Tony, Gregg, and Beth from the workshop. However, I would say that Tony would be quite important to have there. More than Mike in my opinion. The estimate would be $13,338 with just Tony and myself attending.
Total	**$96 929**	

CENTRAL SAANICH
POLICE SERVICE

LES SYLVEN
Chief Constable

File 2018-1267

THE CORPORATION OF THE DISTRICT OF CENTRAL SAANICH

CROP PROTECTION PERMIT

(Issued pursuant to the Firearms By-Law No. 1849)

FEE: $5.00

PERMIT
HOLDER:

ALLOWS THE DISCHARGE OF A SHOTGUN OR BOW ON THE PROPERTY IN THE MUNICIPALITY OF CENTRAL SAANICH KNOWN AS **6929, 6984, 6981, 6950 VEYANESS ROAD, 1376 WHITE ROAD, 6971, 6943 SEABROOK ROAD AND 7351 CENTRAL SAANICH ROAD** THE PURPOSES OF CROP AND LIVESTOCK PROTECTION.

THIS PERMIT IS VALID DURING THE PERIOD **APRIL 18, 2018 TO JANUARY 31, 2019** AND IS SUBJECT TO CANCELLATION AT ANY TIME FOR AN INFRACTION OF ANY FEDERAL, PROVINICAL OR MUNICIPAL STATUTE.

NOTE:

1. THIS PERMIT ONLY EXEMPTS THE PERMITTEES AND THEIR DESIGNATES FROM THE *CORPORATION OF THE DISTRICT OF CENTRAL SAANICH FIREARMS BYLAW NO. 1612* FOR THE PURPOSE OF CROP AND LIVESTOCK PROTECTION.
2. THIS PERMIT DOES NOT EXEMPT THE PERMITTEES AND THEIR DESIGNATES FROM ANY FEDERAL OR PROVINCIAL LEGISLATION RELATING TO WILDLIFE AND MIGRATORY BIRDS. SPECIFICALLY, EXEMPTIONS MAY BE REQUIRED FROM CONDITIONS OF THE BRITISH COLUMBIA WILDLIFE ACT AND THE MIGRATORY BIRDS CONVENTION ACT.

s.19(1)

3. IN ORDER TO SHOOT AT MIGRATORY BIRDS SUCH AS CANADA GEESE/DUCKS/GULLS ETC., A PROPER MIGRATORY BIRD DAMAGE (SCARE/KILL) PERMIT MUST BE OBTAINED FROM PERMIT SECTION, CANADIAN WILDLIFE BRANCH, PHONE #604.350.1950.
4. IT IS THE RESPONSIBILITY OF THE PERMITTEE(S) TO DETERMINE THE NECESSITY FOR ANY EXEMPTIONS FROM THE WILDLIFE ACT AND THE MIGRATORY BIRDS CONVENTION ACT.

5. INQUIRIES REGARDING THE WILDLIFE ACT SHOULD BE MADE TO THE MINISTRY OF ENVIRONMENT PHONE# 250.952.0932.

YOU ARE REQUIRED TO FAMILIARIZE YOURSELF WITH SHOOTING BOUNDARIES AND DISTANCES AS DEFINED IN THE PROVINCIAL WILDLIFE ACT, CLOSED AREA REGULATIONS, SCHEDULE 3, SECTION 19. THEY ARE ALSO OUTLINED IN THE DISTRICT OF CENTRAL SAANICH BY-LAW #1849 SECTION 6. SUBSECTION B, C AND D. A VIOLATION OF ANY REGULATION OR PROVISION WILL BE SUBJECT TO PENALTY UNDER THE APPROPRIATE LEGISLATION AND MAY RESULT IN REVOCATION OF THE CROP PROTECTION PERMIT.

FOR SAFETY REASONS, PERMIT HOLDERS MUST CONTACT CENTRAL SAANICH POLICE DISPATCH AT 250.652.4441 PRIOR TO DISCHARGE OF FIREARM. THIS CAN BE DONE BY ADVISING THE TIME FRAME (i.e. 0800 hrs – 1200 hrs) OR SPECIFIC DAYS OF DISCHARGE (i.e. JULY 22 and 23). ALSO, IF THERE ARE ANY TENANTS RESIDING ON THE PROPERTY, PERMIT HOLDER'S MUST ADVISE THE TENANTS OF ANY CROP PROTECTION ACTIVITY PRIOR TO COMMENCEMENT.

EACH APPLICANT OR DESIGNATE IS REQUIRED TO CARRY A COPY OF THIS PERMIT AND RELATED PROVINCIAL/FEDERAL PERMITS WHEN CONDUCTING CROP PROTECTION, AND MUST PRESENT THESE PERMITS UPON REQUEST TO A PEACE OFFICER OR BYLAW ENFORCEMENT OFFICER.

2018/4/18
Date

Attachments:

s.19(1)

1. District of Central Saanich ByLaw # 1849
2. Provincial Wildlife Act, Closed Area Regulations, Schedule 3, Section 19

Public Works and Government Services Canada | Travaux publics et Services gouvernementaux Canada

Claim for Progress Payment
Demande de paiement progressif

If necessary, use form PWGSC-TPSGC 1112 to record detail costs
Si nécessaire, utiliser le formulaire PWGSC-TPSGC 1112 pour inscrire les coûts détaillés

Contractor's Name and Address / Nom et adresse de l'entrepreneur	Claim No. / N° de la demande	Date / YYYY-MM-DD / AAAA-MM-JJ	Contract Price - Prix contractuel
Coastal Conservation, Inc. 775 Abbington Lane Tappen, BC V0E2X3	2018-9GUIS	2018-12-3	$195,589.53
	File No. - N° du dossier		Contract Serial No. / N° de série du contrat: 5P420-17-5313

Contractor's Procurement Business Number (PBN) / Numéro d'entreprise-approvisionnement (NEA) de l'entrepreneur: 846766715 (federal buisness number)

Financial Code(s) - Code(s) financier(s): 53470-2365-2103-20039144-22264

Contractor's Report of Work Progress (if needed, use additional sheets)
Compte rendu de l'avancement des travaux par l'entrepreneur (si nécessaire, utiliser des feuilles supplémentaires)

Working on preparations to advance the Sidney Island restoration project (please refer to spreadsheet for details).

Period of work covered by the claim / Période des travaux visée par la demande ▶ November 1-30 **Description:** (Expenditures must be claimed in accordance with the basis and/or method of payment of the contract) **Description** : (Les dépenses doivent être réclamées conformément à la base de paiement et (ou) à la méthode de paiement du contrat).	Current Claim / Demande courante (A)	Tax Rate / Taux de taxe	Previous Claims / Demandes précédentes (B)	Tax Rate / Taux de taxe	Total to Date / Total à date (A + B)
Personnel (see attached spreadsheet for details)	$ 1,850.00	5 %	$109,626.25	5 %	$111,476.25
Travel: Taxi, Rental Car, & Public Transit	$ 0.00	5 %	$508.56	5 %	$508.56
Travel: Meals (includes catering charge)	$ 0.00	0 %	$3,077.95	0 %	$3,077.95
Travel: Commercial Accomodations	$ 0.00	5 %	$5,054.27	5 %	$5,054.27
Travel: Flights	$ 0.00	5 %	$10,272.19	5 %	$10,272.19
Travel: Parking	$ 0.00	5 %	$345.10	5 %	$345.10
Professional Services	$ 0.00	5 %	$1,061.30	5 %	$1,061.30
Helicopter fees & fuel	$ 0.00	5 %	$8,685.97	5 %	$8,685.97
		%		%	
		%		%	
		%		%	
		%		%	
Contractor's GST No. / N° de TPS de l'entrepreneur: 81856 3512 RT0001 Subtotal / Sous-total	$1,850.00		$138,631.59		$140,481.59
Contractor's QST No. / No. de TVQ de l'entrepreneur Applicable taxes / Taxes applicables	$ 92.50		$ 6,777.68		$ 6,870.18
Total	$ 1,942.50		$145,409.27		$147,351.77
Less holdbacks on expenditures only (Applicable taxes excluded) Moins les retenues sur les dépenses uniquement (Taxes applicables en sus)	$185.00		$13,868.02		$14,053.02
Total Amount of Claim (including applicable taxes) Montant total de la demande (incluant les taxes applicables)	$1,757.50		$131,541.25		$133,298.75

Percentage of the work completed / Pourcentage des travaux achevés: 71.82 %

Current Claim / Demande courante ▶ Amount due / Montant dû: $1,757.50

A0057862_1-000260

Canada

Claim No. N° de la demande	Contract Serial No. N° de série du contrat

CERTIFICATE OF CONTRACTOR

I certify that:

- All authorizations required under the contract have been obtained. The claim is consistent with the progress of the work and is in accordance with the contract.
- Indirect costs have been paid for or accrued in the accounts.
- Direct materials and the subcontracted work have been received, accepted and either paid for or accrued in the accounts following receipt of invoice from supplier/subcontractor, and have been or will be used exclusively for the purpose of the contract.
- All direct labour costs have been paid for or accrued in the accounts and all such costs were incurred exclusively for the purpose of the contract;
- All other direct costs have been paid for or accrued in the accounts following receipt of applicable invoice or expense voucher and all such costs were incurred exclusively for the purpose of the contract; and
- No liens, encumbrances, charges or other claims exist against the work except those which may arise by operation of law such as a lien in the nature of an unpaid contractor's lien and in respect of which a progress payment and/or advance payment has been or will be made by Canada.

ATTESTATION DE L'ENTREPRENEUR

J'atteste que :

- Toutes les autorisations exigées en vertu du contrat ont été obtenues. La demande correspond à l'avancement des travaux et est conforme au contrat.
- Les coûts indirects ont été réglés ou portés aux livres.
- Les matières directes et les travaux de sous-traitance ont été reçus, et le tout a été accepté et payé, ou encore porté aux livres après réception de factures envoyées par le fournisseur ou le sous-traitant; ces matières et ces travaux ont été ou seront utilisés exclusivement aux fins du contrat.
- Tous les coûts de la main-d'oeuvre directe ont été réglés ou portés aux livres et tous ces coûts ont été engagés exclusivement aux fins du contrat.
- Tous les autres coûts indirects ont été réglés ou portés aux livres après réception des factures ou pièces justificatives pertinentes et tous ces coûts ont été engagés exclusivement aux fins du contrat.
- Il n'existe aucun privilège ni demande ou imputation à l'égard de ces travaux sauf ceux qui pourraient survenir par effet de la loi, notamment le privilège d'un entrepreneur non payé à l'égard duquel un paiement progressif et(ou) un paiement anticipé a été ou sera effectué par le Canada.

Contractor 's Signature - Signature de l'entrepreneur	Title - Titre	Date (YYYY-MM-DD / AAAA-MM-JJ)
	Program Director	2018-12-3

Check the box if the claim is being made with respect to advance payment provisions included in the basis of payment of the contract. ☐

Cocher la case si la demande est faite en rapport avec les dispositions relatives aux paiements anticipés qui se trouvent dans la base de paiement du contrat.

This claim, or a portion of this claim, is for an advance payment.

Cette demande, ou une partie de cette demande, est pour un paiement anticipé.

I certify that:

- The funds received will be used solely for the purpose of the contract and attached is a complete description of the purpose to which the advance payment will be applied.
- The amount of the payment is established in accordance with the conditions of the contract.
- The contractor is not in default of its obligations under the contract.
- The payment is related to an identifiable part of the contractual work.

J'atteste que :

- Les fonds reçus ne serviront uniquement qu'aux fins du contrat; ci-joint est une description complète des fins auxquelles le paiement anticipé sera utilisé.
- Le montant du paiement est établi conformément aux conditions du contrat.
- L'entrepreneur n'a pas manqué à ses obligations en vertu du contrat.
- Le paiement porte sur une partie identifiable des travaux précisés dans le contrat.

Contractor 's Signature - Signature de l'entrepreneur	Title - Titre	Date (YYYY-MM-DD / AAAA-MM-JJ)

CERTIFICATES OF DEPARTMENTAL REPRESENTATIVES

Scientific/Project/Inspection Authority: I certify that the work meets the quality standards required under the contract, and its progress is in accordance with the conditions of the contract.

Inspection Authority (all other contracts): I certify that the quality of the work performed is in accordance with the standards required under the contract.

ATTESTATIONS DES REPRÉSENTANTS DU MINISTÈRE

Autorité scientifique ou responsable du projet / de l'inspection : J'atteste que les travaux sont conformes aux normes de qualité exigées en vertu du contrat et que leur avancement est conforme aux conditions du contrat.

Responsable de l'inspection (tous les autres contrats) : J'atteste que la qualité des travaux exécutés est conforme aux normes exigées en vertu du contrat.

Signature of Scientific / Project / Inspection Authority Signature de l'autorité scientifique ou responsable du projet / de l'inspection	Date (YYYY-MM-DD / AAAA-MM-JJ)

PWGSC Contracting Authority: I certify that, to the best of my knowledge, the claim is consistent with the progress of the work and is in accordance with the contract. This claim, however, may be subject to further verification and any necessary adjustment before final settlement.

Autorité contractante de TPSGC : J'atteste, au meilleur de ma connaissance, que la demande correspond à l'avancement des travaux et est conforme au contrat. Toutefois, cette demande pourrait faire l'objet d'une autre vérification et de tout rajustement nécessaire avant le règlement final.z

Contracting Authority Signature de l'autorité contractante	Title - Titre	Date (YYYY-MM-DD / AAAA-MM-JJ)
	A/Manager, Resource Conservation	

Client's Authorized Signing Officer - (must sign the interim claim): I certify that the claim is in accordance with the contract.

Signataire autorisé du client - (doit signer la demande provisoire) : J'atteste que la demande est conforme au contrat.

Client Signature du client	Title - Titre	Date (YYYY-MM-DD / AAAA-MM-JJ)
	A/Manager, Resource Conservation	

Client's Authorized Signing Officer - (must sign the final claim): I certify that all goods have been received and all services have been rendered, that the work has been properly performed and that the claim is in accordance with the contract.

Signataire autorisé du client - (doit signer la demande finale) : J'atteste que tous les biens ont été reçus, que tous les services ont été rendus, que tous les travaux ont été exécutés convenablement, et que la demande est conforme au contrat.

Client Signature du client	Title - Titre	Date (YYYY-MM-DD / AAAA-MM-JJ)

Description	Eradication Planning Chief (Daily rate: $690.00)	Director of Global Affairs (Daily rate: $1,000.00)	Project Coordinator (Daily rate: $500.00)	Bait Station Marksmen Unit Leader (Daily rate: $2,847.50)	Subtotal
	# days	# Days	# Days	# Days	
Working on preparations to advance the Sidney Island restoration project including designing and organizing bait trials, assessing requirements of the project from a provincial and federal environmental impact assessment perspective, developing a rationale and undertaking discussions regarding the benefits/challenges of targeting black-tailed deer during the operation including conversations with provincial biologist Sean Pendergast regarding the legality of doing this (Parks Canada Agency does not wish to pursue this), responding to Sallas Council questions about impacts to roads during the operation, addressing safety concerns for hunting near buildings and structures, and providing preliminary thoughts on processing deer meat for distribution.	2.50	0.00	0.25	0.00	$1,850.00
					$1,850.00

Gulf Island Contract - Total Invoice amounts vs holdback

Year	Month	Total Invoice (NO TAX)	10% holdback on SUBTOTAL
2018	March	$2,528.98	$252.90
	April	$6,543.88	$654.39
	May	$17,750.38	$1,779.90
	June	$8,455.00	$845.50
	July	$11,132.73	$1,113.27
	August	$28,263.95	$2,826.40
	September	$51,175.42	$5,117.54
	October	$12,781.25	$1,278.13
	November	$1,850.00	$185.00
	December		$0.00
2018	January		$0.00
	February		$0.00
	March		$0.00
	TOTAL	**$140,481.59**	**$14,053.02**

Fur to Forest Finance Snapshot

Last Update: March 18,

Goods and Services

Current Expenditures	220,833	
Pending Expenditures		
Misc	0	
Total	0	

Current Commitments

	committed	**forecasted actual expense**
Coastal Conservation	52,683	0
Coastal Conservaition ammendme	66,240	0
HLRS	24,722	19,778
Saanich Native Heritage Society	2,730	2,730
WLC	23,000	0
Bang the Table	4,000	4,000
	173,375	26,508
	Difference:	146,867

Budget	364,825
Expended	220,833
Pending spending	0
Committed (Actual)	26,508
Total	247,341
Variance	117,484

Salary and Wages

Budget	93,000	
Total Forecasted	102,065	
Additional Forecasted (EDP?)	2,000	
Difference	-11,065	
Salary and Wages Transfer Costs	8,175	*20% of transfer costs
Forecasted	2,213	
Total Forcasted	114,453	

Total Forecasted Expenses	361,794

Budget (2018/2019)	474,800	*We re-profiled $130,000
Balance	113,006	

2019

to move into 2019/2020 budget)

Mcpherson, Michèle (PC)

From: Gregg Howald <gregg.howald@islandconservation.org>
Sent: Wednesday, February 13, 2019 9:53 AM
To: Davies, Helen (PC); Morash, Marcia (PC)
Subject: Thank you

Dear Helen and Marcia,

Thank you for making time today to discuss the island restoration agenda in general and the specifics of community engagement with regard to Sidney.

The values you expressed in regard to community engagement are very much how Island Conservation and Coastal Conservation approaches these projects – we were very supportive of the establishment of a Steering Committee to provide a platform to discuss the issues and learn/understand from each other. We would be doing both the community and ourselves a disservice if we don't build in the appropriate time and effort to engage, and to uncover and take into consideration the communities values and desires. It is important that we build the process so that we consider and incorporate the input from the community into the project, and do it genuinely as a partner.

The challenge for this project (and any project) is how do we build in the necessary elements of important community considerations into the project, in a way that maintains the integrity of the principles of an eradication with a reasonable/high chance of success, given all the other constraints overlaid (time bound, financing, permitting, etc.)? Some values can be incorporated seamlessly, others may require some adjustment and tradeoff (such as longer to completion), some will maybe make it more efficient, and other values may result in failure of the project. Keeping an eye on those tradeoffs and opportunities will be critical. These challenges are universal no matter where a project is implemented.

To your point about considering taking "no action" if the community values are not aligned – we refer to that strategy as "going for the no" – meaning that we work through the project in a process of discovery and if we can't reconcile elements of a project needed to be addressed, we don't move forward. The benefits of island restoration and invasive species removal is that the outcome of the project, the ecological change we are striving for, almost everybody agrees with.

Thank you again for the time today, it was very helpful for me to here this and have a discussion. This helps me calibrate how much to engage and best support the dialogue moving forward. I look forward to an opportunity to meet you again in the coming weeks at the next Steering Committee.

Perhaps we will overlap at the NA Trilateral Meeting held in Victoria. The Trilateral Island Initiative colleagues have expressed an interest in visiting Sidney to see and understand the issues more, and discuss some perspectives that may help with the program, and learn from the project to take home into their projects and programs.

Looking forward to talking further.

Gregg Howald
Director, Global and External Affairs
Island Conservation
p. 250.859.4534

Davies, Helen (PC)

Subject: Notes to File_Feb. 12, 2019

Time: 1pm
Participants: Marcia, Helen, Gregg

- Gregg works for Island Conservation that is headquartered in California. Focussed on preventing extinctions by doing conservation on Islands. Started Island Conservation in the early 90s. Evolved in to an autonomous organization, based in Encinada. Helped build their rat eradication program. Maintain cooperation/collaboration at local agreement and through the North American Trilateral Agreement work with Mexican group. Came out of NAFTA and is hosted by Canadian Wildlife Service. Work to align conservation work. Next meeting will be hosted in Victoria in April to set priorities for the coming year. Work done on monarch butterfly, migratory birds, marine environment. Often bilateral work, for example on wolves & condors.
- Cooperation on continental scale there was a letter signed by Parks Canada.
- Secured funding for Haida Gwaii to the rat eradication project (Foundation funding went directly to Parks Canada; oil rehabilitation funding went through Island Conservation)
- Based in BC and interested in helping advance conservation agenda in BC.
- Working with GINPR in Sidney on CoRe project.
- How does Parks Canada fit in to the broader region? Sphere of influence fit in to the broader region. How lever, cross-boundary opportunities. Fallow-deer free Salish Sea Strategy.
- Model of engagement; Sidney example is complicated and the difficulty to advance projects. Expectation of Parks Canada?
- How advance the dialogue with FNs? Indigenous communities may have expectation that they can use "typical hunting strategies".
- Island Conservation on the Steering Committee, providing advice.
- Was looking for clarification about how to work with Indigenous partners and what Parks Canada's expectations are. Concerns about eradication process.

From: Gregg Howald [mailto:gregg.howald@islandconservation.org]
Sent: January-14-19 1:45 PM
To: Davies, Helen (PC) <helen.davies@canada.ca>; Morash, Marcia (PC) <marcia.morash@canada.ca>
Subject: Islands and Restoration and Visit

Dear Helen and Marcia,

This coming Wednesday, I will be joining the Sidney Island Steering committee and am hoping to have the opportunity to introduce myself and say hello. The few times this past season when I was through the office, we were unfortunately unable to connect.

I have had the privilege to engage with the government of Canada in my capacity as the Director of Global Affairs (and previously NA Regional Director) for Island Conservation – a global NGO focused on preventing extinctions by removing invasive species from islands. I have worked with both PCA and CWS through the North America Trilateral and the UN arenas, and working directly with your folks on historical and more recent projects in Haida Gwaii, in particular Gwaii Haanas and now Sidney. Your leadership on the west coast with invasive species issues on islands has drawn considerable global awareness and attention, and would be grateful to have an opportunity to meet you. I am a co-founder and advisor for Coastal Conservation, the organization working with you on the ground, and I suspect you know our colleagues at our sister organization (GECI) in Mexico that I believe had an exchange with you recently (both in Canada and Mexico).

As you are likely aware, the NA Trilateral is upcoming in Victoria this spring, and being proximate to the islands, an interesting opportunity is emerging to share Canada's contribution to the NA Trilateral Island Initiative (link connected) with regard to the Sidney Island project. Perhaps a site visit on one of the field trip days?

Please do let me know if this is possible to meet, if only for a brief few minutes. You will likely be busy with your Ottawa based staff that are coming through the office Wednesday, but I would be honored for an opportunity to say hello regardless.

Sincerely,

Gregg Howald
Director, Global and External Affairs
Island Conservation
P: 250-859-4534

Sidney Fallow Deer Project

Outstanding deliverables	Allocated $	Estimated balance as of March 31
Eradication Operational Plan	$61 028	$61 028
Partnering agreements, letters of support	$8 450	*-$2 050*
Permitting: Determine Requirements	$3 475	$690
Co-develop Landowner Proposal Document	$8 020	$0
Landowner Proposal revision	$2 570	$1 255
Communications documents for SI Landowners (2)	$5 950	$5 950
Stakeholder communications (e.g. phone calls, emails etc.)	$8 450	$8 450
Determine EIA requirements	$1 880	*-$1 875*
Bait Preference Trial	$8 800	$3 926
Guide Development of Stakeholder Engagement Strategy	$5 070	$5 070
Steering Committee meetings (3)	$15 500	$11 139
Proposal feedback workshop (1)	$10 000	$10 000
Developing detailed implementation budget	$0	*-$2 760*
General preparations to advance the project	$0	*-$8 830*
	Total	**$123 023**
	Amount remaining in contract as of Feb 1, 2019	**$107 809**
	Estimated Balance	-$15 214,24

Chris' Comments
Not started yet - consider removing this from deliverables and using these funds for other project activities.
Gregg estimates 7 days of time between Feb and March 31, hence the deficit here.
Completed
Completed
Invoiced for one day of my time and 1 of in December to address Laura's edits. But we will need to revisit this if Mike needs support for the recommended revisions to address FN's concerns.
Not invoiced yet
Not invoiced yet
Deficit is an estimate based on any revisions needed for the EIA project description or other relative EIA activities.
Need to coordinate analysis of data once it gets underway but that should only take approximately one day of my time so most of this is a surplus that could address the abovementioned deficits.
Not invoiced yet
Invoiced for one steering committee meeting in January. The allocated $ is Mike's original estimate and appears to also include personnel time.
Not invoiced yet. Probably not likely to occur prior to March 31.
Nothing allocated for this activity in original contract.
Estimated time for Gregg and Chris to March 31. Nothing allocated for this activity in original contract.

cells above)

s.19(1)

Mcpherson, Michèle (PC)

From: Janssen2, Michael (PC)
Sent: Wednesday, June 12, 2019 8:24 AM
To: Augustine, Skye (PC)
Subject: RE: Hunting Working Group contract 2019-20

Thank you Skye,
What's your new cell #?
I'll send you a meeting invite for Friday morning. Say hi to the fishies for me!
Mike

Michael Janssen, MSc, PMP, RPBio
Project Coordinator | Coordinatrice de projet
Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6
michael.janssen2@canada.ca (**please note new e-mail address**)
Telephone | Téléphone (250) 654-4015
www.parkscanada.gc.ca | www.parcscanada.gc.ca
Government of Canada | Gouvernement du Canada

Parks Canada - 450 000 km2 of memories / Parcs Canada - 450 000 km2 de souvenirs

From: Augustine, Skye (PC)
Sent: June-12-19 7:45 AM
To: Janssen2, Michael (PC)
Subject: Re: Hunting Working Group contract 2019-20

Mike – my reply yesterday morning didn't send until last night (still figuring out my new phone). Anyway – happy to chat briefly this morning or on the phone at mid-day (during my surface interval) if you have time.

Skye

Sent from my Bell Samsung device over Canada's largest network.

-------- Original message --------
From: "Janssen2, Michael (PC)" <michael.janssen2@canada.ca>
Date: 2019-06-11 10:03 AM (GMT-08:00)
To: "Augustine, Skye (PC)" <skye.augustine@canada.ca>
Subject: FW: Hunting Working Group contract 2019-20

Hi Skye,
Are you around this week? I was wondering if we might be able to chat about ways forward with the Hul'q'umi'num nations. I also wanted to get your interpretation of the email below and how best to proceed. If you around and have some time, I can shoot you a meeting invite ☺

Have a wonderful day!
Mike

Michael Janssen, MSc, PMP, RPBio
Project Coordinator | Coordinatrice de projet
Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6
michael.janssen2@canada.ca **(please note new e-mail address)**
Telephone | Téléphone (250) 654-4015
www.parkscanada.gc.ca | www.parcscanada.gc.ca
Government of Canada | Gouvernement du Canada

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From:
Sent: June-05-19 2:12 PM
To: Janssen2, Michael (PC); Cardinal, Nathan (PC); Zakaluzny, Jay (PC)
Cc: Morash, Marcia (PC)
Subject: Hunting Working Group contract 2019-20

Hi Mike,

Since we have a bit more time, I'd like to make sure we get this contract right.

1st. HLRS is not able to resolve Consultation matters between Parks Canada and our Nations. Our nations have NOT identified who would be best to participate in the Steering Committee and they were not asked to as HLRS, nor I can address Crown-to-Nation consultative matters. Penelakut Tribe agreed to send Ken Thomas, Cowichan agreed to send Gary Drouillard. If we ask Stz'uminus, Halalt, Lyackson and Lake Cowichan, they will each identify their preferred participants, for a total of 6 participants from the Hul'q'umi'num' at the Steering Committee. HLRS nor I are in a position to consult with our Nations for the Crown to identify otherwise. These two individuals expressed an interest in participating in the Steering Committee and they asked/and received their nations for support to do so.

2nd. While HLRS can facilitate the participation of 2 Hul'q'umi'num' Mustimuhw in the participation of the Steering Committee, we CANNOT REQUIRE that they attend any specific number of meetings.

s.13(1)(e)
s.19(1)

I'd prefer the budget to be set out in simpler terms:
- Honoraria $xx
- Food $xx
- Travel $xx
- Gifts $xx
- Coordinator $xx
- Supplies $xx
- Administration $xx

This is how the clam garden budget is set out, it simplifies reporting and reduces duplication in budget and expenditure reporting.

s.13(1)(e)

s.19(1)

From: Michielssen, Suzan (PC)
To: Janssen2, Michael (PC)
Subject: Re: CRT Other Funds Report - February 2019
Date: March-07-19 11:35:29 AM

Good morning Mike,

Below is a table of the budget items posted to the Fur to Forest - 20039144 project

G&S

$309,900 - Received from National Office
224,000 - Received from National Office
(127,900) - RPA adjustment funds returned to National Office
(6,600) - transfer pricing for $33k tsf to SWE(
(33,000) - Transfer to SWE
$366,400 Total G&S Budget

SWE

$60,000 - Initial Budget allocation
$33,000 - transfer from G&S
$93,000 Total SWE Budget

I hope this helps. If you have any questions please don't hesitate to ask.

I am in the office until 11:30 tomorrow. Otherwise I can be reached by either email of phone at 250 464-0687 (local number).

Sue

From: Janssen2, Michael (PC)
Sent: March 5, 2019 3:54 PM
To: Michielssen, Suzan (PC)
Subject: RE: CRT Other Funds Report - February 2019

Thank you Sue,
Thank you also for your time and patience in explaining my budget to me ☺
If you do have time to email me how much money I actually received this year vs what was lost due to transferring, I will file that so I have that on record, so that when I go to sort out finances at a later date and rediscover a discrepancy between the RPA and actual funds received, I will also find that description ☺
Thanks!!

Mike

Michael Janssen, MSc, PMP, RPBio
Project Coordinator | Coordinatrice de projet
Gulf Islands National Park Reserve | Réserve de parc national des îles-Gulf
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6
michael.janssen2@canada.ca (**please note new e-mail address**)
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Government of Canada | Gouvernement du Canada

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From: Michielssen, Suzan (PC)
Sent: March-05-19 2:12 PM
To: Morash, Marcia (PC); Zakaluzny, Jay (PC); Helms, Sibylla (PC); Banovich, Melissa (PC); Noel, Nancy (PC); Goggin, Geneviève (PC); Reader, Brian (PC); Holmes, Michelle (PC); Egan, Adam (PC); Hanson, Christa (PC); Augustine, Skye (PC); Pelletier, Aimee (PC); Janssen2, Michael (PC); Fisk, Nathan (PC); Osolo, Sacha (PC)
Subject: CRT Other Funds Report - February 2019

Good afternoon everyone,

Please find attached the February Other Funds CRT report for your review and comments.

If you notice that I have missed anyone kindly let me know, so I can include them next time.

Thank you,
Sue

Parks Canada Parcs Canada

PROTECTED WHEN COMPLETED

CONTRACT AMENDMENT REQUEST

Project Manager: Michael Janssen

Agreement/ SOA Number: n/a

Contract Number: 5P420-17-5313

Contractor Name: Coastal Conservation Inc.

Project Title: Restoring Forest Health Through Removal of Invasive Fallow Deer From Sidney Island, BC

1. Work (brief description): Provide scientific and technical advice to Parks Canada Agency to explore a range of suitable, evidence-based eradication methods and to develop a detailed plan for operations to eradicate fallow deer ("Eradication Operation Plan")

2. Original Value of Agreement: $ 195,859.53

3. Value of Previous Amendments: $ 66,240.00

4. Value of Current Amendment: ☐ Increase ☐ Decrease ▸ $ Click here to enter text. *OR* ☒ No change

4. Extend the Expiry Date from: 2019-09-30 **to:** 2020-05-31 *OR* ☐ No change

5. Revised Statement of Work: ☐ Yes (attached or below) ☒ No

Click here to enter text.

If the original scope is changing, a revised statement of work should be provided.

6. Justifications of Amendment:

As this project has evolved, the need for collaborative development of the project has become evident. As such, the level of consultation and engagement with various rights-holders has expanded beyond what was initially anticipated. This amendment is an extension only with no change in value, while the current Statement of Work is reassessed to better reflect the timelines and necessary deliverables moving forward.

Financial Coding: 1240-53470-2365-2103-20039144-22264

Approved (signature): _____ **Date:** 10 Sept 2019 Click here to enter a date.

Pursuant to Section 32 (1) of the *Financial Administration Act* that funds are available

Mcpherson, Michèle (PC)

From: Janssen, Michael (PC)
Sent: Wednesday, October 23, 2019 8:25 AM
To: Cardinal, Nathan (PC); Keith Erickson
Subject: RE: deer cull and insurance

Hi Keith,
My initial thoughts are that your best bet is probably to call an insurance lawyer. As an ecologist I hesitate to suggest anything even closely related to legal matters to others. That said, I'll be in the office on Friday if you would like to give me a call. 250 654 4015.
My very best,
Mike Janssen

Michael Janssen, MSc, PMP, RPBio
Project Coordinator | Coordinateur de projet
Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6
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From: Cardinal, Nathan (PC) <nathan.cardinal@canada.ca>
Sent: Tuesday, October 22, 2019 1:50 PM
To: Keith Erickson <conservation@galianoconservancy.ca>
Cc: Janssen, Michael (PC) <michael.janssen@canada.ca>
Subject: RE: deer cull and insurance

Hi Keith,

Best of luck with your cull.
I have cc'd Mike Janssen who is the project manager for our current forest restoration project at GINPR, which involves deer management actions as a central component. Mike has been work quite closely with landowners on Sidney who have raised similar concerns. I believe Mike has done some initial investigations into the issue but I don't believe it's something that we have totally run to ground yet. Mike may be able to provide some info and/or refer you to a few other colleagues that we work with as well.

I'm not sure how it may work for the Conservancy, but Parks Canada essentially self insures its work – are simplistic understanding is that we would pay for any damages that would occur (either via the contractor or directly from Parks Canada) as a result of hunting, but I'm not sure if we fully sorted out how the act of allowing hunting may/may not impact people's insurance rates, premiums, etc.

Mike's away until the 24th, so he may not be able to respond for a few days yet.

Cheers,
Nathan

From: Keith Erickson <conservation@galianoconservancy.ca>
Sent: Tuesday, October 22, 2019 1:42 PM
To: Cardinal, Nathan (PC) <nathan.cardinal@canada.ca>
Subject: deer cull and insurance

Hi Nathan,

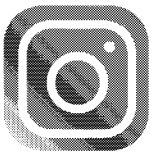
I understand that you are managing the deer cull and hunting projects for PC in the GINPR. The Galiano Conservancy is beginning a discussion of allowing hunting on some of our fee simple conservation lands and the inevitable subject of insurance is on the table. Do you know of and would it be possible to share some of the insurance implications that PC has encountered for such activities?

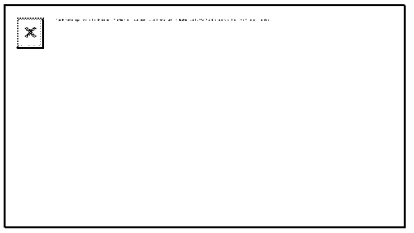
Cheers,
Keith

Keith Erickson
Executive Director
Galiano Conservancy Association
2540 Sturdies Bay Road, Galiano Island, BC, V0N 1P0
250.539.2424

PS: Did you know the Galiano Conservancy is celebrating its 30th Birthday in 2019? Let's celebrate!

The Galiano Conservancy's work for our community is made possible by people like you. Please consider making a gift for nature today! Gifts can be in memory or on behalf of a loved one.





Date: December 10, 2019

To: Sallas Forest Strata Council

Re: **RESTORING A PRECIOUS ECOSYSTEM:**
The value to Sidney Island of removing invasive deer

Sharing an island, sharing a vision

Parks shares our deep commitment, as asserted in our community plan, to ecosystem recovery. They want to work together to achieve it, perhaps an unbalanced working relationship in that Parks contributes so much money, but we retain our property rights, gain a restored biodiverse ecosystem, and lose only the invasive deer we have struggled to control. The restoration budget that includes eradication will be used to help us remove invasive plants, notably hawthorn and broom. So Parks is not manipulating us: we have worked for decades to remove invasive deer. We are lucky to be of one mind with our neighbour on ecological restoration, and doubly lucky that Parks has the resources to achieve what we both seek.

The first step in restoration

Ecological restoration is the work of facilitating a functioning ecosystem following degradation. In every case, the first concern is to remove the source of the degradation. Although restoration is patterned on the historic conditions prior to degradation, the discipline of ecological restoration recognizes that some disruptions (such as human infrastructure, naturalized exotic species, and climate change) cannot be reversed or removed. Invasive deer, however, can be removed.

Guardians of the environment support eradication

Islands Trust, the BC Wildlife Branch, and Parks Canada all see the sad contrast between Sidney's ecosystem and rest of the archipelago. They are promoting eradication because invasive fallow deer are uncannily well adapted to degrade our ecosystem. Invasive deer have the ability to digest a vast range of seedlings, leaves and needles, shrubs, flowers, sedges, and grasses. Invasive deer reproduce at a high and constant rate, simply extending their diet to include more and more plant species as their abundance increases. This makes them peculiarly prone to hyper-abundance, a fact that has proven devastating to native ecosystems: if you are new to Sidney Island, ask anyone who was here before 2008.

Invasive deer and social harmony

Freshwater ponds were created in the 1960s and 70s and liberated the invasive deer population, previously suppressed by summer drought. Since then, great expense in money and volunteer time have been required to defeat hyper-abundance. This has never really succeeded: invasive deer abundance has proven to be a relentless force. Even so, measures that make the difference (captures and subsidized culls) have been vigorously opposed at various times by a minority of owners, as eradication is today. This has been divisive. If we preserve invasive deer for some reason, we sentence ourselves to continued deer management. The very intense volunteer effort after 2008 cannot be readily repeated, so we face high costs in money as well as volunteer hours. And, predictably, we face more vigorous opposition and more divisiveness.

Removing invasives, keeping natives

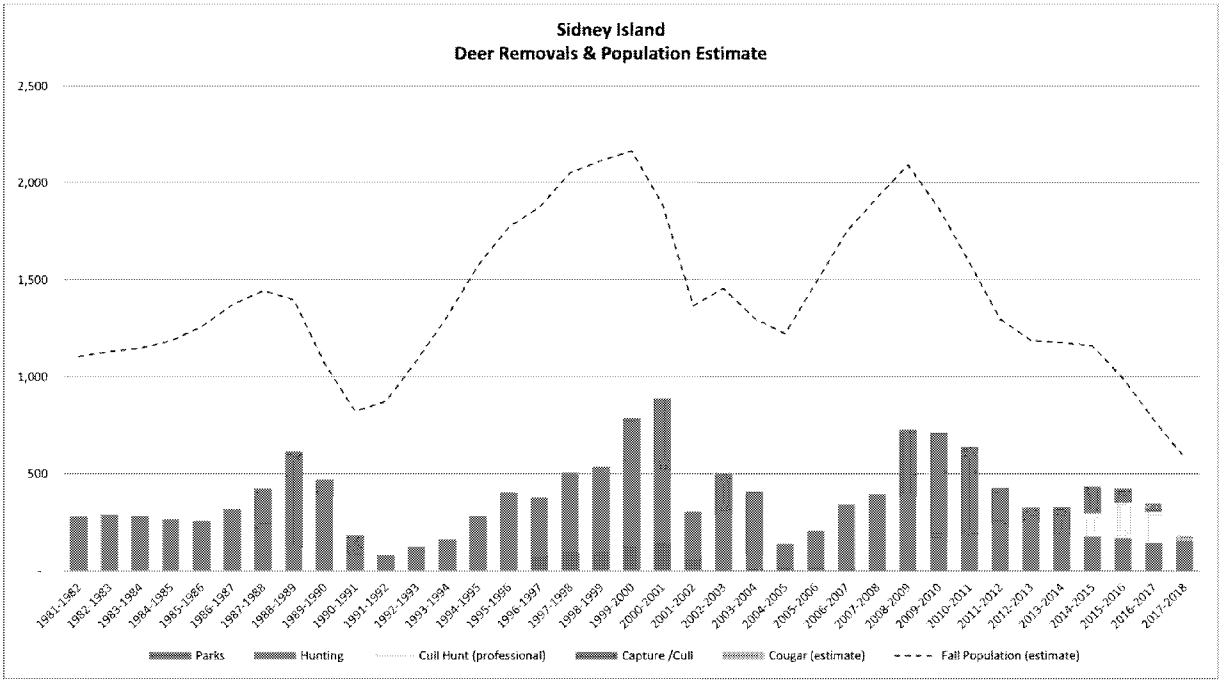
Native deer co-evolved with our ecosystem, and they are protected by BC Environment's Wildlife Branch regulations. By contrast, invasive deer are treated as virtual pests by the Wildlife Branch: we are free to remove any number at any time. We have only so much ability to control deer, and we should use it in the most efficacious way. There is an opportunity to simply remove all the invasive deer at minimal cost to us. We can take this one-time opportunity and then focus hunting efforts on removing any over-abundant population of native deer. The Wildlife Branch has already significantly relaxed black tail hunting regulations on Sidney and James Islands, which supports this approach.

Ungulate population growth

Some owners predict a hyper-abundant population of native deer after removing the invasive deer. Here are three reasons to feel this is manageable threat. 1) We have a sustainable hunting program on Sidney Island that can be directed at native deer. 2) The solitary, territorial native deer do not tend to hyper-abundance as do herds of invasive deer. 3) Native deer have more selective diets and may slow their reproduction when their chosen fodder is in short supply. In addition: consider how futile it would be to sustain a population of invasive deer large enough to degrade the ecosystem in order to suppress native deer. Makes no sense.

How we have managed invasive deer

The alternative to eradication is continuing management of invasive deer. We are lucky to have detailed records on over 35 years of this activity. This graph shows invasive deer population and removals over the decades. It plainly shows that recreational hunting has been a necessary but



C:\Users\Vic\Documents\Sidney Island\Ecological Stewardship\Deer Management\
Deer Population Model (Ken's) Apr 2018a Charts

2018-05-08 5:01 PM

insufficient tool in deer management. Recreational hunting has been uninterrupted over the decades, but we have been intermittent in other methods of deer removal. Clearly, when we leave it to hunting alone, invasive deer populations respond by increasing rapidly. Of course we could find ways to increase hunting pressure on the invasive deer population: more days of hunting, fewer restrictions on hunt boundaries, more subsidized cull hunts. But will an increasingly residential island (we've gone from less than 10 homes at the time of subdivision to over 50 today) welcome a lot more hunting?

Recovery so far

Aggressive volunteer captures and subsidized cull hunts supplemented recreational hunting in the years 2008 to 2015, and the results are easy to see. There is a lot more biomass, especially grasses, across the island. It's a greener place. The browse line has softened. But recovery of species is only beginning. Many shrubs, flowers and small trees that have been essentially extirpated are still missing on Sidney Island, and so is the wildlife that they should support. Our species diversity has been heavily damaged and has not significantly recovered. There are almost no young specimens of deciduous trees. The plants most tasty to deer have the hardest time coming back: it takes many deer to extirpate an established species, but only a few to destroy the first few recruits that would re-establish the species. And the many shrubs that are missing from the island would improve water retention and raise our water table, important concerns as climate change progresses.

The best is yet to come

It may seem that the debate over eradication is all about a few flowers. But no. It is about a million flowers, and about innumerable shrubs and berries and flowering native trees like dogwood and ocean spray. It is about keeping deciduous trees—maple, alder, cherry, Garry oak, arbutus—that are dying out because they cannot recruit. It is about the habitat and food sources that support songbirds and pollinators. It is about a level of species diversity simply unknown to Sidney Island in recent decades. You don't miss what you don't know. Eradication is a first step in the restoration of a precious ecosystem that you will gift to your children and grandchildren.

In supporting these arguments in favour of eradication, the undersigned acknowledge that some owners cherish the opportunity to hunt and consume fallow deer. Eradication is a loss to them, and we recognize that.

Fur to Forest Finance Snapshot

Last Update: March 18,

Goods and Services

Current Expenditures	208,497				
Pending Expenditures					
Misc	0				
				PM03	61558/12*
Total	0				
Current Commitments					
	committed	**forecasted actual expense**			
Bea	13,924	10,342			0.27
SilverCore 1	7,646	7,646			
SilverCore 2	873	0			
WLC	11,490	0			
Paquachin	9,570	9,570	emailed March 20		
WLC 2	25,000	25,000	emailed March 20		
	3,243	1,000	emailed March 20		
HLRS	24,782	12,000			
Coastal Conservation	5,667	1,000			
	102,195	0			
	Difference:	102,195			
Budget	275,818				
Expended	208,497				
Pending spending	0				
Committed (Actual)	0			s.19(1)	
Total	208,497				
Variance	67,321				

Salary and Wages

Budget	169,750		**Initial Sala**
Total Forecasted	169,091		**EBP remov**
			Additional
			Additional
			Total Salar
			Total EBP
Salary and Wages Transfer Costs	5,333	*27% of transfer costs	
Forecasted			
Total Forcasted	174,424		

Total Forecasted Expenses	382,921	491,400	1287100
		108,479	1246600
Budget (2019/2020)	445,568		40500
			423,421
Balance	62,647	-45,832	863,679

*We re-profiled $130,000

2019

10259.67
10259.67

#REF!
#REF!

#REF!

ry budget	149,998.00
ed	40,499.46
Salary	19,752.00
EBP Remo	5,333.00
y	169,750.00
	45,832.46

140909.17 Salary
28,182 EBP

Check
MRT budget - finance budget = initial EBP removed
45832

33000

5,333 Transfer costs
174424

I to move into 2019/2020 budget)

Fur to Forest Finance Snapshot

Goods and Services

Current Expenditures (total)		74,188	
Goods and services (actuals)		64,183	
Contribution Agreements (actuals)		10,005	
Pending Expenditures	Expected expenditures		
WLC Contribution Agreement		19,000	Via GINPR CA, need to JV
Pauquachin Contribution Agreement		0	paid 10005 already
Coastal Conservation		35,572	calculation to the right
Beatrice Frank		16,671	calculation to the right
Judith Cullington		22,000	draft fallow and BTD, veg plans
UBC BTD Contract		28,350	
HLRS Contract		19,000	25,000
Sallas Contribution Agreement		15,000	solicit invoice to get this money o
staff training		3,340	CCT training expense remaining
online software subscriptions		1,000	
computers		1,400	1 new comp (GT04 backfill)
uniforms		1,000	sarah
water taxi		4,000	for hunters.
Youth Hunter Training		4,500	if we pay for 1 course
exclosure materials		9,600	8 exclosures, 1200 each
Hawthorn treatment		5,000	pesticide if needed.
camera grid		0	buy if need to.
exclosure plants		0	unlikely exclusres will be ready
Fuel and boat maintenance		3,000	Shahina will JV to F2F
Total Pending		188,433	

G&S Budget	257,000	Note: this is amount requested in
G&S Expended	74,188	
G&S Pending spending	188,433	
G&S Total Forecasted Spending	262,621	
G&S Variance	-5,621	Note: want to be overspent by 5%

Salary and Wages

Budget	298,300	*Money allocated to salary by FU
Mike PM04	36,505	55,757 - 3.3 months @ (70013/12
Ben PM 04	18,549	67449/12 = 5621/month
Becky PM04	11,242	67449/12 = 5621/month x 2 mont
Becky EG04	41,040	61560/12= 5130/mnth * 8 month
Chris EG04	24,650	59154/12= 4930/month x 5 mont

TBD Becky Backfill EG04	9,860	59154/12 = 4930/month x 2 mont
Ben GT04	45,675	63002/12 = 5250/mnth x 8.7 mnt
TBD GT04 backfill	13,071	62741/12=5228 x 2.5 mnths = 13(
Kyle EG03	10,664	58165/12 = 4847 x 2.2 months
Stephanie PM03	62,179	
Sarah EG 01	9,234	44446/52 = 855 *0.6 = 513. $513/
Total Forecast Salary	282,669	
Salary and Wages Transfer Costs	0	*27% of transfer amount
Forecasted tansfer required	-15,631	if negative number, then no trans
Total Forcasted	282,669	
Employee Benefit Plan Taken off	80,541	*Taken off when money goes fror
Total Forecasted Expenses	625,831	
Budget (2020/21)	654,500	* in 1636.07 RPA
Balance	28,669	

Last Update: Dec 18, 2020

21750

Sept/Oct/nov/dec average = $7250/mnth $7250.month x 4 months (Dec, Jan,Feb, March) = 21,750
Sept/oct/nov average = $5335/4 = 1334/month $1334/month x 4 months (Dec, Jan, Feb, March = $5336.
invoices by deliverable - see contract

guess. $25k available. based on WLC estimate
ut the door.

RPA submitted in Oct. Not approved yet as of Dec, but likely will be and then budget will change to this am

; at year end. Do NOT want to be underspent.

: = 5834/mnth) (leave) = 36505. note, 2 months in RCM + 3.3 off, so only half of annual salary this year.
5621*3.3=18549
ths =
s = 41040 Note: 2 months in PM04,
hs =

s.19(1)

ths =9860
hs = 45675
071

/wk x 18 wks = 9234

Check
MRT budget - finance budget = init
45832

fer required.

n G&S to S&W

+ 8 extra days of Chris' time (8x$750/day = $6000) = 27750, + 7822 for Nov invoice =
+ major ramp up of recorded sessions = $6k???. Total pending = 5335+5336+6000 =

ıount

ial EBP removed

Mcpherson, Michèle (PC)

From: Janssen, Michael (PC)
Sent: February 4, 2020 1:37 PM
To: Judson, Laura (PC); Cardinal, Nathan (PC)
Subject: FW: Reaching out to Elizabeth May

Hi Laura and Nathan,
If arranges a meeting with Elizabeth May regarding this project, is that an opportunity that I should pass up, or ask if I can attend? The purpose being to make her aware of the project in advance of the MOU vote.
Thanks,
Mike

Michael Janssen, MSc, PMP, RPBio
Project Coordinator | Coordinateur de projet
Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6
michael.janssen@canada.ca (**please note new e-mail address**)
Telephone | Téléphone (250) 654-4015
www.parkscanada.gc.ca | www.parcscanada.gc.ca
Government of Canada | Gouvernement du Canada

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From:
Sent: Tuesday, February 4, 2020 1:12 PM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>
Cc: Geraldine Van Gyn <gvangyn@uvic.ca>; Erin Shaw <erin@erinshawfamilylaw.ca>
Subject: Re: Reaching out to Elizabeth May

Hi all,

So I spoke with yesterday, he can get us a meeting scheduled with Elizabeth May. He recommended that a formal meeting would be best since we are in her constituency and could coordinate to include all the stakeholders. I mentioned that Parks wanted to have it be more official due to the political element and he said yes that makes sense but that's what he can help with to get it on her schedule/priority. He did say a meeting would be better than a letter.

When are we aiming for?
Thanks, s.19(1)

On Wed, Jan 29, 2020 at 2:28 PM Janssen, Michael (PC) <michael.janssen@canada.ca> wrote:

Hi

That's an interesting angle! From Park's perspective we would want to reach out to her more officially, because of the political element. If felt it was appropriate to reach out to her in that way, I would leave it to you and Geri and Erin if that approach is preferred for Sidney Islanders, over writing a letter ☺

My very best,

Mike

s.19(1)

Michael Janssen, MSc, PMP, RPBio

Project Coordinator | Coordinateur de projet

Gulf Islands National Park Reserve | Réserve de parc national des îles-Gulf

Parks Canada | Parcs Canada

2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6

michael.janssen@canada.ca (**please note new e-mail address**)

Telephone | Téléphone (250) 654-4015

www.parkscanada.gc.ca | www.parcscanada.gc.ca

Government of Canada | Gouvernement du Canada

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From:
Sent: Tuesday, January 28, 2020 3:58 PM
To: Geraldine Van Gyn <gvangyn@uvic.ca>
Cc: Janssen, Michael (PC) <michael.janssen@canada.ca>; Erin Shaw <erin@erinshawfamilylaw.ca>
Subject: Re: Reaching out to Elizabeth May

Oddly enough my and currently building on the island is a very good and Elizabeth May's. So she may of already heard about some of this through that avenue but we could ask for a warm introduction that way if it makes sense/is appropriate. He is not super well informed about the project or island history relative to deer as he's busy with the building phase at his place.

On Tue, Jan 28, 2020 at 2:53 PM Geraldine Van Gyn <gvangyn@uvic.ca> wrote:

Yes, Michael I would be glad to help with drafting such a paper.

Geri

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: Tuesday, January 28, 2020 2:44 PM
To: Erin Shaw; Geraldine Van Gyn
Cc: Gregg Howald; Judson, Laura (PC)
Subject: Reaching out to Elizabeth May

s.19(1)

Good afternoon Erin, and Geri,

When the MOU goes out to Sidney Islanders there is a chance that it will go public. If it does, we want a few key stakeholders to have already heard about the project. One of the key ones for the project being Elizabeth May.

Parks can reach out to her independently, but it would be better if we had a letter from Sidney Islanders (or a representative), to go with a letter from WSANEC Leadership Council and a letter from PCA, outlining the project, engagement with the community to date, and future directions.

As steering committee reps, would you be willing to spearhead/draft a letter or run this proposal past council?

If you would like me to take on some of that, I would be more than happy to.

Thank you and have a wonderful day!
Mike

Michael Janssen, MSc, PMP, RPBio

Project Coordinator | Coordinateur de projet

Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf

Parks Canada | Parcs Canada

2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6

michael.janssen@canada.ca (**please note new e-mail address**)

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Restoration Activities

year	thing	amnt	
Fenced shrub enclosures			
2020-21	materials	9600	8 exclosures on park side 1200 each
2020-21	plants	3200	8 exlosures on park side $400 each
2021-22	materials	9600	8 exlosures on sallas side 1200 each
2021-22	plants	3200	8 exlosures on sallas side $400 each
Camera Array			
2021-22	camera gri	45000	incl equipment, data analysis, reporting
2022-23	camera gri	25000	data analysis and reporting
2023-24	camera gri	25000	data analysis and reporting
Eradication ops			
2021-22	initial ops	$150,000	based on nothing, rough guess
2022-23	full erad	$948,300	no idea. Needs revision based on techniques chosen.
Hawthorn management			
2020-21	basal bark	5000	
2021-22	hawthorn i	22000	
2022-23	hawthorn i	22000	
Tree seedlings/ sentinel plants			
2021-22	seeds/tree	5000	
2022-23	seeds/tree	5000	
BTD management			
incorporated in FN engagement			

Parks Canada / Parcs Canada

Purchasing Office – Bureau des achats

Parks Canada Agency
National Contracting Services
Suite 720, 220 – 4th Avenue S.E.
Calgary, AB T2G 4X3

CONTRACT AMENDMENT

MODIFICATION AU CONTRAT

The referenced document is hereby amended: unless otherwise indicated, all other terms and conditions of the contract remain the same.

Ce document est par la présente modifie: sauf indication contraire, les modalités du contrat demeurent les mêmes.

The Vendor/Firm hereby accepts/acknowledges this amendment.
Le fournisseur/entrepreneur accepte la présente modification/en accuse réception/

Signature

13/03/2020
Date

Name and Title of person authorized to sign on behalf of Contractor.

Nom et titre de la personne autorisée à signer au nom de l'entrepreneur.

Return signed copy forthwith
Prière de retourner une copie dûment signée immédiatement

Vendor/Firm Name and Address
Raison sociale et adresse du fournisseur/de l'entrepreneur

Beatrice Frank

Telephone No. - No de téléphone:

Email - Courriel: frankbea@hotmail.com

Title-Sujet
Fur to Forest Restoration: Collaboratively planning restoration for Sidney Island R, Gulf Islands National Park Reserve – BC

Contract No. - N° du contrat
5P420-19-0237

Client Ref No. – N° de réf du client	Date of Revision - Date de la révis
45422280	March 13, 2020

Amendment No. - N° de la modif.
001

F.O.B. - F.A.B.	GST - TPS	Duty - Droits
Destination	Included	Included

Destination - of Goods, Services and Construction
Destination – des biens, services et construction

See Herein

Invoices – Original and two copies to be sent to
Facteurs – Envoyer l'original et deux copies à

Parks Canada Agency
Gulf Islands National Park Reserve
2220 Harbour Road, Sidney, B.C. V8L 2P6

Attn: Michael Janssen

Address Enquiries to: - Adresser toutes questions à
Adam Tan Adam.tan@canada.ca

Telephone No. – No de téléphone	FAX No. – No. de Télécop
(587) 436 – 5793	(866) 246-6893

Increase / Decrease - Augmentation / Diminution

$ 5,699.15 (applicable tax included)

Revised Est. Cost - Coût rév. estimatif	Currency Type – Genre de d
$ 17,594.50 (applicable tax included)	**CAD**

For the Minister - Pour le Ministre

Digitally signed by adam.tan@apca2.gc.ca
DN: CN=adam.tan@apca2.gc.ca
Reason: I am the author of this document
Location: your signing location here
Date: 2020-03-13 15:22:54
Foxit PhantomPDF Version: 9.7.0

s.19(1)

Canada

AMENDMENT NO. 01: This amendment is to extend the Period of the Contact and expand the scope of work:

A) **Amend Section 6.4.1 Period of the Contract to extend the Period of the Contract;**
B) **Amend Section 6.7 Payment to increase the contract amount and milestone payments;**
C) **Amend Annex "A" – Statement of Work to incorporate the increase the level of engagement, meetings, and workshops; and**
D) **Amend Annex "B" – Basis of Payment to reflect the increase in contract value.**

A) Amend Section 6.4.1 Period of the Contract to extend the Period of the Contract

DELETE: Section 6.4.1 Period of the Contract in its entirety and replace it with the following:

INSERT:

6.4.1 Period of the Contract

The period of the Contract is from date of Contract to **May 31, 2020** inclusive.

B) Amend Section 6.7 Payment to increase the contract amount and milestone payments

DELETE: Section 6.7 Payment in its entirety and replace it with the following:

INSERT:

6.7 Payment

6.7.1 Basis of Payment – Firm Price

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price, as specified in Annex "B" for a cost of **$ 16,756.67.** Customs duties are included and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

6.7.2 Milestone Payments – Not Subject to Holdback

Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Contract and the payment provisions of the Contract if:

a. an accurate and complete claim for payment using PWGSC-TPSGC 1111, Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;

b. all the certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives;

c. all work associated with the milestone and as applicable any deliverable required has been completed and accepted by Canada.

6.7.3 Schedule of Milestones

The schedule of milestones for which payments will be made in accordance with the Contract is as follows:

Milestone No.	Description	Firm Amount	Due Date
01	Initial information gathering meetings with project staff		
02	Information gathering with rights-holders		
03	Written Report and Presentation (As per Annex "A" – Statement of Work Section 3.2.1):		
04	Written recommendations on a way forward (As per Annex "A" – Statement of Work Section 3.2.2):		
05	**Engagement session with Sidney Islanders:**		
06	Conclusion of continuous guidance and engagement processes (As per Annex "A" – Statement of Work Section 3.1):		

6.8 Invoicing Instructions – Progress Payment Claim – Supporting Documentation Required

6.8.1 The Contractor must submit a claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment.

Each claim must show:

s.20(1)(b)

a. all information required on form PWGSC-TPSGC 1111; s.20(1)(c)

b. all applicable information detailed under the section entitled "Invoice Submission" of the general conditions

Each claim must be supported by:

a. a copy of the invoices, receipts, vouchers for all direct expenses, travel and living expenses;

6.8.2 Applicable Taxes must be calculated on the total amount of the claim before the holdback is applied. At the time the holdback is claimed, there will be no Applicable Taxes payable as it was claimed and payable under the previous claims for progress payments.

6.8.3 The Contractor must prepare and certify one original and two (2) copies of the claim on form PWGSC-TPSGC 1111, and forward it to the Project Authority identified under the section entitled "Authorities" of the Contract for appropriate certification after inspection and acceptance of the Work takes place.

The Project Authority will then forward the original and two (2) copies of the claim to the Payment Office for the remaining certification and payment action.

6.8.4 The Contractor must not submit claims until all work identified in the claim is completed.

C) Amend Annex "A" – Statement of Work to incorporate the increase the level of engagement, meetings, and workshops.

DELETE: Annex "A" – Statement of Work in its entirety and replace it with the following:

INSERT:

Annex "A" – STATEMENT OF WORK

1. Objective:

The objective of this Contract is to help guide development and implementation of engagement processes with stakeholders and rights-holders to collaboratively plan forest restoration on Sidney Island. This will include services to help design, plan and facilitate activities that ensure that rights-holders feel heard and have an active role in contributing to restoration planning. The desired outcome is a process that resolves conflict, and fosters collaboration towards shared conservation objectives. An efficient process is desired.

2. Background:

Invasive Fallow deer and hyperabundant Black-tailed deer have caused significant harm to the health of globally significant Garry Oak ecosystems in the Southern Gulf Islands. In alignment with our mandate to preserve Ecological Integrity and protect Species at Risk, Parks Canada is sponsoring a collaborative process to plan and implement a complex ecological restoration project on lands with a diversity of ownership and stewardship. Gulf Islands National Park Reserve is responsible for 18% of this area. Much of the rest is privately owned by approximately 80 landowners that are grouped under the Sallas Forest Strata. Several small conservation areas fall under the stewardship of the Gulf Islands Trust Conservancy. Also, the traditional territory of two groups of First Nations encompasses the Southern Gulf Islands. All of these groups are considered a "rights-holder" for these lands. Currently, each group is represented by one or two members on the project steering committee for a total of 13 members. The steering committee has identified that the goal of the project is to respectfully work towards a healthy, sustainable, and balanced native forest ecosystem on Sidney Island. The objectives identified by the steering committee include:

- Collaboratively develop a viable 5-year black-tailed deer management strategy
- Collaboratively plan and implement eradication of fallow deer, including prevention of re-invasion.
- Collaboratively develop a forest restoration strategy, including invasive plant management and native plant restoration

We are seeking the services of a group facilitator who is well-versed in the concepts of collaborative decision-making, collective impact, ecological restoration, working with First Nations, and the mandate and work of Parks Canada. Familiarity with Conservation Conflict Transformation, the Open Standards for the Practice of Conservation or the Healthy Country Planning approach to conservation planning would be an asset.

3. Contractor's Responsibilities

The Contractor must:

Scope of Work:

Parks Canada Agency (PCA) is seeking a strong professional facilitator to work closely with PCA staff to design a strategic engagement process that is respectful and inclusive of a diverse suite of rights-holders. The purpose of the engagement process will be to orchestrate consensus within communities towards the objectives identified by the steering committee. Further, the engagement process is intended to enable collaborative planning of restoration activities, to reach the goals and objectives of the project. This will include working with PCA staff and other contractors to guide the development of engagement processes

with rights-holders, including: information gathering from rights-holders, suggested processes, design of engagement activities such as meetings and workshops, and facilitation of initial activities. The full engagement process will consist of a series of nested process. One of the processes is the guidance and facilitation of the project steering committee, which is not included within the scope of this contract. The scope of this contract refers specifically to the design and guidance of the processes that focus on Sidney Island Landowners and First Nation's partners. Guidance related to processes of engagement between the different rights holders will also be sought.

Tasks

3.1.1 Provide guidance on strategic engagement with rights-holders to enable a collaborative approach to planning restoration activities

- Provide guidance/advice as needed on engagement processes and techniques to the project team, including PCA staff and other contractors, for the purpose of planning the project as a whole.
  - Includes **two hours** of telephone meetings approximately once per week until **May 31, 2020**
  - Includes in person meeting once every 8 weeks until **May 31, 2020**. Specific dates will be communicated after contract award.

3.1.2 Information gathering from stakeholders.

- The Contractor must communicate with relevant communities/organizations and their representatives to guide the development of engagement processes. This will include:
  - Working with project staff and community contacts to determine appropriate audiences for engagement.
  - Communicating with the communities to determine:
    - What each group's values and needs are in reference to the project;
    - What type of engagement processes are most appropriate for each group. This includes:
      - Identifying which techniques are logistically appropriate for each group (i.e. interviews, workshops, info sessions)
      - Ensuring that we are engaging with the right individuals.
      - Working with each group to develop a group – specific process that ensures that they feel that their values, concerns and knowledge are incorporated in to project planning.
      - **Work with Sidney Island Strata Council to plan community engagement workshop**
- Engagement processes above refers to:
  - Engagement processes within each group, prioritizing: Sidney Island Landowners, WSANEC First Nations, Hul'q'umi'num' First Nations.
  - Initial interviews with community representatives may total 12 interviews.
  - Further interviews, workshops, or meetings will be determined by the initial interviews and may total close to **20 interviews** or meetings.

3.1.3 Provide guidance on strategic engagement with rights-holders to enable a collaborative approach to planning restoration activities.

- The Contractor will work with PCA staff, other contractors, and rights-holders to guide the development of engagement processes, including:
  - Foster agreement on engagement goals or milestones
  - Develop processes for achievement of milestones
  - Design of engagement activities such as meetings or workshops
  - Proposed timeline of engagement processes

- Engagement processes above refers to:
  - Engagement processes within each group, including: WSANEC First Nations, Hul'q'umi'num' First Nations, Sidney Island Landowners, and PCA.
  - Engagement processes between groups when necessary, including: Islands Trust Conservancy, PCA, WSANEC First Nations, Hul'q'umi'num' First Nations, Sidney Island Landowners, and BC FLNRO.

3.1.4 Design and Planning of engagement activities.

- Activities will occur in Sidney, Sidney Island, Brentwood Bay, or Duncan, BC.
- The contractor will work collaboratively (via teleconference or in person) with PCA staff, and other contractors to plan project related activities, debrief, and adjust as necessary.
- **The contractor will work collaboratively with Sidney Island Strata Council to develop a community engagement session.**
- The contractor will identify supporting material and provide on-going advice as required

3.1.5 Professional facilitation services during engagement activities:

- Facilitation services may be required to conduct initial engagement activities for the purpose of informing future engagement processes.
- The contractor will facilitate the meetings in a way that will encourage meaningful dialogue among participants.
- It is expected that at least one workshop/ group meeting may be required for the three primary processes: Sidney Islanders, WSANEC First Nations, and Hul'q'umi'num First Nations.

3.2 Deliverables

3.2.1 Written report and presentation for the project team, outlining key learnings from the interview process that includes:

- Preferred methods of communication and engagement for each group
- Key values, identity issues, and concerns that are relevant to the project
- Key knowledge holders or community leaders (individuals) within each group and suggested methods for engaging with them
- Potential issues and considerations to take in to account moving forward.

3.2.2 Written recommendations on a way forward – to be determined in close collaboration with Project Staff, that includes:

- Suggested techniques and next steps for a planning process that ensures that each group feel that their values, concerns and knowledge are incorporated in to project planning. The purpose of the planning exercise is to plan restoration activities to meet the objectives identified by the steering committee and put forth in the MOU.
- Sequence of suggested next steps as we work towards collaborative restoration planning.
- Timeline outlining a sequence of potential next steps and approximate duration necessary for each.
- Budget outlining estimated costs (roughly) associated with each activity in the timeline.

3.3 Additional Contractor Responsibilities:

3.3.1 Provide detailed agenda for meetings with rights-holders prior to the meetings.

3.3.2 Participate in teleconference or in person meetings with project staff to plan and implement collaborative planning activities.

3.3.3 Adhere to the proposed timelines for submitting the deliverables.

3.3.4 Contractor to include price break down to ensure fair value.

4. Parks Canada's Responsibilities

Parks Canada will:

4.1 Share information required by the Contractor, including contact information and meeting notes.
4.2 Provide staff time to help coordinate meetings, conduct engagement activities, and communicate with rights-holders.
4.3 Book and pay for venues and hospitality for all meetings and workshops.
4.4 Coordinate participation in meetings and send out meeting invitations to rights holders.
4.5 Provide financial compensation to meeting participants as necessary.
4.6 Review and approve any work completed by the Contractor within five days of receipt.

5. Timeframe

The project requires that steady progress is made towards the final outcome.

- Initial information gathering meetings with project staff: before October 30, 2019
- Information gathering with rights-holders: October – December, 2019
- Written Report and Presentation (3.2.1): December 15, 2019
- Written recommendations on a way forward (3.2.2): January 30, 2019
- **Engagement session with Sidney Islanders: March 14, 2020**
- Ongoing guidance of engagement processes: before **May 31, 2020.**

D) Amend Annex "B" – Basis of Payment to reflect the increase in contract value.

Under Annex "B" – Basis of Payment, replace all references to $ 11,328.90 with **$ 16,756.67.**

ALL OTHER TERMS AND CONDITIONS OF THE CONTRACT REMAIN THE SAME

Coulson, Stephanie (PC)

From: Stephanie Coulson
Sent: April 6, 2020 11:29 AM
To: BEATRICE FRANK
Cc: Coulson, Stephanie (PC); Janssen, Michael (PC)
Subject: Re: I: Background/Agenda for Tuesday meeting

s.19(1)

I have some concerns about this project and process completely getting away from us, while still relying on our funding. I don't think I did a good job articulating my concerns last week, but when we frame SIERP as completely independent from any sort of PCA GINPR forest restoration plan, I think we're opening ourselves up to side-conversations and projects that run off in completely different directions from our original intentions, and if we claim that we have no authority over its direction what-so-ever, then we can't step in other than to add a voice to the conversation. I believe that we can be a collaborative project whilst still maintaining that Parks is the sponsor and thus, to a minute degree, regulator for the scope within which this project operates. That is, we can own the process (while actively seeking out and actioning input) without owning the project. With that, I think, also comes the opportunity/responsibility for Parks to have an active role in moving the process forward (which is completely missing from the email conversation happening here unless I'm misinterpreting).

I also have very strong concerns about Gregg's role in this process, and I need clarification about a) what PCA is paying him for, and b) what he stands to gain from an approved eradication process. If Coastal Conservation gains financially or otherwise in some way from an approved eradication plan going forward, then Gregg should NOT be running this show - it's a conflict of interests, and it could jeopardise the project. Plus, at some point, I feel the need to emphasise that a respectful and inclusive process means that all project partners - including Gregg - treat all other project partners with respect, and frankly, I don't feel that Gregg respects me or my input in any way (I can't speak for Bea, but I don't feel as an outside observer that he treats her respectfully either). I'm fine to take that on a personal level, but it terms of the project's success, having someone in a leadership role who interacts with other team members in a way I am tempted to describe as "bullying" is not an authentically respectful process.

Mike, I am free all afternoon post-F2F team meeting.

Best,
Stephanie

On Mon, Apr 6, 2020 at 10:41 AM BEATRICE FRANK <frankbea@hotmail.com> wrote:

Ciao Steph and Mike,

I think Mike is time for you to bring in Steph and offer her support. It is worrying that Gregg is "reparing a proposed structure of next steps that need your input".
This is not his role as it could have negative effects on the process, we saw what happened with the MOU wording and how he pushed for his way.
If you want to chat I am in my office until 12.00 and back again for a call after 4.30pm today.

Ciao Bea

Da: Gregg Howald <gregg@coastalconservation.ca>
Inviato: lunedì 6 aprile 2020 10:32
A: Erin Shaw <erin@erinshawfamilylaw.ca>
Cc: Janssen, Michael (PC) <michael.janssen@canada.ca>; BEATRICE FRANK <frankbea@hotmail.com>; Geraldine Van Gyn <gvangyn@uvic.ca>
Oggetto: Re: Background/Agenda for Tuesday meeting

Hi All-

I am preparing a proposed structure of next steps that need your input.

I can plan to share this with you, but has not been as of yet discussed with anyone and can use for a "straw dog" to get started.

Gregg

Sent from my iPhone

On Apr 5, 2020, at 10:44, Erin Shaw <erin@erinshawfamilylaw.ca> wrote:

Happy Sunday everyone.

Geri asked for some background for the meeting I've asked for and that we've arranged for Tuesday. I know we will be discussing the process for the MOU at the next meeting of the Steering Committee, but I wanted to have a smaller more focused discussion before the larger meeting.

There seems to be some confusion on Council about what this process is going to look like. Some on Council are still talking about Parks "presenting us with a plan". I have repeatedly emphasized that the process is going to be more inclusive and collaborative than that but clearly the message is not getting through. One member cited a conversation that was reported to him by an owner who had a conversation with Gregg (the good old SI telephone game) which suggested that there was a "Parks Plan" being made.

When I talked to Council about engaging in a social process to determine what was important to Sidney Islanders, some Council members thought the owner engagement session had already done that. On the other hand, Council would like to arrange meeting with Bea to talk about effectively managing the social part of this issue as we move forward.

I would also like to talk about the roles that Geri, and I can play in the next stage. Maybe each of us want to focus on one of the three aspects of the project and be responsible for bringing in other Sidney Islanders to that project. For example, maybe is the hunt person and she makes sure she is bringing in those owners who want input into that part of the plan. (Not trying to put you in the hotspot ! I would be happy to take that on but thought it might be what you're interested in).

I also wanted to talk about whether there is any scope for Parks to support us in hiring a project manager to support us in this work.

s.19(1)

So… Proposed Agenda:

1. High level process discussion
2. Geri, Erin roles
3. Project Manager

I hope that helps frame our discussion. s.19(1)

Erin

Erin Shaw Family Law
11-1140 Fort Street
Victoria BC V8V 3K8
P: 778-265-5156
F: 250-388-3841
erinshawfamilylaw.ca

<image001.jpg>

--
Stephanie Coulson

Sidney Fallow Deer Eradication

Existing Contract Deliverables (ends May 31 2020)	**$262 099** $275,204 with tax	
Scoping Document		
Eradication Operational Plan		
Partnering agreements, letters of support		
Permitting: Determine Requirements		
Site Visits (2)		
Stakeholder Workshops (4)		
FN Engagement (4 trips)		
Steering Committee meetings (3)		
Co-develop Landowner Proposal Document		
Landowner Proposal revision		
Communications documents for SI Landowners (2)		
Stakeholder communications (e.g. phone calls, emails etc)		
Bait Preference Trial		
Contribute to Stakeholder Engagement Strategy		
Proposed Contract Amendment:		
Timeline	Extend to May 31 2021	
Scope	The idea is that we have go ahead for eradication in April/May 2021, giving time to set up for full on eradication winter 21_22. The planning (work permits etc) for that would be encompassed in the contract for eradication.	
Still to do:		
Eradication Operational Plan (incl budget).		
to add:		
Chair Steering Committee (Gregg)	8 meetings, 4 in person	1 day prep, 1 day
Guidance on Project Development Process (Gregg)		
Participation in Eradication working group (Chris)	7 meetings, 3 in person plus contribution to design of any trials.	
Info sessions prior to votes (2)	Chris or Gregg	
Attend Planning workshops (3)	Chris	
Contribute to development of communications documents	chris (7 days) Gregg (2 days)	

Salaries			
	Project Manager (PM04)		72,885
	Resource Management Officer II (EG04)		63,983
	Hunt & Safety Coordinator (GT04)		66,640
	Partnering and Engagement Officer (PM03)		66,529
	Resource Management Officer I (EG03 0.5 FTE)		27,963
	Restoration Technician (EG01 0.3 FTE)		
	Admin Assistant (CR04 0.25 FTE)		11,969
	Other: Casual, Overtime		5,000
Employee Benefits Plan (EBP)			85,042
Analyses, and Studies			
Studies	Steering Committee Chair and fallow eradication planning (CC Contract)		77,585
	Chair Technical working groups (deer and veg) (Judith Contract)		27,500
	black-tailed deer management planning (Arcese/Martin Contract)	-	
	Forest Restoration Planning/Monitoring	-	
CRM / Archaeological Assessment			
	Pauquachin FN participation (planning, harvest) Contribution Agreement		10,000
	Hul'q'umi'num FN participation (planning, harves) Kat Contract		25,000
	WSANEC FNs participation (planning, harvest) WLC Contribution Agreement		25,000
	Other: Indigenous youth training and mentorship		10,000
Impact assessment			
Design / Tender specifications			
PWGSC Fees and Disbursements SSAs			
Hardware / Software Acquisitions			
	Software fees (e.g Gantt Pro, dropbox, website)		2,500
	Computer equipment/office supplies		2,000
	Other: Camera Array		45,000
Construction			
Construction Supervision, Inspection and Quality assurance			
Other Costs			
	Sallas Engagement/Coordination		50,000
	Sallas Contribution agreement	30,000	
	Info Session/site visit	20,000	
	Stakeholder/Public Engagement		31,000
	Beatrice Frank Contract	31,000	
	Meat Recovery		10,000
	signage		8,000
	Fallow deer eradication materials/services		150,000
	Black-tailed deer management		10,000
	Forest Restoration Materials/Services		39,800
	Exclosures and plants Sallas side	12,800	
	Hawthorn Treatment	22,000	
	sentinel trees/shrubs	5,000	
	Staff Training		2,000

	Miscellaneous (travel, equipment, uniforms, fuel)	7,500
	G&S	524,885
	Salary	314,969
	EBP	85,042
	contingency	92,490
	Total	1,017,385

21_22

Mcpherson, Michèle (PC)

From: Janssen, Michael (PC)
Sent: Friday, May 22, 2020 4:23 PM
To: Chris Gill
Cc: 'Gregg Howald'
Subject: RE: CC contract ammendment

Thanks Chris,
I'm going to just ask for an extension of a couple months while we sort out deliverables etc.
What we really don't want, is for the contract to expire.
Have a great weekend,
Mike

Michael Janssen, MSc, PMP
Project Coordinator | Coordinateur de projet
Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6
michael.janssen@canada.ca
Telephone | Téléphone (250) 418-5746 (**please note new phone number**)
www.parkscanada.gc.ca | www.parcscanada.gc.ca
Government of Canada | Gouvernement du Canada

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From: Chris Gill <chris@coastalconservation.ca>
Sent: Thursday, May 21, 2020 11:11 AM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>
Cc: 'Gregg Howald' <gregg@coastalconservation.ca>
Subject: RE: CC contract ammendment

Hi Mike,

Here is what I came up with:

Total contract amount (no taxes)	$262,099.53
Spent to May 1 including holdback (no taxes)	$235,466.59
$ remaining in contract including 10% holdback (no taxes)	$26,632.94
Average invoice for previous 3 months including 10% holdback (no taxes)	$4,678.33
Number of months of cash remaining based on average invoicing	*5.7*

We are happy to add in a few extra months to get us through the next amendment so do whatever works best for you.

Thanks,
Chris

Chris Gill, MSc, RPBio,

Co-founder & Director of Invasive Species Programs
www.coastalconservation.ca
Ph: (250) 253-0298

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: Thursday, May 21, 2020 9:54 AM
To: Chris Gill <chris@coastalconservation.ca>
Cc: Gregg Howald <gregg@coastalconservation.ca>
Subject: CC contract ammendment

Good morning Chris,
Quick question.
How much cash do we have left in the contract, and is there flexibility for us to just add a month or two (no extra funds) while we sort out this next amendment? Or will we run out of money?
Thanks Chris,
Mike

Michael Janssen, MSc, PMP
Project Coordinator | Coordinateur de projet
Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6
michael.janssen@canada.ca
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SIERP Purpose and Need Statements

Version 4. Final for Steering Committee Consideration

6/3/2020

Objective 1.

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

The Purpose is to:

i. Facilitate the ~~restoration~~ ecological recovery of ~~the~~ Sidney Island forest ecosystems by eradicating invasive fallow deer, and preventing their re-establishment.

Objective 2.

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

The Purpose is to:

i. Facilitate the restoration of the Sidney Island forest ecosystem by [removing] invasive plant species, cultivating native plant diversity and abundance, and introducing sustainable and long-term forest management practices.

~~i.~~ii. Facilitate long-term sustained recovery of native forest vegetation on Sidney Island.

Commented [MJ1]: Forest management usually means logging. We are not doing that. Veto on that wording.

3. Collaboratively develop a viable management strategy for black-tailed deer.

The Purpose is to:

i. Preserve the presence of native black-tailed deer on Sidney Island through sustainable methods to moderate the relationship between population size and ecological impacts of deer density.

~~i.~~ii. To ensure that over the long-term, browse pressure by black-tailed deer is maintained at levels consistent with abundant and diverse native forest vegetation on Sidney Island

Commented [MJ2]: Don't like this at all.

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Mcpherson, Michèle (PC)

From: Janssen, Michael (PC)
Sent: Thursday, June 18, 2020 10:16 AM
To: Becky Miller; Stephanie Coulson
Cc: Tooby, Ben (PC)
Subject: Re: Financially compensating working group participants?

Nope. But we can cover travel expenses.

Sent from my Bell Samsung device over Canada's largest network.

-------- Original message --------
From: Becky Miller <
Date: 2020-06-17 1:52 p.m. (GMT-08:00)
To: Stephanie Coulson
Cc: "Tooby, Ben (PC)" <ben.tooby@canada.ca>, "Janssen, Michael (PC)" <michael.janssen@canada.ca>
Subject: Re: Financially compensating working group participants?

I hope not. That's going to get very expensive.

On Wed, Jun 17, 2020 at 11:52 AM Stephanie Coulson > wrote:
Hi all,
I know we compensate FN participants through contribution agreements; is financial compensation being offered to other Working Group participants who are involved outside of their paid work (i.e., Sallas?)

Thanks,
Stephanie

Partnering and Engagement Officer, Gulf Island National Park Reserve
Parks Canada / Government of Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6
PLEASE NOTE TEMPORARY EMAIL ADDRESS:
stephanie.coulson@canada.ca (limited access)
Tel: (250) 552-0154
www.parkscanada.gc.ca

Agent ou agente, partenariats et engagement, Réserve de parc national des Îles-Gulf
Parcs Canada / Gouvernement du Canada
2220, rue Harbour, Sidney, C.-B. V8L 2P6
MON E-MAIL TEMPORAIRE:
stephanie.coulson@canada.ca (acces limite)
Tél. : (250) 552-0154
www.parcscanada.gc.ca

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Becky Miller, MSc
Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6
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s.19(1)

Annex "A" – STATEMENT OF WORK

1. Objective:

The objective of this Contract is to help guide development and implementation of engagement processes with the Sidney Island Community to collaboratively plan forest restoration on Sidney Island. This will include services to help design, plan and facilitate activities that ensure that stakeholders feel heard and have an active role in contributing to restoration planning, as well as working with key stakeholders to increase support for, or reduce opposition to, the project. The desired outcome is a process that resolves conflict, addresses anxieties and concerns, fosters collaboration towards shared conservation objectives, and increases overall stakeholder buy-in in the project. An efficient process is desired.

2. Background:

Invasive Fallow deer and hyperabundant Black-tailed deer have caused significant harm to the health of globally significant Garry Oak ecosystems in the Southern Gulf Islands. In alignment with our mandate to preserve Ecological Integrity and protect Species at Risk, Parks Canada is sponsoring a collaborative process to plan and implement a complex ecological restoration project on lands with a diversity of ownership and stewardship. Gulf Islands National Park Reserve is responsible for 18% of this area. Much of the rest is privately owned by approximately 80 landowners that are grouped under the Sallas Forest Strata ('Sidney Islanders'). Several small conservation areas fall under the stewardship of the Gulf Islands Trust Conservancy. Additionally, the traditional territory of two groups of First Nations encompasses the Southern Gulf Islands. All of these groups are considered a "rights-holder" for these lands. Currently, each group is represented by one or two members on the project steering committee for a total of 13 members. The steering committee has identified that the goal of the project is to respectfully work towards a healthy, sustainable, and balanced native forest ecosystem on Sidney Island. The objectives identified by the steering committee include:

- Collaboratively develop a sustainable black-tailed deer management strategy that will outlast the lifespan of the project
- Collaboratively plan and implement eradication of fallow deer, including prevention of re-invasion.
- Collaboratively develop a forest restoration strategy, including invasive plant management and native plant restoration, that will outlast the lifespan of the project

We are seeking the services of a group facilitator who is well-versed in the concepts of collaborative decision-making, collective impact, ecological restoration, working with First Nations, and the mandate and work of Parks Canada. Familiarity with Conservation Conflict Transformation, the Open Standards for the Practice of Conservation or the Healthy Country Planning approach to conservation planning would be an asset.

3. Contractor's Responsibilities – Required Services

Scope of Work:

The scope of this contract refers specifically to the design and guidance of processes that focus on Sidney Islanders during the collaborative planning phase of the project. Parks Canada Agency (PCA) is seeking a strong professional facilitator to work closely with PCA staff and the Sidney Island Council to design a strategic engagement process that orchestrates consensus within the Sidney Islander community towards the objectives identified by the Steering Committee, and enables the collaborative planning of restoration activities that contribute to achieving the objectives of the project. The Contractor will work with the Sidney Island Council, PCA staff, and other contractors to guide the development of engagement processes with Sidney Islanders, including: information gathering, opportunities to provide feedback on or contribute to planning activities, design of engagement activities such as meetings and

workshops to increase community participation in and support for the project, and the facilitation of such activities. Guidance related to processes of engagement between the different rights holders may also be sought.

3.1 Tasks

3.1.1 Provide guidance on strategic engagement with Sidney Islanders as it contributes to the overall project planning process

- Includes up to two hours of telephone meetings approximately once per two weeks until June 30, 2021
- Includes a full day of in-person or video conference meetings up to once every 8 weeks until June 30, 2021. Specific dates will be communicated after the contract is awarded

3.1.2 Determine community priorities of Sidney Islanders that are relevant to the project.

- Work with project staff and Sidney Island Council to determine appropriate and effective information gathering strategies
- Engage with Sidney Islanders to determine:
    - What the community's values and needs are in reference to the project
    - What are the community's concerns and/or unanswered questions about the project
    - The preferred methods of engagement or communication within the community
    - Who the influential voices in the community belong to, and what their level of support or opposition to the project is
    - What community members would need to see from the planning process in order to feel that it is inclusive and legitimate
    - Other relevant information as identified by PCA staff

3.1.3 Plan and implement strategies that enable Sidney Islanders (broad community) to contribute to the collaborative planning process, including opportunities to give feedback on the technical planning that takes place within the project's technical Working Groups

- Work with project staff and Sidney Island Council to determine appropriate and effective opportunities for Sidney Islanders to contribute to collaborative planning and give feedback on plans

3.1.4 Identify and work with influential community members within the Sidney Island community to decrease opposition and/or increase support for the project

- Identify community members whose positions may pose a risk to the project overall, and develop and implement risk mitigation strategies
    - Assess their current and desired level of support for the project at the start of this contract, and then periodically through the planning process
    - Suggest and implement opportunities for key individuals to become more aware of and supportive of the project.

3.1.5 Design and implement engagement activities as needed/desired, with the intention of increasing overall participation in and support for the project amongst Sidney Islanders.

- Activities will occur in Sidney, Sidney Island, Brentwood Bay, or Victoria, BC.
- The contractor will work collaboratively (via teleconference or in person) with PCA staff, and other contractors to plan project-related activities, debrief, and adjust as necessary.
- The contractor will work collaboratively with Sidney Island Strata Council or other representatives to develop appropriate engagement sessions as needed

- The contractor will identify supporting material and provide ongoing advice as required
- The number and nature of engagement activities to be determined as the planning process develops and opportunities for meaningful engagement arise

3.1.6 Professional facilitation services during engagement activities:

- The contractor will facilitate meetings and engagement activities in a way that will encourage meaningful dialogue and/or participation among participants

3.2 Deliverables

3.2.1 Written report for the project team that details Sidney Island community priorities, including:

- Preferred methods of receiving information, providing feedback to the project team, and for communicating within the community.
- A prioritized list of values and concerns relevant to planning of vegetation restoration and deer management that indicates which values and concerns are of the highest priority to the most people.
- Outline of which operational elements of deer eradication operations should be prioritized from the perspective of Sidney Islanders. For example, expediency or lack of disturbance?
- Raw database of information gathered

3.2.2 Written recommendations and/or contribution to stakeholder registry updating the project team on key, influential community member's positions towards the project, opportunities or suggestions for influencing those positions positively, and the identification of potential risk and risk-mitigation strategies as they relate to positions of opposition within the community

- To be provided initially to the project staff after information gathering
- To be updated upon request from project staff, depending on the positions identified and relative risk to the project
- Identified risk mitigation strategies to be carried out by the contractor.

3.2.3 Verbal summaries of engagement activities conducted by the Contractor to the project team, in order to debrief, make adjustments moving forward, and share information gathered and lessons learned, including:

- Number and identify of participants
- Questions or concerns raised by participants during the engagement activities
- Other information relevant to the planning process and/or the overall success of the project

3.3 Additional Contractor Responsibilities:

3.3.1 Provide detailed agenda for meetings with stakeholders prior to the meetings.
3.3.2 Participate in teleconference or in person meetings with project staff to plan and implement collaborative planning activities.
3.3.3 Adhere to the proposed timelines for submitting the deliverables.
3.3.4 Participate in teleconference meetings with the Sidney Island Strata Council
3.3.5 Contractor to include price break down to ensure fair value.

4. Optional Services

After the collaborative planning phase of the project, the project partners will decide whether to implimnet the strategies identified during the planning phase. In the event that a plan for eradication is supported by all project partners, The Contractor grants to Parks Canada the option to acquire the services described herein:

4.1 Provide ongoing guidance of engagement and communication processes with the Sidney Island community, over tahe 1 year implementation period, including:

- Up to 2 hours per week of telephone conversations with PCA project Staff
- Ongoing engagement with Sidney Island community members to monitor concerns and level of support for the project
- Ongoing verbal recommendations to the project team to ensure continued support for the project throughout the implementation phase.

5. Parks Canada's Responsibilities

Parks Canada will:

5.1 Share information required by the Contractor, including contact information and meeting notes.
5.2 Provide staff time to help coordinate meetings, conduct engagement activities, and communicate with stakeholders
5.3 Book and pay for venues and hospitality for all meetings and workshops.
5.4 Coordinate participation in meetings and send out meeting invitations to stakeholders
5.5 Provide financial compensation to meeting participants as necessary.
5.6 Review and approve any work completed by the Contractor within five days of receipt.

6. Timeframe

The project requires that steady progress is made towards the final outcome.

- Research Sidney Island Community priorities: August - Sept 2020
- Written Report and Presentation (3.2.1): before Sept 30, 2020
- Written recommendations on key individuals (3.2.2): before September 30, 2020
- Ongoing design and implementation of engagement activities: before June 30, 2021
- Ongoing guidance of engagement processes during planning phase: before June 30, 2021

- Optional services during the implementation phase: July 1, 2021 – June 30, 2022.

Fur to Forest Finance Snapshot

Last Update: July 8, 202(

Goods and Services

Current Expenditures	13,671		
Pending Expenditures			
WLC Contribution Agreement	25,000		
Pauquachin Contribution Agreem(	10,005		
Coastal Conservation	72,000		
Sidney Social Contract	50,000		
Working Group Chair	65,000		
BTD Contract	30,000		
HLRS Contract	25,000		
Sidney coordinator	30,000		
Materials	15,000		
Misc	10,000		
Training	20,000		
Total Pending	352,005		
Current Commitments			
	committed	**forecasted actual expense**	
			0.27
			emailed March 20
			emailed March 20
			emailed March 20
	Difference:	0	
Budget	275,818		
Expended	13,671		
Pending spending	352,005		
Committed (Actual)	0		
Total	365,676		
Variance	-89,858		

Salary and Wages

Budget	298,300

Becky, Mike, Ben, Steph, EG03	380,000			**Initial Sala**
EG01	19,048	45k * 0.3	14998.5	**EBP remov**
		27%	19048.1	**Additional**
				Additional
				Total Salar
				Total EBP
Salary and Wages Transfer Costs Forecasted	0	*27% of transfer costs		
Total Forcasted	399,048			

Total Forecasted Expenses	764,724	491,400	1287100
		-273,324	1246600
Budget (2020/21)			40500
			805,224
Balance		273,324	481,876

*We re-profiled $130,000

)

#REF!
#REF!

#REF!

Check

ry budget	149,998.00
'ed	40,499.46
Salary	19,752.00
EBP Remo'	5,333.00
y	169,750.00
	45,832.46

MRT budget - finance budget = initial EBP removed
45832

33000

316666.67 Salary
63,333 EBP

0 Transfer costs
380000

) to move into 2019/2020 budget)

Actions and Outcomes:	Needs	Output	Time Estimate	Assumption	CC Time Estimate	Travel
			Days			
Go/No Go Decision Document	Final document produced likely 3 Docs to accommodate: Sallas; PCA/Isls Trust/Prov BC; and FNs	DIA and Alternatives assessment for each Prov BC/Islands Trust/Sallas/FN Communities to inform go/no go decision	10	The WG produce docs that meet criteria to roll into the DIA process seamlessly	5	2
Fallow deer WG Discussions	Meet monthly/Summarize	Fallow Deer alternatives and recommendation	41	3 days per meeting, includes prep, meet, summarize, plus 5 days to produce final document	41	6
Plant WG Discussions	Meet monthly/Summarize	Plant alternatives and recommendation	41	3 days per meeting, includes prep, meet, summarize, plus 5 days to produce final document	15	3
BTD WG Discussions	Meet monthly/Summarize	BTD alternatives and recommendation	41	3 days per meeting, includes prep, meet, summarize, plus 5 days to produce final document	41	6
Working Groups Set Up	One time investment	Working Groups ToR - who, when, where, how, what	10	To be set by Proj Team of PCA/Coastal Cons	10	0
Set Scope of Project: Purpose/Need	One time investment	Set Purpose/Need	5	one time deal		0

Engagement

This is what Mike has left in. The rest was omitted from his budget

Steering Committee Discussions	Meet monthly	Advancement of Working Groups to produce documents for Go/No Go Decision		48	Assumes 4 day investment per Steering Committee, including engagemetn with WG Chairs to bring information forrward in strucutred manner.	48	6
Saltas	Information meetings:	Scoping, Draft, Final and Info Sessions to inform vote		12	Heavy engagement at key steps of project development	5	2
FNs	Face to face	Dependent on needs of communities	?			3	1
Islands Trust/FLNRO	Information meetings:	Transfer of information from St. Comm. to Islands Trust and FLNRO		5	Both FLNRO and Islands Trust have capacity to transfer that knowledge appropriately	1	
Public	Scoping &/or Draft &/or Final	Sidney town hall style meetings	5-15		Public meetings are desired and or needed.	3	3
						172	

Actions and Outcomes:	Needs	Output	Time Estimate	Assumption	CC Time Estimate
			Days		
Go/No Go Decision Document (revisions to landowner proposal doc)	Final document produced likely 3 Docs to accommodate: Sallas; PCA/Isls Trust/Prov BC; and FNs	DIA and Alternatives assessment for each Prov BC/Islands Trust/Sallas/FN Communities to inform go/no go decision	10	The WG produce docs that meet criteria to roll into the DIA process seamlessly	5
Deer WG Discussions (Chris)	Chris Participate in Fallow portion	Fallow Deer alternatives and recommendation	12	6 meetings @ 2 day per meeting.	12
Chair Steering committee (Gregg)	Meet monthly	Advancement of Working Groups to produce documents for Go/No Go Decision	40	Assumes 10 meetings, 4 day investment per Steering Committee meeting, includes engagement with WG Chairs, setting of WG P/N's, WG ToR, engagement with MJ and project team	40
Engagement					
Sallas	Information meetings: Scoping &/or Draft &/or Final	Info Session to inform vote	12	Heavy engagement at key steps of project development	5
Public		Sidney town hall style meetings	5-15	Public meetings are desired and or needed.	3
					65

Travel	Cost	Travel Cost
2		
	5000	1760
3	8280	2640
3		
	40000	2640
2		
	5000	1760
1	3000	880
	61280	9680

Optional Erad Ops Plan	Full Ops plan	complete operation plan including recommended techniques and methods, identified permit requirements, roles and responsibilities, detailed schedules, and costs estimates, as well as resourcing and logistical requirements. Plan will identify potential risks and outline strategies for managing risks.	?

Actions and Outcomes	Needs	Output	Time Estimate (Person Days)	Assumption	CC Time Estimate	Travel (# trips)
Go/No Go Decision Document (revisions to landowner proposal doc)	Final document produced likely 3 Docs to accommodate: Sallas; PCA/Isls Trust/Prov BC; and FNs	DIA and Alternatives assessment for each Prov BC/Islands Trust/Sallas/FN Communities to inform go/no go decision	10	The WG produce docs that meet criteria to roll into the DIA process seamlessly	5	2
Deer WG Discussions (Chris to participate. Tony, providing input as requested)	Chris Participate in Fallow **and Black-tailed deer WGs**	Fallow **and black-tailed deer** alternatives and recommendation	**33**	6 meetings @ 2 day per meeting.	33	3
Chair Steering committee (Gregg)	Meet monthly	Advancement of Working Groups to produce documents for Go/No Go Decision	40	Assumes 10 meetings, 4 day investment per Steering Committee meeting, includes engagement with WG Chairs, setting of WG P/N's, WG ToR, engagement with MJ and project team	40	3
Sallas	Information meetings:	Info Session to inform vote	12	Heavy engagement at key steps of project development	5	2
Public	Scoping &/or Draft &/or Final	Sidney town hall style meetings	5-15	Public meetings are desired and or needed.	3	1

Cost	Travel Cost based on $1,100/1.5 day trip or $1,430 for 2 day meetings (based on actuals)
$5 000	$2 200
$32 303	$4 290
$40 000	$3 300
$5 000	$2 200
$3 000	$1 100

Optional Erad Ops Plan	Full Ops plan	Complete operation plan including recommended techniques and methods, identified permit requirements, roles and responsibilities, detailed schedules, and costs estimates, as well as resourcing and logistical requirements. Plan will identify potential risks and outline strategies for managing risks.	70		70	0
External review of operational plan by Island Conservation Eradication Advisory Team (ICEAT)			N/A		N/A	0
Ongoing revisions to operational plan			13		13	0
Plan meat recovery operation			8		8	0
Fallow deer biosecurity plan development			41		41	0

Subtotal

Contingency (15%)

TOTAL

Coastal Conservation in-kind contribution based on daily rate reductions

Coastal Conservation in-kind contribution <u>to date</u> (April 2018-June 2020)

TOTAL in-kind contribution from Coastal Conservation

$61 028	-
$10 000	-
$11 678	-
$8 498	-
$32 875	-
$209 381	**$13 090**
$31 407	***$1 964***
$240 788	**$15 054**
$89 130	
$99 698	
$188 828	

Description	Program Director		Eradication Planning Chief		Aerial & Ground Hunting Unit Leaders		Bait Station Unit Leader		Total
	# days	Subtotal	# days	Subtotal	# days	Subtotal	# days	Subtotal	
Complete draft operational plan including identifying permit requirements, scheduling, equipment/supplies, other logistics, estimated costs, etc.		$5 000,00		$37 950,00	5,00	$6 078,20		$12 000,00	**$61 028,20**

s.20(1)(b)

Coulson, Stephanie (PC)

From: Janssen, Michael (PC)
Sent: July 16, 2020 10:16 AM
To: Coulson, Stephanie (PC); Becky Miller
Subject: RE: 2020-21-0156 CSVF (RS) RE: Contract Security Request - Sidney Island Ecological Restoration Working Group Chair

Yup!

Michael Janssen, MSc, PMP
A/Manager, Resource Conservation I A/Gestionnaire, Fonction de conservation des resources
Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf
Parks Canada | Parcs Canada
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www.parkscanada.gc.ca | www.parcscanada.gc.ca
Government of Canada | Gouvernement du Canada

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From: Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>
Sent: Thursday, July 16, 2020 10:12 AM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>; Becky Miller
Subject: RE: 2020-21-0156 CSVF (RS) RE: Contract Security Request - Sidney Island Ecological Restoration Working Group Chair

Noted. Did you include on the list of suppliers for the "Bea contract" part 2?

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: July 16, 2020 9:01 AM
To: Becky Miller ; Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>
Subject: RE: 2020-21-0156 CSVF (RS) RE: Contract Security Request - Sidney Island Ecological Restoration Working Group Chair

Yes but you want to include more than 3 if you can.

-
-
- +2?
-

Michael Janssen, MSc, PMP
A/Manager, Resource Conservation I A/Gestionnaire, Fonction de conservation des resources
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michael.janssen@canada.ca
Telephone | Téléphone (250) 418-5746 (**please note new phone number**)

s.19(1)

From: Becky Miller <
Sent: Wednesday, July 15, 2020 3:49 PM
To: Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>
Cc: Janssen, Michael (PC) <michael.janssen@canada.ca>
Subject: Re: 2020-21-0156 CSVF (RS) RE: Contract Security Request - Sidney Island Ecological Restoration Working Group Chair

3 peeps need to be contacted

On Wed, Jul 15, 2020 at 3:47 PM Coulson, Stephanie (PC) <stephanie.coulson@canada.ca> wrote:

Greetings earthlings,

Remind me what the minimum number of potential suppliers is? Is it three?

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: July 15, 2020 1:42 PM
To: Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>
Cc: Becky Miller <
Subject: RE: 2020-21-0156 CSVF (RS) RE: Contract Security Request - Sidney Island Ecological Restoration Working Group Chair

Woohoo! We got security back for the WG Chair contract.

Stephanie, if you can prioritize the list of potential suppliers, once we have that we can submit the request to Calgary.

Thanks!
Mike

s.19(1)

Michael Janssen, MSc, PMP

A/Manager, Resource Conservation I A/Gestionnaire, Fonction de conservation des resources

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michael.janssen@canada.ca

Telephone | Téléphone (250) 418-5746 (**please note new phone number**)

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From: Rioux2, Bernard (PC) <bernard.rioux2@canada.ca> **On Behalf Of** securitemarches-securitycontracting (PC)
Sent: Wednesday, July 15, 2020 12:35 PM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>
Cc: Becky Miller
Subject: 2020-21-0156 CSVF (RS) RE: Contract Security Request - Sidney Island Ecological Restoration Working Group Chair

Good day Janssen, Becky,

Le texte français suit plus bas

s.19(1)

Please find attached your signed CSVF. The following security clauses are to be used for this contract:

- The Contractor/Offeror's personnel as well as their subcontractors that require unescorted access to work site(s) as well as access to sensitive assets or information must EACH hold and maintain a valid RELIABILITY STATUS, granted or approved by Parks Canada Agency Security Directorate (PCASD).

**Sensitive assets may include: Cash, artefacts, firearms, explosives, keys, vehicles, Historic sites and buildings, electronic equipment, IT networks, Critical installations and systems, etc.*

- The Contractor/Offeror's personnel as well as their subcontractors MUST NOT remove any PCA information or assets from the identified work site(s) without consent from a PCA employee, and they must ensure that their personnel are made aware of and comply with this restriction.

Temporary Security Clause Covid 19

Important : This clause must be included to the initial contracts requiring a level of security screening affected by Covid 19 restrictions on fingerprinting or as an amendment to existing contracts for which screening has not yet been completed.

- **COVID 19** - Contractor's Security Screening Temporary Process for "Reliability/Site Access Status with Limitations" during the COVID-19 Pandemic:

The Treasury Board Standard on Security Screening requires a number of security screening activities, including a law enforcement inquiry (criminal record check), which is required for employment and contracting in the federal government. Due to the extenuating circumstances of the COVID-19 pandemic, a temporary security screening process has been implemented and includes a mandatory requirement to conduct a ''**Name Based Criminal Records Check**'' in lieu of fingerprints. As a result, a "Security Status with Limitations" may be granted on a conditional basis, pending successful completion of fingerprinting. Parks Canada will reassess conditionally-granted security screening levels as soon as fingerprinting activities resume.

Should the individual fail to comply with this requirement or should the completion of the required security screening activity result in the future identification of adverse information, in accordance with Appendix D of the Standard on Security Screening, the individual will be provided an opportunity to explain – validate or refute – the information prior to a decision being reached to confirm, suspend, or revoke the Security Status with Limitations. Revocation of the "Security Status with Limitations" would result in the termination of the individual's ability to work in positions of the contract that require Reliability Status or Site Access Status.

The Parks Canada Agency will assume the cost of conducting the ''**Name Based Criminal Records Check**''; however, it will remain **mandatory** for contractors to attend fingerprinting to complete a criminal record check at their own expense when the service returns.

Note: Name-based criminal record checks are done by checking against the RCMP's Canadian Police Information Centre (CPIC) system. They consist of a check of the National Repository of Criminal Records based on a person's name and date of birth. It may also include searches of other national and local databases.

For Project Authority info. Do not include the following in the contract

- Contractor's Security Screening Temporary Process for "Reliability/Site Access Status with Limitations" Covid 19

https://drive.google.com/file/d/1DjtdjiHBKYV31sbIFY_in9pmfhwE9Ft5/view

- Good Practice Guidance for Project Authorities: "Reliability/Site Access Status with Limitations" Covid 19

https://drive.google.com/file/d/19eo7oKcI0w0VuBZAhKqTzTLXnGV3q4sj/view

Français

Veuillez trouver en attachement votre copie signée du FVSM. Les clauses de sécurité suivantes doivent être utilisées pour ce contrat :

- Le personnel de l'entrepreneur ou de l'offrant ainsi que ses sous-traitants, qui doivent avoir accès à un ou plusieurs sites de travail sans escorte, ou ceux qui traitent avec des biens ou de l'information de nature délicate de l'Agence de Parks Canada (APC), doivent TOUS détenir et maintenir un STATUT DE FIABILITÉ valide, accordé ou approuvé par la Direction de la sécurité de l'Agence Parcs Canada (DSAPC).

- Le personnel de l'entrepreneur ou de l'offrant ainsi que ses sous-traitants NE DOIVENT PAS emporter d'information ou de biens appartenant à l'APC hors des établissements de travail visés sans l'approbation d'un employé de l'APC et il doit s'assurer que son personnel est au courant de cette restriction et qu'il la respecte.

Clause de sécurité temporaire (Covid 19)

Important : Cette clause doit être incluse aux contrats initiaux requérant un niveau de filtrage de sécurité et affectés par les restrictions de prises d'empreintes causées par le Covid 19 ou comme amendement aux contrats déjà en place pour lesquels le filtrage n'a pas été effectué.

- **COVID 19** - Processus temporaire de filtrage de sécurité du fournisseur pour la Cote de fiabilité/Accès aux sites avec limitations pendant la pandémie COIVD-19 :

La Norme du Conseil du Trésor sur le filtrage de sécurité exige un certain nombre d'activités de filtrage de sécurité, y compris une enquête sur l'exécution de la loi (vérification du casier judiciaire), qui est nécessaire pour travailler et établir des contrats au sein du gouvernement fédéral. En raison des circonstances atténuantes de la pandémie COVID-19, un processus temporaire d'enquête de sécurité a été mis en place et comprend l'obligation d'effectuer une **« vérification nominale du casier judiciaire »** en remplacement des empreintes digitales. Par conséquent, une « cote de sécurité avec limitations » peut être accordé conditionnellement, en attendant que la prise d'empreintes digitales puisse être effectuée. Parcs Canada réévaluera les cotes de sécurité accordés sous cette condition dès que les activités de prise d'empreintes digitales reprendront.

Si vous ne vous conformez pas à cette exigence ou si le résultat de l'activité de filtrage de sécurité requise entraîne l'identification future d'informations défavorables, conformément à l'annexe D de la Norme sur le filtrage de sécurité, vous aurez la possibilité d'expliquer - valider ou réfuter - les informations avant qu'une décision ne soit prise pour confirmer, suspendre ou révoquer la « cote de sécurité avec limitations ». La révocation de la «cote de sécurité avec limitations » entraînerait la cessation de votre capacité à travailler dans des postes du contrat qui exigent une cote de fiabilité ou une cote d'accès au site.

L'Agence Parcs Canada assumera le coût de la **« vérification nominale du casier judiciaire »** ; toutefois, il demeurera **obligatoire** pour les fournisseurs de faire prendre leurs empreintes digitales à leurs propres frais pour effectuer la vérification du casier judiciaire lors de la reprise du service.

Note : Les vérifications nominales de casiers judiciaires sont effectuées en consultant le système du Centre d'information de la police canadienne (CIPC) de la GRC. Elles consistent en une vérification du Répertoire national des casiers judiciaires sur la base du nom et de la date de naissance d'une personne. Elle peut également inclure des recherches dans d'autres bases de données nationales et locales.

Notes pour les gestionnaires de projets ref Covid 19, Ne pas inclure dans le contrat :

- Processus temporaire des fournisseurs pour les demande de Cote de fiabilité/Accès aux sites avec limitations pendant la pandémie COVID-19.

  https://drive.google.com/file/d/1BLKWutiOZaV62NlYoorUZK48VJMv72F1/view

- Guide de bonnes pratiques pour les gestionnaires de projet.

  https://drive.google.com/file/d/1JZfU9Tls5nGHoo4Cyjm-0QIrbhUyeu23/view

Regards

Bernard

Bernard Rioux

Conseiller en Sécurité

Parcs Canada, Gouvernement du Canada

30 rue Victoria PC-04-G), 4-3 Gatineau QC, J8X 0B3

bernard.rioux2@canada.ca

Tel: 819-420-4842

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From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: July 8, 2020 2:16 PM
To: securitemarches-securitycontracting (PC) <pc.securitemarches-securitycontracting.pc@canada.ca>
Cc: Becky Miller
Subject: Contract Security Request

Good afternoon,

Please find attached a statement of work and security form for a contract to chair two technical working groups as part of a collaborative forest restoration initiative.

Thank you very much and have a wonderful day,

Mike Janssen

Michael Janssen, MSc, PMP

Project Coordinator | Coordinateur de projet

Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf

Parks Canada | Parcs Canada

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--
Becky Miller, MSc
Forest Ecologist | Écologiste Forestier
Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf
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PLEASE NOTE TEMPORARY EMAIL ADDRESS:
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Government of Canada | Gouvernement du Canada

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s.19(1)

Mcpherson, Michèle (PC)

From: Janssen, Michael (PC)
Sent: Monday, August 10, 2020 3:57 PM
To: Becky Miller
Subject: RE: Collaborative Planning Contract

Recommend just moving forward under DSO recommendation ☺
Not a battle worth waging.

Michael Janssen, MSc, PMP
A/Manager, Resource Conservation I A/Gestionnaire, Fonction de conservation des resources
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Parks Canada | Parcs Canada
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s.19(1)

From: Tan, Adam (PC) <adam.tan@canada.ca>
Sent: Monday, August 10, 2020 2:39 PM
To: Becky Miller
Cc: Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>; Miller, Becky (PC) <becky.miller@canada.ca>; Janssen, Michael (PC) <michael.janssen@canada.ca>
Subject: RE: Collaborative Planning Contract

Hi Becky,

Please see my Advisor's response below and the DSO contact information:

You will need to make your case on why the recommended security clauses are not applicable to the work. You could also try and state some of the security exemptions if applicable. Below are the three security exemptions. I believe if you can talk to the DSO they may have a better understanding of the work, such as your explanation below:

the contractor likely won't be coming to the SOC and data from Parks will not be transferred to the contractor. Rather, they will be generating their own data/information by facilitating Sidney Island community progress. That form is correct, the contractor won't be receiving classified or sensitive information.

1. Maintenance work being done outside Agency operational zones (operational zones are those areas normally restricted to Parks Canada staff);
2. Work being done under the supervision of an Agency-approved escort;
3. Purchase of a good with no installation or maintenance associated with the good.

"The field unit will either need to move forward under DSO recommendation or contact them to reach alternate security requirements agreement. We will require final direction from DSO for the file.

Unfortunately we cannot implement contract contrary to DSO direction"

Kevin Magny-Maloney

Agent en sécurité du personnelle
Parcs Canada / Gouvernement du Canada
30, rue Victoria (PC-04-G), 447, Gatineau, QC J8X 0B3
Kevin.Magny-Maloney@canada.ca / Tél: 819-938-0312

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Bernard Rioux

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www.parcscanada.gc.ca

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From: Becky Miller
Sent: August 10, 2020 2:57 PM
To: Tan, Adam (PC) <adam.tan@canada.ca>
Cc: Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>; Miller, Becky (PC) <becky.miller@canada.ca>; Janssen, Michael (PC) <michael.janssen@canada.ca>
Subject: Re: Collaborative Planning Contract

Hi Adam,

1. I don't necessarily think that reliability security clearance is needed - the contractor likely won't be coming to the SOC and data from Parks will not be transferred to the contractor. Rather, they will be generating their own data/information by facilitating Sidney Island community progress. That form is correct, the contractor won't be receiving classified or sensitive information. I can't find the email the form is referring to, don't know if it went exclusively to Mike.
We're going through acquiring clearance for another contract - I believe we have them fill out a few forms (personnel screening consent and authorization form, two pieces of ID, and references if necessary) and then submit through the security service desk portal (http://jira/servicedesk/customer/portal/14/create/281), correct?

2. Mike thinks that progress payments will be the best option due to the nature of the work. The community engagement process can be fairly fluid so milestone dates are often reshuffled or priorities reorganized. A 10% hold back works for us. For the progressive payments option, would we need to submit a table like the milestones table you provided?

3. The contractor will hold intellectual property.

Please let me know next steps and I'll get on them ASAP.

Cheers,
Becky

On Fri, Aug 7, 2020 at 12:22 PM Tan, Adam (PC) <adam.tan@canada.ca> wrote:

Hi all,

I have developed our solicitation documents I just need a couple things before we enter our tender period.

1. The DSO has come back with Personal Screening and security clauses required . Please see form attached. Do you have the corresponding email the Security form refers to? Have you gone through the process of gathering security screening for a contractor before? This can take a month of two for clearance. If you don't find that security is necessary for the kind of work you are looking for I can provide further direction.

2. How would you like payment to be made? I am thinking we can stick to milestones, however we need firm definitions thought-out the year. I could only find two. Attached is how we went out for milestones last year. Please feel free to add more defined milestones and the per cent allotted to each line item.

a. We could also just do progress payments if you are okay with dealing with a little bit more paperwork – you will need to track work progress and need to ensure whatever the Contractor submits as "progress" is invoiceable and you will pay for a portion of the total contract amount. With payment like this we need a hold back amount which is paid after everything is completed.

Milestone No.	Description	Firm Amount	Due Date
01	Written Report and presentation as per Annex A – Statement of work Section 3.2.1 Written recommendations on key individuals as per Annex A – Statement of work Section 3.2.2	%%%%	September 30, 2020
02			
03			
04			
05	Conclusion of continuous guidance and engagement processes Conclusion of design and implementation of engagement activities		June 30, 2020

3. Who is to own the Intellectual Property created by this contract? Contractor or PCA?

Thank you, hope to have this out next week,

Adam Tan

Contracting Officer / National Contracting Services Unit

Parks Canada Agency

National Contracting Services

220 - 4 Avenue S.E., suite 720

Calgary, AB T2G 4X3

adam.tan@canada.ca / Telephone: 587-436-5793 / Facsimile: 1-866-246-6893

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www.parcscanada.gc.ca

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From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: July 28, 2020 10:19 AM
To: Tan, Adam (PC) <adam.tan@canada.ca>; 'Becky Miller' <
Subject: RE: Collaborative Planning Contract

Thanks Adam,

Stephanie normally would be your point of contact, but best to work with Becky (cc'd) on this for the next couple weeks as Stephanie

Thank you!
Mike

Michael Janssen, MSc, PMP

A/Manager, Resource Conservation I A/Gestionnaire, Fonction de conservation des resources

Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf

s.19(1)

Parks Canada | Parcs Canada

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michael.janssen@canada.ca

Telephone | Téléphone (250) 418-5746 (**please note new phone number**)

www.parkscanada.gc.ca | www.parcscanada.gc.ca

Government of Canada | Gouvernement du Canada

Parks Canada - 450 000 km of memories / Parcs Canada - 450 000 km de souvenirs

From: Tan, Adam (PC) <adam.tan@canada.ca>
Sent: Tuesday, July 28, 2020 9:17 AM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>; 'Becky Miller'
Subject: RE: Collaborative Planning Contract

Hello Michael,

Thank you for following up, I believe I have everything moving forward. I will be in contact this week for development. We may be about to move to solicitation this week!

Will Stephanie Coulson be possibly taking over as previously stated?

Look forward to working on this with you,

Adam Tan

Contracting Officer / National Contracting Services Unit

s.19(1)

Parks Canada Agency

National Contracting Services

220 - 4 Avenue S.E., suite 720

Calgary, AB T2G 4X3

adam.tan@canada.ca / Telephone: 587-436-5793 / Facsimile: 1-866-246-6893

www.parkscanada.gc.ca

Parcs Canada

Service national de passation de marchés

220, 4e Avenue Est, bureau 720

Calgary AB T2G 4X3

adam.tan@canada.ca / Téléphone : 587-436-5793 / Télécopieur: 1-866-246-6893

www.parcscanada.gc.ca

Parks Canada - 450 000 km2 of memories / Parcs Canada - 450 000 km2 de souvenirs

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: July 28, 2020 10:12 AM
To: Tan, Adam (PC) <adam.tan@canada.ca>; 'Becky Miller' <
Subject: Collaborative Planning Contract

Hi Adam,

We submitted an RFQ procurement request for a collaborative planning contract that I believe went to you.

I wanted to follow up and make sure that you aren't waiting on us for anything?

Thank you!
Mike

Michael Janssen, MSc, PMP

s.19(1)

A/Manager, Resource Conservation I A/Gestionnaire, Fonction de conservation des resources

Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf

Parks Canada | Parcs Canada

2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6

michael.janssen@canada.ca

Telephone | Téléphone (250) 418-5746 (**please note new phone number**)

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Government of Canada | Gouvernement du Canada

Parks Canada - 450 000 km of memories / Parcs Canada - 450 000 km de souvenirs

--

Becky Miller, MSc

Acting Project Coordinator | Intérimaire Coordinateur de projet

Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6
PLEASE NOTE TEMPORARY EMAIL ADDRESS:
becky.miller@canada.ca
www.parkscanada.gc.ca | www.parcscanada.gc.ca
Government of Canada | Gouvernement du Canada

Parks Canada - 450 000 km2 of memories | Parcs Canada - 450 000 km2 de souvenirs

s.19(1)

Fur to Forest Finance Snapshot

Last Update: Sept 9 201

Goods and Services

Current Expenditures	63,864		
Pending Expenditures			
Collab Contract	150,000		
Veg Pulls	30,000		
Training	15,000		
Misc	100,000		
Total	295,000		
Current Commitments			
	committed	**forecasted actual expense**	
Training	3,376	0	can remove
Coastal Conservaition ammendme	30,763	30,763	
Coastal Conservaition ammendme	47,319	47,319	
HLRS	24,782	24,782	
WLC	15,240	0	can cancel
WLC	24,995	24,995	
	146,475	127,859	
	Difference:	18,616	

Budget	1,096,600
Expended	63,864
Pending spending	295,000
Committed (Actual)	127,859
Total	486,723
Variance	609,877

Salary and Wages

Budget	150,000	
Total Forecasted	86,978	
Additional Forecasted	104,528	
Forecast EDP	5,000	
Difference	-41,506	
Salary and Wages Transfer Costs		*20% of transfer costs
Forecasted	6,600	
Total Forcasted	203,106	

Total Forecasted Expenses	689,829	
Total Budget (2019/2020)	1,246,600	*We re-profiled $130,000
Balance	556,771	

I to move into 2019/2020 budget)

Public Works and Government Services Canada | Travaux publics et Services gouvernementaux Canada

Claim for Progress Payment
Demande de paiement progressif

If necessary, use form PWGSC-TPSGC 1112 to record detail costs
Si nécessaire, utiliser le formulaire PWGSC-TPSGC 1112 pour inscrire les coûts détaillés

Contractor's Name and Address Nom et adresse de l'entrepreneur	Claim No. N° de la demande	Date YYYY-MM-DD / AAAA-MM-JJ	Contract Price - Prix contractuel
Coastal Conservation, Inc. 775 Abbington Lane Tappen, BC V0E2X3	2020-29GUIS	2020-9-2	$396,259.00
	File No. - N° du dossier		Contract Serial No. N° de série du contrat 5P420-17-5313

Contractor's Procurement Business Number (PBN) Numéro d'entreprise-approvisionnement (NEA) de l'entrepreneur	Financial Code(s) - Code(s) financier(s)
846766715 (federal buisness number)	53470-2265-2103-20039144-22264

Contractor's Report of Work Progress (if needed, use additional sheets)
Compte rendu de l'avancement des travaux par l'entrepreneur (si nécessaire, utiliser des feuilles supplémentaires)

Holdback payment on contract for the period starting March 1 2018 and ending July 31, 2020. (see page 3 for details).

Period of work covered by the claim Période des travaux visée par la demande ▶ Mar 18-Aug 20 **Description:** (Expenditures must be claimed in accordance with the basis and/or method of payment of the contract) **Description** : (Les dépenses doivent être réclamées conformément à la base de paiement et (ou) à la méthode de paiement du contrat).	Current Claim Demande courante (A)	Tax Rate Taux de taxe	Previous Claims Demandes précédentes (B)	Tax Rate Taux de taxe	Total to Date Total à date (A + B)
Holdback payment	$ 24,756.43	5 %	$0.00	%	$24,756.43
	$ 0.00	5 %		0 %	
	$ 0.00	0 %		0 %	
	$ 0.00	5 %		0 %	
	$ 0.00	5 %		0 %	
	$ 0.00	5 %		0 %	
	$ 0.00	5 %		0 %	
	$ 0.00	5 %		0 %	
	$ 0.00	5 %		0 %	
	$ 0.00	5 %		5 %	
		%		%	
		%		%	
		%		%	
Contractor's GST No. N° de TPS de l'entrepreneur 81856 3512 RT0001 Subtotal Sous-total	$24,756.43				$24,756.43
Contractor's QST No. No. de TVQ de l'entrepreneur Applicable taxes Taxes applicables	$ 1,237.82				$ 1,237.82
Total	$ 25,994.25				$25,994.25
Less holdbacks on expenditures only (Applicable taxes excluded) Moins les retenues sur les dépenses uniquement (Taxes applicables en sus)	$0.00		$0.00		
Total Amount of Claim (including applicable taxes) Montant total de la demande (incluant les taxes applicables)	$25,994.25				$25,994.25

Percentage of the work completed Pourcentage des travaux achevés	Current Claim Demande courante	Amount due Montant dû
60.74 %	▶	$25,994.25

A0057893_1-000358

Canada

Claim No. N° de la demande	Contract Serial No. N° de série du contrat

CERTIFICATE OF CONTRACTOR

I certify that:

- All authorizations required under the contract have been obtained. The claim is consistent with the progress of the work and is in accordance with the contract.
- Indirect costs have been paid for or accrued in the accounts.
- Direct materials and the subcontracted work have been received, accepted and either paid for or accrued in the accounts following receipt of invoice from supplier/subcontractor, and have been or will be used exclusively for the purpose of the contract.
- All direct labour costs have been paid for or accrued in the accounts and all such costs were incurred exclusively for the purpose of the contract;
- All other direct costs have been paid for or accrued in the accounts following receipt of applicable invoice or expense voucher and all such costs were incurred exclusively for the purpose of the contract; and
- No liens, encumbrances, charges or other claims exist against the work except those which may arise by operation of law such as a lien in the nature of an unpaid contractor's lien and in respect of which a progress payment and/or advance payment has been or will be made by Canada.

ATTESTATION DE L'ENTREPRENEUR

J'atteste que :

- Toutes les autorisations exigées en vertu du contrat ont été obtenues. La demande correspond à l'avancement des travaux et est conforme au contrat.
- Les coûts indirects ont été réglés ou portés aux livres.
- Les matières directes et les travaux de sous-traitance ont été reçus, et le tout a été accepté et payé, ou encore porté aux livres après réception de factures envoyées par le fournisseur ou le sous-traitant; ces matières et ces travaux ont été ou seront utilisés exclusivement aux fins du contrat.
- Tous les coûts de la main-d'oeuvre directe ont été réglés ou portés aux livres et tous ces coûts ont été engagés exclusivement aux fins du contrat.
- Tous les autres coûts indirects ont été réglés ou portés aux livres après réception des factures ou pièces justificatives pertinentes et tous ces coûts ont été engagés exclusivement aux fins du contrat.
- Il n'existe aucun privilège ni demande ou imputation à l'égard de ces travaux sauf ceux qui pourraient survenir par effet de la loi, notamment le privilège d'un entrepreneur non payé à l'égard duquel un paiement progressif et(ou) un paiement anticipé a été ou sera effectué par le Canada.

Contractor 's Signature - Signature de l'entrepreneur	Title - Titre	Date (YYYY-MM-DD / AAAA-MM-JJ)
	Program Director	2020-9-2

Check the box if the claim is being made with respect to advance payment provisions included in the basis of payment of the contract. ☐

Cocher la case si la demande est faite en rapport avec les dispositions relatives aux paiements anticipés qui se trouvent dans la base de paiement du contrat.

This claim, or a portion of this claim, is for an advance payment.

Cette demande, ou une partie de cette demande, est pour un paiement anticipé.

I certify that:

- The funds received will be used solely for the purpose of the contract and attached is a complete description of the purpose to which the advance payment will be applied.
- The amount of the payment is established in accordance with the conditions of the contract.
- The contractor is not in default of its obligations under the contract.
- The payment is related to an identifiable part of the contractual work.

J'atteste que :

- Les fonds reçus ne serviront uniquement qu'aux fins du contrat; ci-joint est une description complète des fins auxquelles le paiement anticipé sera utilisé.
- Le montant du paiement est établi conformément aux conditions du contrat.
- L'entrepreneur n'a pas manqué à ses obligations en vertu du contrat.
- Le paiement porte sur une partie identifiable des travaux précisés dans le contrat.

Contractor 's Signature - Signature de l'entrepreneur	Title - Titre	Date (YYYY-MM-DD / AAAA-MM-JJ)

CERTIFICATES OF DEPARTMENTAL REPRESENTATIVES

Scientific/Project/Inspection Authority: I certify that the work meets the quality standards required under the contract, and its progress is in accordance with the conditions of the contract.

Inspection Authority (all other contracts): I certify that the quality of the work performed is in accordance with the standards required under the contract.

ATTESTATIONS DES REPRÉSENTANTS DU MINISTÈRE

Autorité scientifique ou responsable du projet / de l'inspection : J'atteste que les travaux sont conformes aux normes de qualité exigées en vertu du contrat et que leur avancement est conforme aux conditions du contrat.

Responsable de l'inspection (tous les autres contrats) : J'atteste que la qualité des travaux exécutés est conforme aux normes exigées en vertu du contrat.

Signature of Scientific / Project / Inspection Authority Signature de l'autorité scientifique ou responsable du projet / de l'inspection	Date (YYYY-MM-DD / AAAA-MM-JJ)

PWGSC Contracting Authority: I certify that, to the best of my knowledge, the claim is consistent with the progress of the work and is in accordance with the contract. This claim, however, may be subject to further verification and any necessary adjustment before final settlement.

Autorité contractante de TPSGC : J'atteste, au meilleur de ma connaissance, que la demande correspond à l'avancement des travaux et est conforme au contrat. Toutefois, cette demande pourrait faire l'objet d'une autre vérification et de tout rajustement nécessaire avant le règlement final.z

Contracting Authority Signature de l'autorité contractante	Title - Titre	Date (YYYY-MM-DD / AAAA-MM-JJ)

Client's Authorized Signing Officer - (must sign the interim claim): I certify that the claim is in accordance with the contract.

Signataire autorisé du client - (doit signer la demande provisoire) : J'atteste que la demande est conforme au contrat.

Client Signature du client	Title - Titre	Date (YYYY-MM-DD / AAAA-MM-JJ)

Client's Authorized Signing Officer - (must sign the final claim): I certify that all goods have been received and all services have been rendered, that the work has been properly performed and that the claim is in accordance with the contract.

Signataire autorisé du client - (doit signer la demande finale) : J'atteste que tous les biens ont été reçus, que tous les services ont été rendus, que tous les travaux ont été exécutés convenablement, et que la demande est conforme au contrat.

Client Signature du client	Title - Titre	Date (YYYY-MM-DD / AAAA-MM-JJ)

Gulf Island Contract - Total Invoice amounts vs holdback

Year	Month	10% holdback on SUBTOTAL	Comments
2018	March	$252.90	
	April	$654.39	
	May	$1,779.90	
	June	$845.50	
	July	$1,113.27	
	August	$2,826.40	
	September	$5,117.54	
	October	$1,278.13	
	November	$185.00	
	December	$269.50	
2019	January	$1,111.42	
	February	$687.25	
	March	$0.00	No invoice submitted
	April	$393.25	
	May	$1,167.58	
	June	$724.50	
	July	$832.29	
	August	$443.15	
	September	$967.97	
	October	$483.52	
	November	$815.97	
	December	$100.00	
2020	January	$100.00	
	February	$434.50	
	March	$451.75	
	April	$517.25	
	May	$469.00	
	June	$534.50	
	July	$200.00	
	TOTAL	$24,756.43	

Mcpherson, Michèle (PC)

From: Janssen, Michael (PC)
Sent: Thursday, September 17, 2020 10:48 AM
To: Michielssen, Suzan (PC)
Subject: RE: COASTAL CONSERVATION HOLD BACK
Attachments: Coastal Conservation Invoice 2020-29GUIS September 2020.pdf; Amd PO 45400472_C. Amend 06.pdf; Sig. C. Amend 06-17-5313.pdf

Hi Sue,
Please find attached the revised invoice and contract.
Thank you very much!
Mike

Michael Janssen, MSc, PMP
Project Coordinator | Coordinateur de projet
Gulf Islands National Park Reserve | Réserve de parc national des îles-Gulf
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6
michael.janssen@canada.ca
Telephone | Téléphone (250) 418-5746 (**please note new phone number**)
www.parkscanada.gc.ca | www.parcscanada.gc.ca
Government of Canada | Gouvernement du Canada

Parks Canada - 450 000 km of memories / Parcs Canada - 450 000 km de souvenirs

From: Michielssen, Suzan (PC) <suzan.michielssen@canada.ca>
Sent: Thursday, September 17, 2020 10:15 AM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>
Subject: RE: COASTAL CONSERVATION HOLD BACK

Hi Michael,

I received a note in the I2P system from Heather requesting an actual invoice including the amended amount.

Sue

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: Thursday, September 17, 2020 8:48 AM
To: Michielssen, Suzan (PC) <suzan.michielssen@canada.ca>
Subject: RE: COASTAL CONSERVATION HOLD BACK

Thank you Sue,
I'll take care of it ☺
mike

Michael Janssen, MSc, PMP
Project Coordinator | Coordinateur de projet

Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6
michael.janssen@canada.ca
Telephone | Téléphone (250) 418-5746 (**please note new phone number**)
www.parkscanada.gc.ca | www.parcscanada.gc.ca
Government of Canada | Gouvernement du Canada

Parks Canada - 450 000 km of memories / Parcs Canada - 450 000 km de souvenirs

From: Michielssen, Suzan (PC) <suzan.michielssen@canada.ca>
Sent: Thursday, September 17, 2020 8:23 AM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>
Subject: FW: COASTAL CONSERVATION HOLD BACK

Good morning Michael,

I received the email below from Heather in Cornwall with respect to the holdback for Coastal Conservation. The total below reflects the amount she has posted in the holdback account.
The invoice was for $24,756.43, leaving the holdback account short by $4.87.
I'm not sure what Heather is referring to when she says it is out by a penny.

Sue

From: Goring-Goodfellow, Heather (PC) <heather.goring-goodfellow@canada.ca>
Sent: Thursday, September 17, 2020 8:16 AM
To: Michielssen, Suzan (PC) <suzan.michielssen@canada.ca>
Subject: COASTAL CONSERVATION HOLD BACK

HI Sue,
This is what I have held back:

G/L Account 41007 M/M - Contractor Holdbacks
Company Code 1240

S	Reference	CDO #	Doc. Date	DocumentNo	Posting Date	Doc. Type
	PP1 2018-1GUIS	0690	03.04.2018	5100553490	06.06.2018	RE
	PP2 2018-1GUIS	0690	01.05.2018	5100553491	06.06.2018	RE
	PP3	0690	01.06.2018	5100554414	19.06.2018	RE
	PP4 20184GUIS	0605	12.07.2018	5100556620	16.07.2018	RE
	2018-5GUIS	0605	01.08.2018	5100558951	07.08.2018	RE
	2018-6GUIS PP6	0605	04.09.2018	5100562354	11.09.2018	RE
	2018-7 GUIS PP7	0605	02.10.2018	5100565745	16.10.2018	RE
	PP8	0605	01.11.2018	5100568925	20.11.2018	RE
	COASTAL CON PP9	0605	03.12.2018	5100571995	20.12.2018	RE
	PP10	0605	07.01.2019	5100574646	25.01.2019	RE
	PP11	0605	04.02.2019	5100576518	14.02.2019	RE
	PP12	0690	04.03.2019	5100578794	13.03.2019	RE
	PP13	0605	01.05.2019	5100585214	22.05.2019	RE
	PP14	0605	04.06.2019	5100586908	17.06.2019	RE
	PP16	0605	02.07.2019	5100590427	24.07.2019	RE
	PP16	0605	01.08.2019	5100592746	15.08.2019	RE
	PP17	0605	06.09.2019	5100596066	17.09.2019	RE
	PP18	0605	03.10.2019	5100598400	10.10.2019	RE
	5P420-17-5313	0605	04.11.2019	5100602433	21.11.2019	RE
	PP#20	0605	02.12.2019	5100604655	16.12.2019	RE
	PP22	0605	02.02.2020	5100610702	20.02.2020	RE
	PP21	0605	06.01.2020	5100611706	02.03.2020	RE
	2020-24GUIS	0690	01.04.2020	5100616695	31.03.2020	RE
	2020-23GUIS	0690	05.03.2020	5100616992	31.03.2020	RE
	PP25	0605	04.05.2020	5100617852	06.05.2020	RE
	PP26	0605	01.06.2020	5100619429	04.06.2020	RE
	PP 27	0605	02.07.2020	5100621403	08.07.2020	RE
	PP 28	0605	31.07.2020	5100623392	05.08.2020	RE
	Account 41007					

There is a penny difference too (can't remember what line), which accounts for the total difference. Can you please pass this on and get the claim changed. As I said, ideally, an invoice is preferable to the claim form.

Thanks

Heather Goring-Goodfellow

Accounting Assistant, Comptroller Branch/Aide-Comptable, direction de la fonction du contrôleur
Chief Financial Officer Directorate/Direction Générale du Dirigeant principale des finances
Parks Canada Agency/Agence Parc Canada
111 Water St., E
Cornwall, ON K6H 6S2
T: (613) 938-5756
F: (613) 937-1309
Parks Canada - 450 000 km2 of memories/Parcs Canada – 450 000 km2 de souvenirs

CONTRIBUTION AGREEMENT

Parks Canada General Class Contributions Program

Introduction

Contributions are used to help the Agency achieve its objectives through third parties that has a vested interest in Parks Canada's mandate and mission. Contributions are used to support specific activities that extend our scarce resources by leveraging our funds with those of others, and to support projects where we do not have the expertise or where others share jurisdiction. The recipient uses the contribution directly or indirectly to produce goods and services for the ultimate client of the program, the People of Canada. The recipient must retain ownership of the project and manage it in accordance with the terms stipulated in the contribution agreement.

This document is your template for producing a contribution agreement under Parks Canada's General Class Contribution Program (GCCP). Before using the template, you should review the GCCP terms and conditions (link) to ensure that your proposed contribution fits within the parameters of the program (that the project is eligible for funding, that the recipient is eligible to receive funding, etc.). It is recommended that you always consult with members of the Centre of Expertise on Grants and Contributions before starting the contribution process to ensure that you are using the correct financial instrument: pc.contributions.pc@canada.ca.

Using this Template

To create a contribution agreement from this template, simply do the following:

1. Delete this page
2. Replace the red text with information specific to your project (in black text, no italics).
3. *Red italic text* is only required under certain circumstances. Some sections include sample wording for different situations. Please choose the appropriate text and delete the alternative text that does not apply.
4. *Text in purple italics* contains instructions that should be deleted.
5. Text in black should normally not be changed. If you change any black text, please add a comment with an explanation for the contribution team to review.
6. Bear in mind that a contribution agreement is a legally binding document outlining the relationship between Parks Canada and an external party, and defining each party's obligations. It should not include any information that should remain internal to Parks Canada.
7. **No changes** should be made to the General Clauses, without legal review. If you have any issues with these clauses, please consult first with the contributions team. If changes are found necessary to reflect a particular situation, the originator who drafted the contribution agreement will need to seek advice from legal services (ec.legalparcs-legalparks.ec@canada.ca) and provide a copy of the legal advice to the contributions team.

Risk Assessment

All contributions up to $25,000 are considered to be low risk. To determine the risk level consult the Risk Assessment Tool for contributions over $25,000 (click here for the template). Some of the agreement clauses, in particular related to frequency of advances, holdback amount, and reporting requirements, are based on the risk level of the initiative.

Other templates related to contribution agreements can be found in the Contribution Agreement Approval Process document under the GCCP (link). For additional information please consult the General Information on Contributions (link) or contact the contributions team at pc.contributions.pc@canada.ca

Canada

Parks Canada Parcs Canada

CONTRIBUTION AGREEMENT – GC-XXX

Parks Canada General Class Contributions Program

[NOTE: REMOVE ALL ITALICS AND RED TEXT, AND DELETE ALL PURPLE TEXT PRIOR TO SUBMITTING]

This Contribution Agreement ("Agreement") made in duplicate on _____.
(leave this blank. Once the agreement has been signed, write in date of last signature of the Agreement).

BETWEEN: Parks Canada Agency a body corporate established under section 3 of the *Parks Canada Agency Act* ("Parks Canada") represented by the Chief Executive Officer;

AND: Sallas Forest Strata Corporation ("the Recipient"), a legal entity having its head office / principal place of business at:
Insert address

WHEREAS the Recipient wishes to implement a project or initiative ("Project") as described in Annex "B";

AND WHEREAS Parks Canada wishes to make a contribution to the Recipient toward the implementation of the Project entitled Sidney Island Ecological Restoration Project.

Therefore, Parks Canada and the Recipient agree as follows:

1. Purpose and Maximum Amount of Contribution

1.1 Parks Canada hereby makes a contribution to the Recipient ("contribution") solely for the implementation of the Project in accordance with the terms specified in this Agreement.

1.2 Subject to the terms of this Agreement, Parks Canada agrees to make a contribution to the Recipient of an amount not exceeding $45,000 over fiscal years 2020-21 *to 2021-22* towards the eligible expenditures as described in Annex A of this Agreement.

(Note: Delete 1.2.1 and 1.2.2 for single-year contributions).
1.2.1 The maximum amount payable by fiscal year is as follows:
2020-21: $15,000;
2021-22: $30,000;

1.2.2 The maximum amount payable by fiscal year may be modified by amending the Contribution Agreement.

2. Payment

CONTRIBUTION AGREEMENT – GC-XXX

Parks Canada General Class Contributions Program

(NOTE: *Preference is to reimburse expenses after they are incurred by the Recipient, however advances can be provided if the Recipient would be unable to implement the project without advances. Payment terms should be in accordance with the risk level of the Recipient and project, as determined by the Risk Assessment Tool.)*

In consideration of the implementation of the Project and the fulfillment of all of the Recipient's other obligations pursuant to this Agreement, Parks Canada agrees to pay a contribution to the Recipient in accordance with the following:

(Select the appropriate option, in its entirety, and delete all of the others. Should you need a different payment arrangement, please discuss with the Contributions team)

2.1 Upon receipt of a request for advance payment, Parks Canada agrees to provide an initial advance of up to $15,000 covering the cash flow requirements of the Recipient for the Project for fiscal year 2020-21. *(Cash amount required for the remainder of year 1 of the agreement – this amount should be listed 1.2.1, 1st FY)*

2.2 Parks Canada agrees to provide a second advance in 2021-22 covering the cash flow requirements of the Recipient for the Project for the fiscal year. The advance will be for an amount of up to $25,000. A holdback of $5,000 *(Suggested holdback is 5% of the annual amount for a low-risk project, 10% of the annual amount for a medium-risk project, and 10% of the overall project value for a high-risk project)* is to be released upon completion of the project by the Recipient. *(Amount of advance plus holdback should be listed 1.2.1, 2nd FY)*

2.3 If the amount of the advances exceeds the eligible costs incurred for which the advance was approved, the Recipient shall reimburse the difference to Parks Canada or Parks Canada shall recover the surplus from any sums payable to the Recipient, at Parks Canada's discretion.

2.4 Advance payments made during a fiscal year will not exceed the Recipient's estimated cash flow requirements with respect to Parks Canada's share of eligible expenditures incurred by the Recipient in that fiscal year. However, an advance payment may be made in one fiscal year to cover Parks Canada's share of expected eligible expenditures to be incurred by the Recipient during the month of April of the following fiscal year.

2.5 On or before January 1, 2022 *(at least one month before the end of the agreement)*, the Recipient shall submit to Parks Canada's satisfaction a request for a final payment of up to $5,000 *(amount of holdback in 2.2)* accompanied by final financial and final narrative

reports as described in Annex B. Upon Parks Canada's approval of the final reports, Parks Canada will release the final payment under this Agreement.

2.6 All payment requests should include the Recipient's name and address, the Agreement number, the type of payment (advance or final payment) and the period covered. Advance requests must be accompanied by an estimate of eligible costs to be incurred during the period of the advance.

3. Duration

This Agreement comes into effect on the date of signature of both parties. Unless sooner terminated as provided for in the Agreement, the Agreement shall remain in effect until April 30, 2022 *(This should be at least one month after receipt of the final report and payment request, and can be no later than April 30, 20YY for projects ending in FY 20XX-YY).*

Note: An agreement that has terminated cannot be amended. Therefore, the duration chosen should include enough flexibility to allow for the amendment of the agreement if there are any delays in the submission of reports.

4. Applicable Laws

This Agreement shall be governed by and construed in accordance with the laws in force in the Province of British Columbia and the laws of Canada if applicable.

5. Notice or Communication

Any notice, information or document required under this Agreement shall make reference to the title of the Project and be given if it is delivered, sent by facsimile, email or mail (stamped or prepaid). Any notice delivered, sent by facsimile or e-mail shall be deemed to have been received one working day after it is sent. Any notice that is mailed shall be deemed to have been received eight (8) calendar days after it is mailed.

Either Party may change the address shown in this Agreement by informing the other Party of the new address, and such change shall take effect fifteen (15) days after the notice is received.

All notices must be sent to the following addresses:

To Parks Canada: Name
Title
Address

Facsimile
E-mail
Telephone number:

To the Recipient: Name
Title
Address
Facsimile
E-mail
Telephone number:

6. Public Acknowledgement

In any promotion programs, advertising and publicity for the activities funded under this Agreement, acknowledgement shall be given to Parks Canada in a manner reflecting Canada's contribution. This acknowledgement shall be in both official languages, where possible. Timing and location of recognition events will be agreed to between the two Parties. Parks Canada reserves the right to waive this requirement at its discretion.

The Recipient's name, the amount of the contribution and the general nature of the activities supported may be made publicly available by the Government of Canada.

7. Evaluation

The Recipient will cooperate fully with Parks Canada to provide all required information that may be necessary for the proper conduct of any evaluation of the contribution. The criteria to be used to assess the effectiveness of the contribution relative to its objectives will be determined by Parks Canada.

8. Entire Agreement

This Agreement together with Annexes "A", "B", and the "General Clauses" constitute the entire Agreement between the Parties with respect to the Project and supersede all previous negotiations and communications and other agreements relating to it, unless they are expressly incorporated by reference.

9. Signatures

Signed on behalf of **Recipient**:

Signature_____ Date_____

CONTRIBUTION AGREEMENT – GC-XXX

Parks Canada General Class Contributions Program

Name: _____ Title: _____
(if signatory name/title is known in advance, enter them here. Else, leave blank for them to be added (printed) when signed.)

Signed on behalf of the **Parks Canada Agency**:

Signature_____ Date_____

Name: Insert name Title: Director/FUS, Business Unit

Note: Parks Canada should always be the last party to sign the agreement. It should only be signed once the contribution has been approved. The agreement can be signed by the relevant FUS/Director, even if the approval is at a higher level via the Briefing Note. It should only be signed at a higher level (ED/VP) if there is a specific reason.

CONTRIBUTION AGREEMENT – GC-XXX

Parks Canada General Class Contributions Program

ANNEX A

A.1 ESTIMATE OF ELIGIBLE EXPENDITURES

2020-21 *(If activities and amounts vary from year to year, add additional tables for each FY)*

Project Activity Breakdown	**Parks Canada**	**Recipient**	**Project Total**
	Dollar Amount	Dollar Amount	Dollar Amount
Community Coordinator	$10,000		
Project Meetings	$5,000		
Activity 3			
Total			

2021-22

Project Activity Breakdown	**Parks Canada**	**Recipient**	**Project Total**
	Dollar Amount	Dollar Amount	Dollar Amount
Community Coordinator	$10,000		
Project Meetings	$5,000		
Activity 3			
Total			

Note: For the Recipient and Other Funding sources, include both cash and in-kind contributions. Identify in-kind contributions with (in-kind). Add up cash contributions separately from in-kind contributions in the Project Total column. Note that Parks Canada does not provide in-kind contributions.

If the risk level of the project has been assessed as medium or high risk, consider providing funding for an independent financial verification and certification of project costs for the final financial attestation (see clause under the Reporting section in Annex B)

Other Funding Sources: Delete this column if the Parks Canada contribution does not exceed $100,000 and include all non-PCA funding under "Recipient"

Parks Canada has the authority to contribute a modest percentage of direct costs (10-15%) to cover a recipient's overhead or indirect costs, however, overhead expenses should usually be considered part of the Recipient's contribution to the project and not an item for reimbursement by Parks Canada. If you are covering overhead costs, insert a sub-total for direct project costs

and calculate the overhead amount. If we are ***not*** *covering overhead costs, delete these two rows (sub-total and overhead).*

A.2 LIST OF ELIGIBLE EXPENDITURES

A list of eligible expenditures must be detailed in every contribution agreement. The expenditures listed must be auditable, i.e., the Recipient must be able to provide evidence that the amounts were spent in furtherance of the objectives of the project. The following is a list of common eligible expenditures. Should any of these ***not*** *be applicable for this agreement, please remove them.*

The following expenditures for the implementation of the Project described in this Agreement are eligible for reimbursement by Parks Canada:

(A) Remuneration: Rate (per hour, day, month or year) applicable to employees of the Recipient for time spent working on the implementation of the Project. Rates include:

- (i) Direct salaries: actual sums paid to employees for the time directly spent on the implementation of Project activities described in the Agreement and not exceeding the market rates for the specific type of services;
- (ii) Fringe benefits including paid absences for statutory holidays, annual vacation and sick leave at the rate the paid leave is earned and not at the point of consumption; and
- (iii) Paid benefits such as the employer's contribution to employment insurance and workers' compensation plans (where applicable), etc. in accordance with the Recipient's policies.

(B) Reimbursable expenditures: The following actual and reasonable expenditures directly related to the implementation of the Project:

- (i) Actual cost of subcontractor's fees. Individual rates shall not exceed the market rates that apply to the specific type of service;
- (ii) Actual and reasonable honoraria costs;
- (iii) Actual and reasonable travel costs not exceeding the rates permissible under the Treasury Board travel policy;
- (iv) Actual costs arising from the purchase, rental, maintenance and transportation of goods, equipment, vehicles and supplies;
- (v) Communication costs, such as telephone, facsimile, mail and messenger services, translation and word processing costs, printing and production costs (such as photocopying, printing, etc.); and
- (vi) Other actual expenses required to implement the Project as approved in advance by Parks Canada.

The Recipient shall not include profit, directly or indirectly, in the calculation of remuneration or in any other of the costs except when the profit is included in an acceptable subcontractor agreement with a for-profit entity with which the Recipient does not hold any direct or indirect interest.

Parks Canada will not contribute to the indirect costs of the Recipient such as a general administrative or overhead cost applied as a percentage to other project expenses.

Expenditures incurred before the signing of the Agreement are not eligible for reimbursement. ***(If you are covering costs incurred prior to the signing of the agreement, change wording to "Expenditures incurred since DATE are eligible for reimbursement".*** *(This should only be used in exceptional circumstances. If you include this, you must include the retroactive date in the "Agreement Particulars" section of the Contribution Approval Form, and justify in the briefing note as to why a CA was not put in place prior to incurring expenses and why expenditures for this period should be covered.)*

A.3 OTHER SOURCES OF FUNDING FOR THE PROJECT

In addition to Parks Canada's contribution, the Recipient undertakes to contribute an amount of $XXX in kind from its own funds or other sources for the implementation of the Project. *This amount (specify if in-cash and/or in-kind) should be included in the Recipient column in A.1. and cover the same period, either the total project budget or the amount per fiscal year. This amount reflects estimates by the Recipient and includes their own funds and any other sources of funding. If none, insert $0.)*

Where the Recipient receives additional funding for the same expenses as referred to above, Parks Canada may at its discretion: (a) reduce the contribution by such amount as it considers appropriate, up to the amount of additional funding received; or (b) if the contribution has already been paid, require repayment of a portion or all of the contribution, as it considers appropriate.

The Recipient shall repay all amounts claimed pursuant to the paragraph above, within the time specified in the notice requesting such repayments. The amounts that the Recipient shall repay pursuant to this paragraph constitute debts to Her Majesty.

CONTRIBUTION AGREEMENT – GC-XXX

Parks Canada General Class Contributions Program

ANNEX B

Use Annex B to provide a description of the purpose of the contribution and the activities, project or initiative being funded, and the results to be achieved ***by the Recipient****. The results expected should be those that are within the reasonable control of the Recipient and should be stated at a level that will support accountability and performance measurement.*

Project Description

This contribution supports the participation of the Sidney Island community in the Sidney Island Ecological Restoration Project.

Background

Parks Canada, together with the Sidney Island community, participating First Nations, and Island's Trust Conservancy are co-developing a multi-jurisdictional forest restoration project. The goal of the project is to work respectfully towards a healthy, sustainable and balanced native forest ecosystem on Sidney Island. The objectives of the project include the removal of invasive fallow deer, co-development of a forest restoration strategy, and co-development of a viable management strategy for black-tailed deer. All project participants have expressed a desire to work collaborative towards these shared restoration objectives.

Parks Canada Agency Result Supported by this Project

Canada's natural heritage is protected for future generations.

Expected Results

- Incorporation of the values, perspectives and knowledge of the Sallas community in collaborative development of the multi-jurisdictional Sidney Island Ecological Restoration Project.

Key Activities

- Facilitate the participation of the Sidney Island Community in the Sidney Island Ecological Restoration Project, including:
    - Coordinate and support meetings and events such as focus groups, engagement sessions, and project planning sessions.
    - Coordinate representation of the Sidney Island community on the project steering committee and the project's two technical working groups.
    - Support Sallas Strata Council discussion regarding the Sidney Island Ecological Restoration Project
- Facilitate project related communication between the Sidney Island community, Sallas Strata Council, Steering Committee, and technical working groups.

Reporting

No later than 30 days before the end of the Agreement, the Recipient will submit to Parks Canada a final narrative project report summarizing the activities conducted and results achieved, and a final financial report detailing all project expenditures incurred for the Project.

CONTRIBUTION AGREEMENT – GC-XXX

Parks Canada General Class Contributions Program

GENERAL CLAUSES

The "General Clauses" shall form an integral part of this Agreement.

1. DEFINITIONS

1.1 "Agreement" means the Contribution Agreement; the "General Clauses" and such amendments and appendices which are or may be expressed to form part of the Agreement;

1.2 "Recipient" means the organization or person receiving the contribution and being responsible for the performance and administration of the Agreement;

1.3 "Financial Audit" means any examination of the accounts and records of a "Recipient" or other information deemed necessary in the circumstances;

1.4 "Fiscal Year" refers to the fiscal year of the Government of Canada spanning April 1 of one year until March 31 the following year.

2. REPRESENTATIONS BY THE RECIPIENT

2.1 The Recipient represents:

2.1.1 that it has the capacity and authority to enter into this Agreement to carry out the Project and that it knows of no reason, fact or event, current, imminent or probable, that would diminish this capacity and authority;

2.1.2 that payments to the Recipient by way of advance payments are essential for the timely carrying out of the Project;

2.1.3 that it is in compliance with the laws that govern it;

2.1.4 that it has no interest, pecuniary or otherwise, in any business matter that would put it in an actual or apparent conflict of interest in carrying out the Project.

3 AMENDMENTS

3.1 This Agreement may be amended by the mutual written consent of the Parties. To be valid, any amendment to this Agreement shall be in writing and signed by the Parties within the duration of the Agreement.

4 ADVANCE PAYMENTS

4.1 Where the terms of the Agreement permit advance payments to be made, such advance payments shall be considered debts owed to Canada until such time as the Recipient has accounted for the said advance payments in accordance with the terms of the Agreement and to Parks Canada's satisfaction.

4.2 Advance payments made under this Agreement shall be deposited in an interest-bearing bank account of a commercial banking establishment and accounted for separately by the Recipient. Interest on outstanding balances will be calculated and compounded monthly in accordance with the Treasury Board *Interest and Administrative Charges Regulations.* Any interest accumulated by the Recipient is to be used for activities related to the achievement of project results or be subtracted from the maximum amount payable under this Agreement.

5 OVERPAYMENT

5.1 In the event that payments made to the Recipient under this Agreement exceed the amount thereof required or expended by the Recipient in accordance with this Agreement, any such surplus is payable forthwith to Parks Canada. Where any surplus payable has not been repaid,

5.1.1 an amount equal to the surplus may be retained by way of deduction from or set-off against any sum of money that may be due or payable to the Recipient; or

5.1.2 the Recipient shall repay all amounts claimed pursuant to paragraph 5.1, within the time specified in the notice requesting such repayments. The amounts that the Recipient shall repay pursuant to paragraph 5.1 constitute debts to Her Majesty. The Recipient shall issue repayment cheques to the Receiver General of Canada and forward them to Parks Canada. Interest will be charged on all overdue repayments in accordance with the Treasury Board *Interest and Administrative Charges Regulations.*

6 DISPOSAL OF ASSETS

6.1. The Recipient agrees that, at the end of the Project or upon termination of this Agreement if earlier, and if directed to do so by Parks Canada, any capital assets that have been preserved by the Recipient shall be:

6.1.1 sold at fair market value and the funds realized from such a sale applied to the eligible expenditures of the Project to offset its contribution to the eligible costs of the Project;

6.1.2 turned over to another organization or person designated or approved by Parks Canada; or

6.1.3 disposed of in such other manner as may be determined by Parks Canada.

6.2 Any intellectual property created as a result of this Project will remain the property of the Recipient.

7 MEMBERS OF THE SENATE OR THE HOUSE OF COMMONS

7.1 No member of the Senate or the House of Commons shall be admitted to any share or part of the Agreement, or to any benefit arising from it, that is not otherwise available to the general public.

8 ASSIGNMENT

8.1 The Recipient shall not assign this Agreement or any part thereof or any payments to be made thereunder without the written permission of Parks Canada, but nothing shall preclude the Recipient from enlisting the assistance of others in carrying out the obligations under this Agreement.

9 RELATIONSHIP

9.1 The Parties acknowledge that no principal-agent, employer-employee, partnership or joint venture relationship is created by virtue of this Agreement. The Recipient will not represent itself as an agent, employee or partner of the Crown, including in any agreement with a third party.

10 CERTIFICATION - CONTINGENCY FEES

10.1 The Recipient certifies that it has not directly or indirectly paid or agreed to pay any covenants that it will not directly or indirectly pay a contingency fee for the solicitation, negotiation or obtaining of this Agreement to any person other than an employee acting in the normal course of the employee's duties. All accounts and records pertaining to payments of fees or other compensation for the solicitation, obtaining or negotiation of the Agreement shall be subject to the Accounts and Audit provisions of the Agreement.

10.2 If the Recipient certifies falsely under this section or is in default of the obligations contained therein, Parks Canada may either terminate this Agreement for default as per the provisions of the Agreement or recover from the Recipient by way of reduction to the contribution or otherwise the full amount of the contingency fee.

11 APPLICABLE LEGISLATION

11.1 The Recipient shall ensure that the activities or programs will be conducted in compliance with applicable laws.

11.2 The Recipient agrees to comply with the spirit and intent of the *Employment Equity Act* and the *Canadian Multiculturalism Act*.

11.3 The Recipient agrees to comply with the spirit and intent of Part VII of the *Official Languages Act* of Canada.

11.4 The Recipient shall ensure that the Recipient or any person lobbying on behalf of the Recipient to obtain funding is in compliance with the *Lobbying Act*.

11.5 The Recipient shall meet any applicable requirements of the *Impact Assessment Act*.

11.6 The Recipient shall ensure that any information which may be brought to the attention of the Recipient and its employees or agents will be dealt with according to the provisions of the *Privacy Act*.

12 CONFIDENTIALITY

12.1 The Recipient shall ensure that any information of a confidential nature, relating to the affairs of Parks Canada, or Her Majesty, to which the Recipient or its officers, servants or agents become privy, shall be treated as confidential and shall not disclose such information to third parties without obtaining the prior written consent of Parks Canada.

13 CONFLICT OF INTEREST

13.1 The Recipient confirms that no current or former federal public servant or public office holder to whom the *Conflict of Interest Act*, *Conflict of Interest and Post-Employment Code for Public Office Holders* or *The Values and Ethics Code for the Public Service* applies shall derive direct benefit from this Agreement, unless the provision or receipt of such benefits is in compliance with such legislation and codes.

13.2 The Recipient shall at no time during the duration of this Agreement pursue interests that are inconsistent with the interests served by this Agreement.

14 OBLIGATIONS OF THE RECIPIENT

14.1 During the term of this Agreement the Recipient shall:

14.1.1 take all necessary action to maintain itself in good standing, to preserve its legal capacity and to inform Parks Canada without delay of any failure to do so;

14.1.2 complete the Project and take all necessary action to carry it out successfully within the limits and the agreed budget in accordance with good business practice and using qualified staff;

14.1.3 disclose to Parks Canada, without delay, any fact or event that would or might compromise the Project's chance of success or its ability to carry out any of the terms and conditions of this Agreement, either immediately or in the long term, including, but not limited to, pending or potential lawsuits and audits;

14.1.4 in the acquisition of assets and the letting of service contracts for the execution of the Project, the Recipient shall call upon professionals, merchants and subcontractors to the extent that they are competitive and available; and

14.1.5 declare any amounts owing to the federal government under legislation or contribution agreements and recognize that amounts due to the Recipient may be set-off against amounts owing to the government.

14.2 The Recipient agrees to give access to Parks Canada and/or its representatives as well as to representatives of the Auditor General of Canada to visit the premises or site where the activities funded under this Agreement are being carried out and to review documents for the purpose of conducting an audit or monitoring compliance with the Agreement.

15 LIABILITY

15.1 Her Majesty the Queen in Right of Canada and Parks Canada, their officers, employees or agents, shall not be liable for any injury or death caused to the person of any agent, official or employee of the Recipient or for loss or damage to property or the same, unless resulting from a negligence of an officer, employee or agent of Parks Canada or of the Government of Canada in the exercise of their office.

16 INDEMNIFICATION

16.1 The Recipient agrees to indemnify and save harmless Her Majesty the Queen in Right of Canada and Parks Canada, their officers and agents from and against all claims, damages, loss, costs and expenses (including reasonable legal fees) which they or any of them may at any time incur or suffer as a result or arising directly or indirectly out of the carrying out of this Agreement, except to the extent caused by a breach of duty on the part of Parks Canada, its officers, employees or agents.

16.2 Further, the Recipient agrees to indemnify and save harmless Her Majesty and Parks Canada, their officers, employees and agents for any deficit incurred by the Recipient during the term of this Agreement.

17 DEFAULT AND REMEDIES

17.1 The following constitute events of default:

17.1.1 the Recipient becomes bankrupt or insolvent or is placed in receivership or takes the benefit of any statute relating to bankrupt and insolvent debtors;

17.1.2 an order is made or a resolution passed for the winding-up of the Recipient or the Recipient is dissolved, or the Recipient dies;

17.1.3 if in Parks Canada's opinion, there is a change in risk which would jeopardize the successes of the Project;

17.1.4 the Recipient, either directly or through its representatives, makes or has made a false or misleading statement to Parks Canada;

17.1.5 in Parks Canada's opinion, a term or condition or a commitment provided for in the Agreement has not been respected;

17.1.6 the Recipient is no longer eligible under the "Eligibility Criteria" of the Program.

17.2 Where there is an event of default or where, in Parks Canada's opinion, there is likely to be a default under this Agreement, Parks Canada may avail itself of one or more of the following remedies:

17.2.1 reduce the level of the contribution and inform the Recipient accordingly;

17.2.2 suspend any payment of the contribution, either with respect to sums already owing or future payments;

17.2.3 rescind this Agreement and immediately terminate any financial obligation arising out of it;

17.2.4 by written demand, require any guarantee or security from the Recipient that Parks Canada considers appropriate within a set time limit;

17.2.5 by written demand, require repayment of amounts already paid which were spent contrary to the terms of the Agreement; the amount claimed becoming a debt owing to the Crown as soon as the demand is made on the Recipient. The Recipient shall immediately comply with such a written demand.

17.3 The fact that Parks Canada refrains from exercising a remedy it is entitled to exercise under this Agreement shall not be considered to be a waiver of such right and, furthermore, partial or limited exercise of a right conferred on it shall not prevent it in any way from later exercising any other right or remedy under this Agreement or other applicable law.

18 DISPUTE RESOLUTION

18.1 In the event of a dispute arising under the terms of this Agreement, the Parties agree to make a good faith attempt to settle the dispute. In the event that the Parties could not resolve the dispute through negotiation, they agree to submit to mediation. The Parties will bear the costs of mediation equally.

19 ACCOUNTS, FINANCIAL STATEMENTS AND OTHER DOCUMENTS

19.1 The Recipient agrees to keep proper accounts and records of the revenues and expenditures for the subject matter of the Agreement, including all invoices, receipts and vouchers relating thereto. The Recipient will provide financial statements and other documents stipulated in the Agreement and as required from time to time by Parks Canada, and shall conduct its financial affairs according to generally accepted accounting principles and practices. For the purposes of this Agreement, the Recipient will keep all financial accounts and vouchers and other records for a period of at least seven years after the expiry of the Agreement.

19.2 The Recipient shall ensure that all costs for the implementation of the Project include, where applicable, the GST, HST and provincial sales tax that the Recipient shall pay on all goods and services, less any credits or reimbursements to which it is entitled.

20 AUDIT

20.1 Parks Canada and/or the Auditor General of Canada reserves the right to audit or cause to have audited the accounts and records of the Recipient to ensure compliance with the terms and obligations of the Agreement, and the Recipient shall make available to such auditors any records, documents and information that the auditors may require. The scope, coverage and timing of such audit shall be as determined by Parks Canada and/or the Auditor General of Canada and if conducted may be carried out by employees of Parks Canada, the Auditor General of Canada or its agent(s).

21 AUDIT RESULTS

21.1 Parks Canada agrees to inform the Recipient of the financial results of any audit, and to pay to the Recipient as soon as possible after the completion of the audit any monies that the audit may show to be then due and owing to the Recipient. The Recipient

agrees to pay to Parks Canada, on being informed of the results of such audit, any monies which the audit may show to be then due and owing to Parks Canada.

22 APPROPRIATION

22.1 The payment of any money under this Agreement is subject to there being an appropriation by Parliament for the fiscal year in which the payment is to be made. Parks Canada may also cancel or reduce the contribution amount in the event that the Agency's funding levels are reduced by Parliament.

23 TERMINATION

23.1 Parks Canada reserves the right to terminate this Agreement for convenience, without cause or due to the default of the Recipient.

23.2 The Recipient may terminate this Agreement at any time prior to receiving any part of the contribution by giving written notice of termination to Parks Canada, in which case the parties shall be relieved of all obligations under the Agreement, and in particular and without affecting the generality, Parks Canada shall have no obligation to pay to the Recipient the contribution or any part thereof.

23.3 Where the Recipient has received payment of part of the contribution, it may give notice in writing to Parks Canada that it does not wish to receive further payment of the contribution, in which case the Agreement shall remain in effect with regard to the reporting and audit requirements for the portion of the contribution already received.

24 SURVIVAL OF TERMS

24.1 All obligations of the Recipient (or of the Parties) herein, including, without limitation, clause 7, Annex A.3, and General Clauses 5,12,15,16,19, 20, 21 and 24 shall, expressly or by their nature, survive termination or expiry of this Agreement, until or unless they are fulfilled or by their nature expire.

From: Janssen, Michael (PC)
Sent: Wednesday, September 23, 2020 8:48 PM
To: Bishop, Margot (PC)
Cc: Miller, Becky (PC)
Subject: Sidney Contribution Agreement: for briefing of Marcia
Attachments: PCA_ Sallas_Contribution Agreement.doc

Hi Margot,
When you get a chance would it be possible to please brief Marcia on this contribution agreement, to let her know that we are working on it?
The relevant part is Annex B.

Following signature of the Sidney Island Ecological Restoration Project MOU, multiple parties, including Sallas have agreed to work together to co-develop the plan for the forest restoration of Sidney Island.

To this point a few Sallas community members have been volunteering their time to coordinate participation of the community in project related discussions (steering committee and working groups), and communicate back to the community. As the project has grown, this has become more of a burden than can be sustained. In addition, the necessary discussions require the time and resources of the Sallas community. The intent of this contribution agreement is to contribute resources to support continued participation of the Sallas community in project planning, including the hire of a community coordinator.

Value: FY 2020-21: $15,000
FY 2021 – 22: $30,000

Michael Janssen, MSc, PMP
Project Coordinator | Coordinateur de projet
Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6
michael.janssen@canada.ca
Telephone | Téléphone (250) 418-5746 (**please note new phone number**)
www.parkscanada.gc.ca | www.parcscanada.gc.ca
Government of Canada | Gouvernement du Canada

Parks Canada - 450 000 km of memories / Parcs Canada - 450 000 km de souvenirs

[redacted] **Parks Canada** **Parcs Canada**

ARTICLES OF AGREEMENT
ARTICLES DE CONVENTION

Contract No N° du contrat	Order Date Date de la commande
45431479	09/02/2020

Period of Work - Durée des travaux

From - Du: **09/02/2020** To - À: **06/30/2021**

			Value of Contract Valeur du contrat	Tax Amount Montant de la taxe	Total
			55,000.00 CAD	**2,750.00 CAD**	**57,750.00 CAD**

Issuing Office Address - Adresse du bureau d'origine

PARKS CANADA
GULF ISLANDS NAT. PARK RESERVE
Att: Becky Miller
2220 HARBOUR ROAD
SIDNEY BC V8L 2P6

Contact - Personne-ressource	Tel. No - N° de Tél.
Joanne Cuthbert	403-292-4558

Contractor Name and Address - Nom et adresse de l'entrepreneur

Judith Cullington
o/a Judith Cullington & Associates

s.19(1)

Contact Name - Nom du contact	Tel. No - N° de Tél.
	250-360-7653

Description

Milestone 1 Facilitator Services

Contract file no 5P420-20-0152

This contract incorporates, except to the extent modified by this document entitled "ARTICLES OF AGREEMENT" the General Conditions as well as any other documents attached hereto as Appendices.

In the event of discrepancies, inconsistencies or ambiguities between the wording of this document and the General Conditions or any other documents attached hereto the wording of this document shall prevail.

Signature of this contract constitutes acknowledgement of receipt of the General Conditions.

Les conditions générales ainsi que tout autre document ci-joint en annexe font partie du présent contrat à l'exception des modifications apportées à celles-ci dans le présent document intitulé "ARTICLES DE CONVENTION".

En cas de divergences, d'incohérences ou d'ambiguïtés entre celui-ci et les conditions générales ou tout autre document ci-annexé, le libellé du présent document aura préséance.

La signature du présent contrat signifie l'acceptation des Conditions générales.

APPROPRIATE LAWS - LOIS PERTINENTES

This contract shall be governed by and construed in accordance with the laws in force in the Province of:
Le contrat est administré selon les lois en vigueur dans la province suivante: **BC**

FINANCIAL AUTHORITY - AUTORISATION FINANCIÈRE

Certified pursuant to subsection 32(1) of the Financial Administration Act

Certifié en vertu du paragraphe 32(1) de la Loi sur la gestion des finances publiques.

CONTRACT APPROVAL - APPROBATION DU CONTRAT

This contract is approved for the Chief Executive Officer by the duly authorized officer.

Ce contrat est approuvé pour le Directeur général par un agent autorisé.

Signature Date

Contracting Authority - Autorité contractante Telephone - Téléphone Address - Adresse

CONTRACTOR'S ACCEPTANCE - CONSENTEMENT DE L'ENTREPRENEUR

The Contractor offers and agrees to sell and supply to the Chief Executive Officer upon the terms and conditions set out in this document, the supplies and/or services listed herein at the price(s) setout therefore.

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Sidney Island Ecological Restoration Working Group Chair

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AnimalKind
BCSPCA Accredited

Wildlife and Rodent Control Standards

BCSPCA
SPEAKING FOR ANIMALS

THE BRITISH COLUMBIA SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS

August 2019 – Version 1.4
Authored by: Science and Policy Division

PAACO
Professional Animal Auditor Certification Organization Inc.
ACCREDITED PROGRAM

Contents

Preface

The British Columbia Society for the Prevention of Cruelty to Animals (BC SPCA) developed the AnimalKind Accreditation Program and the AnimalKind Wildlife and Rodent Control Standards with funding from the Peter Wall Institute for Advanced Studies and the Vancouver Foundation. The AnimalKind Wildlife and Rodent Control Standards are based on widely accepted ethical principles and animal welfare science.

The BC SPCA is one of the largest animal welfare organizations of its kind in North America. Established in 1895 under the provincial *Prevention of Cruelty to Animals Act* (*PCA Act*), the Society's mandate is to protect and enhance the quality of life for domestic, farm and wild animals in British Columbia. As a registered charity, the BC SPCA operates community animal shelters, education and adoption facilities, veterinary and spay/neuter clinics, a wildlife rehabilitation centre, a provincial call centre, and an administration office. In addition to province-wide programs for advocacy, government relations, humane education, and scientific research, Special Provincial Constables enforce the *PCA Act* and *Criminal Code of Canada* to fulfill the Society's law enforcement functions.

Introduction

Purpose and Scope of the AnimalKind Accreditation Program and Standards

The AnimalKind Accreditation Program (the "Program") aims to decrease wild animal suffering by promoting Wildlife Control Service Providers ("WCSPs") who prioritize the use of non-lethal, removal-and-exclusion methods to resolve human-wildlife conflicts. In the limited cases where use of live capture or lethal control methods are justified, the Program supports only those methods that are legal and cause fewer harms to animal welfare. The Program contributes to public education by raising awareness of the animal welfare outcomes of traditional wildlife and rodent control methods.

Wildlife generally refers to animal species that have not been domesticated, and includes species that are introduced or native, and wild-born or captive-bred. The AnimalKind Wildlife and Rodent Control Standards (the "Standards") apply to free-living, vertebrate animals designated as wildlife by the *BC Wildlife Act Designation and Exemption Regulation* and any introduced wildlife species. Free-living refers to animals that are currently not living in captivity and may be independent of humans, therefore the Standards do not apply to wildlife permanently in captivity (for example, those held in zoos). Introduced species, which may or may not cross-referenced in the *BC Wildlife Act*, include those that are alien, exotic, foreign, non-indigenous, or a non-native species living outside of its natural range as a result of human activity.

Feral cats and feral horses are not designated as wildlife by the *BC Wildlife Act* and are domestic species so these Standards do not apply to them; however, feral rabbits and feral pigs are designated wildlife by the *BC Wildlife Act* and the Standards would apply. The Standards also apply to the introduced species of commensal rodents, Norway rat (*Rattus norvegicus*), roof rat (*Rattus rattus*) and the house mouse (*Mus musculus*). Although negatively regarded as a significant "pests" given their associations with zoonotic diseases and property damage, the commensal rodents have the same capacity to experience pain and distress as other vertebrates and it is on this basis that animal welfare considerations in the Standards have been extended towards them.

The Standards were developed primarily for control of wildlife and rodents that come into conflict with humans in urban and residential settings (i.e. structural pest control). However, they could be used to guide control decisions and actions in other types of locations.

Accreditation is intended for individuals, organizations or businesses that manage and/or provide wildlife or rodent control services, either for external customers or internally as part of maintenance of the organizations' or

businesses' own facilities in British Columbia (BC). Accreditation may also be considered for companies that perform wildlife and rodent control on an ad hoc basis (e.g. as part of lawn care or sign maintenance), for project-based conservation programs, or for companies that use detector dogs for insect pest control and wish to have third-party animal welfare accreditation for their use of working dogs. The Program does not currently accredit entities outside of BC.

To be eligible for accreditation, a WCSP must adhere to the Standards, which outline acceptable and prohibited actions, and the terms and conditions of the Program, outlined in the AnimalKind Accreditation Program Operations Manual (the "Operations Manual"). In addition, accredited WCSPs are expected to adhere to federal, provincial acts and regulations and municipal bylaws related to wildlife, pest management, animal cruelty and the laws of Canada. When wildlife-proofing structures, WCSPs are also expected to install materials in accordance with local building codes. The accreditation process is initiated when a WCSP submits an application to the Program and is followed by participation in an audit process to establish that the WCSP meets the Standards. Accreditation must be renewed yearly and may involve an annual re-accreditation audit. The Program is operated as a social enterprise and recovers operating costs through fees paid by WCSPs.

Background

Development of the Standards was informed by: applicable laws of BC and Canada; science-based animal welfare concerns identified in the *BC SPCA Humane Wildlife Control Evaluations* [1]; and the ethical guidance of the *International Consensus Principles of Ethical Wildlife Control* [2] developed by expert consensus at a workshop held at the University of British Columbia [3]. Ethical wildlife control is defined as the acceptability of a wildlife control action based on a comprehensive analysis that includes the control action's necessity, benefits, feasibility, costs to people and animals, alternatives, and effects on animal welfare in terms of the humaneness of the physical methods employed.

In particular, the following questions about wildlife control (derived from the *International Consensus Principles*) guided development of the Standards:

1. *Can the problem be mitigated by changing human behaviour?*
2. *Are the harms serious enough to warrant wildlife control?*
3. *Is the desired outcome clear and achievable, and will it be monitored?*
4. *Does the proposed method carry the least animal welfare cost to the fewest animals?*
5. *Have community values been considered alongside scientific, technical and practical information?*
6. *Is the control action part of a systematic, long-term management program?*
7. *Are the decisions warranted by the specifics of the situation rather than negative categorization of the animals?*

Acknowledgements

The BC SPCA gratefully acknowledges Dr. David Fraser and the University of British Columbia Animal Welfare Program for their leadership in applying animal welfare to free-living animals and their advice during the development of the Program. The BC SPCA also thanks the following individuals and groups for sharing their expertise: Alyssa Bell Stoneman, Dr. Cassandra Tucker, John Griffin, Dr. Dan Weary, Humane Society of the United States, PAACO review panel, SPCA Certified and numerous wildlife and rodent control industry professionals. We also thank the Peter Wall Institute for Advanced Studies and the Vancouver Foundation, for funding and making possible development of the AnimalKind Accreditation Program and Wildlife and Rodent Control Standards.

AnimalKind Wildlife and Rodent Control Standards

Standard 1: Business models align with a commitment to protect wild animal welfare

1.1. WCSPs must have a written wild animal welfare policy to communicate expectations for technicians regarding wild animal welfare (refer to Appendix 2 for required elements of policy).

1.2. Technicians must demonstrate awareness of the wild animal welfare policy.

1.3. Technician training must:

a) use Standard Operating Procedures (SOPs) (refer to Appendix 2 for required SOP topics); and

b) be documented with written records retained for at least 12 months.

1.4. The WCSP must identify a professional wildlife rehabilitator operating in their provincial region or one able to take animals from their region OR a local veterinarian in good standing with the College of BC Veterinarians who agrees to provide emergency euthanasia services for wildlife.

1.5. Technicians or the WCSP must not have been convicted of an offence involving wildlife or animal cruelty, and/or have not had animals seized pursuant to any other provincial legislation.

1.6. Concurrent operation of another non-accredited wildlife or rodent control business alongside the wildlife or rodent control business intended for accreditation is prohibited (including branches and franchises, but excluding the parent company of a subsidiary company).

1.7. Partnerships, subcontracting or referrals to another non-accredited wildlife or rodent control business is prohibited.

1.8. The sale, barter, trade, permanent display, or use of any wildlife or wildlife parts (i.e. pelts) for any purpose that does not conform to the Standards is prohibited to ensure there is no financial incentive for the WCSP to capture wildlife or use lethal control.

1.9. To prevent transmission of disease, equipment that comes into contact with animals or animal blood or feces must be cleaned prior to reuse.

Standard 2: Ethical and legal business practices are followed

2.1. A valid business license must be held.

2.2. Liability insurance must be held.

2.3. The WCSP must operate in compliance with WorkSafe BC regulations.

2.4. Technicians using rodenticides must hold valid pesticide applicator licenses in compliance with the *BC Integrated Pest Management Act* and Regulations.

2.5. Technicians using ladders or boom lifts must be trained on safety for working at heights.

2.6. Technicians using gases to kill wildlife must be trained on the safe and effective use of gas chambers.

2.7. Technicians using firearms to kill wildlife must be:

a) trained on the safe and effective use of firearms (e.g. calibre, body placement, accuracy)

b) hold valid firearms licenses in compliance with the laws of BC.

2.8. Technicians must be trained on how to prevent injuries from animals (bites, scratches) and how and when to use personal protective equipment.

Standard 3: Prohibited devices, trap types, poisons or killing methods are not used

3.1. Only wildlife and rodent control devices, trap types, poisons and primary killing methods that conform to the Standards may be used.

3.2. Use or sale of the following devices, trap types, poisons and use of the primary killing methods is prohibited:

Devices, trap types and poisons	
▪ limb-restraint/leg-hold/body gripping (e.g. Conibear) traps or snares including foot-encapsulating traps (e.g. EGG) and neck snares ▪ electrocution traps ▪ rodent glue traps unless used as per Program exemptions ▪ multiple capture rodent traps unless used as per Program exemptions ▪ poisons other than specific rodenticides named in the Standards ▪ avian adhesive gel repellents (optical & tactile) ▪ predator odour repellent derived from captive wild animals	
Primary killing methods	
▪ air embolism injection ▪ chloral hydrate ▪ chloroform ▪ decapitation of conscious animal ▪ drowning ▪ electrocution of conscious animal ▪ exsanguination of conscious animal	▪ falconry for lethal control of birds or small mammals ▪ freezing ▪ hypothermia ▪ maceration ▪ smothering/suffocation ▪ thoracic compression ▪ vehicle exhaust to deliver carbon monoxide

The above devices, trap types, poisons and primary killing methods are prohibited for one or more of the following reasons: the method is illegal; it may cause excessive pain, distress or physical injury to a conscious animal; it may result in an extended length of time to irreversible unconsciousness (TIU) to the target animal; it may result in an extended length of time until the death of a target animal; or evidence examining humaneness of the device, trap type, poison or killing method is unavailable.

AnimalKind Standards were developed from an animal welfare perspective and aim to prioritize control methods that cause fewer harms to animals, where possible. The assessments of control methods are informed by animal use and killing standards, guidelines and policies produced by relevant North American regulatory organizations and veterinary associations. However, AnimalKind assessments occasionally differ from the assessments of other expert organizations. These differences often arise from distinctions made between appropriate killing methods for domestic animals and wildlife maintained in captivity versus free-living wildlife. A lower standard of welfare is often applied to free-living wildlife for practical reasons (e.g. availability of equipment) or because the animal has been labelled a "pest" species. However, AnimalKind is aiming to create a consistent standard of care for all animals, including wildlife.

There are a variety of legal limb-restraint/leg-hold/body gripping traps or snares including foot-encapsulating traps (e.g. EGG), neck snares and body-gripping (e.g. Conibear) traps. These types of traps are prohibited by the Standards due to the excessive physical injuries that are caused to captured animals [4] and the potential for excessive psychological and/or physiological distress to animals left in live traps for long periods due to: exposure to adverse climate, dehydration, energy deprivation, predation, self-mutilation and over-exertion [4–7]. In

addition, there is the potential for animals caught in these traps to die from exertion, predation or adverse environmental conditions [4].

Electrocution traps and primary killing by electrocuting a conscious animal are prohibited due to lack of assurances that TIU is short. Although there is limited evidence that electrocution implemented under ideal conditions, with unconscious animals and using specially designed equipment, may kill quickly [8], no evidence examining the effectiveness of electrocution traps or electrocution under field conditions without anesthesia has been published. Some evidence suggests that electrocution may not result in death for small animals (<5kg) [9]. Glue traps used to capture rodents or other small animals are generally prohibited with some exemptions because glue traps merely capture but do not kill animals, and therefore restrictions on their use may decrease overall animal suffering. Also known as "sticky gels", avian adhesive gel repellents (both optical and tactile types) are prohibited because the gels can stick to the feathers of birds that come into contact with them and disrupt preening behavior and the bird's ability to fly [10].

Use of poisons to kill non-rodent wildlife in BC is illegal and thus is prohibited with the exception of use of specific legal rodenticides for commensal rodents that are named in the Standards. Predator odour repellents that are derived from captive wild animals, such as foxes on fur farms, are prohibited due to the severe negative welfare consequences that captive wild animals experience in fur farming facilities.

Prohibited primary killing methods include: air embolism injections into the vasculature of an animal because it may cause convulsions, opisthotonos (severe hyperextension and spasticity) and vocalization [9]; chloral hydrate because it causes death by hypoxemia and may be preceded by gasping, muscle spasms, and vocalization [9,11]; and chloroform due to length of TIU and distress. Both chloral hydrate and chloroform are considered unacceptable killing methods by the AVMA [9].

Prohibited physical primary killing methods include decapitation and exsanguination of conscious animals, which are both deemed unacceptable for use in conscious animals by the AAZV and the AVMA [8,9] (although decapitation is listed by the AVMA as a possible first-step method of euthanasia for small wild mammals and birds). Recent research has raised concerns that decapitation does not result in immediate unconsciousness [12]. Decapitation and exsanguination may be used as secondary killing methods on unconscious animals. Thoracic compression and maceration are prohibited due to lack of clarity over the TIU or time to death of these methods when used on mammals and adult birds [9,13] (although thoracic compression is still considered acceptable for use in the field by some wildlife science organizations). Maceration involves the use of a specially designed machine with rotating blades that cause death by fragmentation. It has only been found acceptable for use on very young chicks (less than 72 hours old by the AVMA [9]; less than 2 days old by the CCAC [14]; and less than 1 day old by the OIE [15]) and there is uncertainty associated with accurately aging wild bird chicks to within these narrow age brackets.

Drowning has an excessively long TIU as animals take minutes to die from inadequate oxygen supply (hypoxia-anoxia) and experience hypoxemia-induced discomfort and distress prior to death [16]. It has been deemed unacceptable as a killing method by wildlife scientists [14,17] and veterinarians [8,9]. Smothering and suffocation (death by asphyxiation caused by physically preventing an animal from breathing) are also methods that cause excessive distress and a lengthy TIU [8,9]. Freezing, or causing death by hypothermia, can cause painful ice crystal formation within tissues [8]. In addition, some species may simply enter a state of torpor in cold temperatures but may awaken in a fully conscious state [18]. Falconry for lethal control is prohibited because of the limited research examining the welfare impacts of killing by this method and use of live prey for training. The use of vehicle exhaust to deliver CO is prohibited due to the unreliability of the method and the pain and distress that it causes animals (i.e. from heat and inhaled particles) [14].

Standard 4: Human-wildlife conflicts are clearly diagnosed prior to the start of a control action

4.1. The animal species and legal status must be determined prior to initiation of the control action.

4.2. Relevant permits for the control of the target species must obtained (if applicable).

4.3. The animals' use of the customer's property must be determined, such as the location of a den, nest or access point into a structure (i.e. the human-wildlife conflict).

4.4. Presence and mobility of dependent young must be determined (exception: not required for mice and rats due to the difficulty and unlikelihood of finding commensal rodent nests).

Standard 5: Customers are proactively educated about wildlife and rodent control options

5.1. Customers must be provided in writing with accurate information about:

a) the species of animal;

b) the diagnosis of the conflict;

c) control options and the option that is recommended; and

d) recommendations for the prevention of future conflicts.

5.2. Customers must be informed of the AnimalKind Accreditation Program and provided with the website address.

Standard 6: Environments are modified to remove the reason for conflict and/or encourage animals to depart voluntarily

6.1. Food and water attractants must be removed, made inaccessible or the environment must be modified to make attractants less accessible and/or the attractants must be identified to the customer.

6.2. Unoccupied shelter and potential harborage sites must be removed, made inaccessible, or the environment must be modified to make shelter sites less desirable and/or accessible and/or these sites must be identified to the customer.

6.3. Environmental modifications to address conflicts with beavers must include the installation of flow devices and/or fences or devices to block access to culverts and trees.

6.4. Population reduction of Schedule C or Migratory birds (with relevant permits) is acceptable by:

a) removal of bird nests with unhatched eggs and no flightless young occupying them; or

b) egg addling; or

c) avian contraceptives (e.g. OvoControl P).

6.5. Young birds must have fledged and left the nest or be flighted before hazing can commence.

6.6. Hazing using humane harassment methods is acceptable when hazing does not result in:

a) direct contact with the animal;

b) physical injury to the animal; and/or

c) mother animals abandoning their dependent young.

6.7. Use of dogs or raptors (working animals) to haze Migratory or Schedule C birds is acceptable provided hazing is not intended to result in:

a) direct contact with the target birds;

b) physical injury to the target birds; and/or

c) mother animals abandoning their dependent young.

6.8. Technicians must conduct a safety assessment of the hazing location prior to releasing working animals in order to determine potential hazards for the working animals (e.g. roadways, hydro wires).

6.9. Technicians must attempt to retrieve birds that are accidentally injured during hazing and transport them to a professional wildlife rehabilitation centre or veterinarian for treatment.

It is internationally recognized that human-wildlife conflicts arise from human activities and that alteration of human practices to prevent such conflicts, for example by removal of attractants and by wildlife-proofing structures, is the best strategy for achieving conflict-free coexistence with wildlife [2,19]. Aversive conditioning, also known as harassment or hazing, is the process of disturbing an animal's sense of security to such an extent that it decides to leave its location and move on [20]. This can include use of scare devices (noise, light) and controlled introduction of predators (i.e. falconry or dogs). Examples of hazing methods that would not conform to the Standards include: spraying pepper spray at the animal and using paint guns or pellet guns.

Standard 7: Removal methods that protect animal welfare are used to evict animals from structures and locations of conflict

7.1. When structure access points are closed off, at least one egress point must be left to allow the animal to exit the structure (exception: not required for mice and rats).

7.2. If immobile and dependent young are present in a structure (exception: not required for mice and rats), installation of an exclusion device, such as one-way doors, must only occur:

a) outside of the target species nursing season;

b) after the young are mobile and able to follow the mother out of the structure; or

c) if the structure will be entered to manually collect dependent young animals with the intention of reuniting with the mother.

7.3. Confirmation of the exit of target animals from a structure must be attempted by:

a) motion-triggered remote camera video recording of the animal(s) exiting;

b) visual inspection of the interior of the structure to verify animal(s) are no longer present;

c) direct observation by the technician of animal(s) leaving the structure; and/or

d) another method that shows the one-way door has been used.

7.4. Following departure of the target animal:

a) any eviction device must be removed and the entry point wildlife proofed to prevent animals from re-entering the structure; and

b) a technician must be available to return to the site during the 48 hours following closure of the entry point in the event that a customer suspects than an animal is still trapped inside the structure.

7.5. Use of one-way doors to evict bats[1] from structures may only occur during September to April. It is prohibited from May to August (inclusive) when bats are roosting and nursing dependent young.

7.6. Eviction by manual removal of immobile and dependent young animals (exception: immobile and dependent young bats and birds may not be manually removed) may only be justified if the animals' presence is:

a) a health and/or safety concern for the animal;

b) a health and/or safety concern for people; and/or

c) causing a structural or fire hazard.

7.7. During an eviction process, mother and dependent young must not be separated, or must be reunited if briefly separated (e.g. using heated reunion boxes).

7.8. Eviction by moving a nest with flightless young birds is prohibited unless the nest is in a location that:

a) presents a health and/or safety concern for people (such as a dryer vent or electrical infrastructure); or

b) is dangerous to the target birds (such as a car engine, roadway, structure about to be torn down, or a location posing immediate potential for separation of parent and young, i.e. boat leaving port).

7.9. If nests with flightless young birds are moved, young must be re-nested in a site nearby the original site, to allow parents to continue to care for them until they are flighted.

7.10. Resumption of parental care of dependent young must be confirmed within 24 hours following any separation.

7.11. If parental care is not resumed, orphaned young must be:

a) transported to a professional wildlife rehabilitation centre, or

b) killed using a primary killing method that conforms to the Standards if space in a professional wildlife rehabilitation centre is not available.

[1] In BC, exposure to bats is only considered a reportable disease if a bat has come into unprotected contact or suspected unprotected contact with a person, or direct contact with a pet. Human exposure to other wildlife that may have come into contact with bats is not a reportable human health risk.

Standard 8: Cage-trapping and manual capture methods are rarely used

8.1. Healthy animals must not be cage-trapped or manually captured to:

a) resolve nuisance complaints (i.e. minor property damage, noise or smell complaints);

b) remove animals from a location that continues to provide access to food sources such as unsecured garbage cans and dumpsters or deliberate feeding; or

c) remove animals from a location that will continue to have ongoing accessibility to other animals in the population (e.g. open-air sheds, greenspaces, unmodified culverts).

8.2. The use of live capture may only be justified if it is legal and the animal:

a) is injured or diseased;

b) is a mother captured to facilitate collection of her dependent young for reunion;

c) is inside a building or structure and cannot find its own way out;

d) is in a location dangerous to itself (e.g. railway yard, construction site); and/or

e) presents a health and/or safety issue for people that cannot be resolved by environmental modification, hazing and/or eviction-exclusion methods

f) is the target of legal and justified lethal control (refer to Standard 10).

8.3. Manual capture methods using hands, catchpoles or nets must be used in a way that does not cause physical injury to the animal.

8.4. Cage traps must be labelled with the name, address and phone number of the WCSP.

8.5. Harmful outcomes to cage-trapped animals (e.g. dehydration, hypothermia) must be minimized by:

a) placing traps in locations sheltered from weather and safe from flooding;

b) protecting traps from temperature extremes; and

c) ensuring trapped animals are not without access to food or water for more than 12 hours (i.e. through provision of food and water in trap or by regular trap checking or use of trap signaling technology).

8.6. Electronic trap signaling technology must include a self-checking feature that alerts the user if the system malfunctions (i.e. stops working).

8.7. WCSP must not rely on a client or employees of a client for notification that an animal is caught in a cage-trap unless a technician is calling the client daily to remind them to check and keeping records of these calls.

8.8. A captured animal may be transported for up to 8 hours if the animal:

a) is free from severe injuries; and

b) is held in locations sheltered from weather, including heat or rain, and other stressors (pets, traffic); and

c) is handled in a way that does not cause physical injury; and

d) is not without access to food or water for > 24 hours (e.g. combined capture and transport time).

8.9. Non-target animals caught in traps must be released immediately upon detection unless:

a) the animal is severely injured or diseased;

b) the animal is dependent orphaned young; or

c) release of the species is illegal (e.g. bullfrogs, red-eared slider turtles and European domestic rabbits).

Standard 9: Release and relocation procedures protect animal welfare

9.1. Healthy animals must be released on the same property the animals were captured on unless:

a) the capture site is a source of danger to the animal;

b) animal-proofing to prevent re-entry is not possible (i.e. construction site, open door warehouse); or

c) use of lethal control is legal and justified (refer to Standard 10).

9.2. If cage trapped mice or rats are to be released at the customer's request, release must occur on the same property the animals were captured on.

9.3. Manually captured bats[2] must be placed on the side of a tree or other vertical surface to enable climbing and flying away.

9.4. If captured animals cannot be released on the site of capture release must:

a) occur within the animals' home range, near the vicinity of capture; and

b) must comply with legal relocation distances and locations for the species as per the *BC Wildlife Act Designation and Exemption Regulation*.

9.5. The WCSP is permitted to rehome legally non-releasable animals into the care of a permit-holding sanctuary or adoptive guardian if one is available (for example red-eared slider turtles and European domestic rabbits).

9.6. Animals must not be released if:

a) the animal is severely injured or diseased;

b) the animal is dependent orphaned young; or

c) release of the species is illegal (for example, bullfrogs, red-eared slider turtles and European domestic rabbits).

Many wild animals live in a defined home range and removal from this area will cause them difficulty in locating food and shelter. For example, squirrels translocated from urban or suburban locations to forests experienced high mortality and lose access to stored food [21]. Relocated moles lose access to their run system and may have difficulty surviving if released into new areas [22]. In addition, urban-dwelling wildlife (raccoons, skunks) tend to have smaller and denser territories than rural-dwelling animals of the same species. Urban raccoons have different foraging habits than rural raccoons and may suffer in rural areas due to inexperience with food sources and predation [23]. Relocation attempts will be more successful if animals experience the least amount of stress possible during capture and handling and species-appropriate release and post-monitoring protocols are followed [24–26]. For example, squirrels can adapt to relocation if the stress of capture and transport is minimized by using covered traps, cone handling bags and short transport times [5,27,28].

[2] In BC, exposure to bats is only considered a reportable disease if a bat has come into unprotected contact or suspected unprotected contact with a person, or direct contact with a pet. Human exposure to other wildlife that may have come into contact with bats is not a reportable human health risk.

In additional to welfare concerns for the relocated animal, conservation concerns may arise if non-native animals are released into an area and if new predators are introduced [29,30]. Commensal rodents are not legally classified as wildlife in BC, but instead are considered invasive species given their negative effects on novel environments. Release of captured commensal rodents, although legal, raises both conservation and human health concerns [31,32].

Standard 10: Lethal methods are only used when an animal's continued presence is an ongoing threat to human health and safety

10.1. Healthy animals must not be killed to:

a) resolve nuisance complaints (i.e. minor property damage, noise or smell complaints);

b) remove animals from a location that will continue to have ongoing accessibility to other animals in the population (e.g. open air sheds, greenspaces, unmodified culverts); or

c) cull populations of animals without scientific evidence supporting the feasibility of the cull goal and justification for the reason the animals are to be killed.

10.2. Lethal control methods may only be used if justified because the animal is:

a) severely injured;

b) injured or diseased without access to wildlife rehabilitation;

c) orphaned, dependent young without access to wildlife rehabilitation;

d) accidentally or purposefully brought into an area with no established population and where return to established population is not possible;

e) introduced onto a small island or into an isolated area and full eradication is achievable;

f) hand-raised and human-habituated, with no possibility for rehabilitation and release;

g) a species that cannot be legally released and a non-lethal option is not available;

h) continually returning to a site where it is causing a human health and safety threat that has failed to be resolved by environmental modification, hazing and/or eviction-exclusion methods; or

i) a commensal rodent (mice or rats) causing an ongoing health and safety threat to people that cannot be resolved using only environmental modification and/or removal methods (e.g. pre-existing infestations of commensal rodents; or infestations with irremediable environmental conditions, such as nearby food sources or poorly maintained residential buildings, that are out of the control of the WCSP or tenant residents to change).

10.3. Use of a lethal control method for an individual raccoon, goose or swan is additionally allowed if the animal is aggressive and food-conditioned, presenting an immediate public safety risk and hazing or relocation is no longer an option.

10.4. Lethal control must be accompanied by a plan to prevent or reduce recurrence of the conflict.

Standard 11: Methods causing the least possible pain and distress are used when lethal control is justified

11.1. Animals may be killed by:

a) a professional wildlife rehabilitator; or

b) a veterinarian or their designate; or

c) a trained technician using CO from a pure gas cylinder delivered into a sealed gas chamber with a regulator (exception: CO may not be used to kill beavers); or

d) a trained technician using CO_2 – only when CO cannot be used due documented worker safety regulations and CO_2 is from a pure gas cylinder delivered into a sealed gas chamber with a regulator to achieve >40% concentration (exception: CO_2 may not be used to kill beavers).

11.2. Birds may be also be killed by technicians trained to use:

a) CO_2 from a pure gas cylinder delivered into a gas chamber with a regulator to achieve >40% concentration; or

b) for small birds (approximately <250g), manually applied blunt trauma to the head followed by immediate use of a secondary killing method to ensure death; or

c) for birds <3kg, cervical dislocation followed by immediate use of a secondary killing method to ensure death; or

d) a captive bolt followed by immediate use of a secondary killing method; or

e) firearms to deliver a shot to a free-ranging bird followed by retrieval of the bird to confirm death; or

f) firearms to deliver a shot to the head of a captive bird.

11.3. Beavers, possums, rabbits, raccoons and skunks may also be killed by technicians trained to use:

a) firearms to deliver a shot to the head of a captive animal; or

b) firearms to deliver a shot to a free-ranging animal followed by retrieval of the animal to confirm death.

11.4. Captured mice may also be killed by technicians trained to use:

a) manually applied blunt trauma to the head followed by immediate use of a secondary killing method to ensure death; or

b) cervical dislocation followed by immediate use of a secondary killing method to ensure death.

11.5. Captured rats may be killed by technicians trained to use manually applied blunt trauma to the head followed by immediate use of a secondary killing method.

11.6. Use of a lethal method must be followed by confirmation of the animals' death and/or use of a secondary killing method to ensure death (e.g. decapitation, exsanguination, CO_2 gas).

11.7. WCSPs must assume responsibility for the legal disposal of animal remains.

To confirm death, a combination of criteria is the most reliable including: lack of pulse; lack of breathing; lack of response when pupil touched or toe pinched; lack of respiratory sounds and heartbeat when listening with a stethoscope; and rigor mortis [9].

As discussed above, the Standards were developed from an animal welfare perspective and aim to prioritize control methods that cause fewer harms to animals where possible. Therefore, AnimalKind assessments are occasionally different from the assessments of other expert organizations.

The use of gas as a method of killing presents opportunities to minimize animal handling, and therefore distress, as often the cage enclosing the animal can be placed directly into a gas chamber. CO induces loss of consciousness without pain for many species [8,9]. However, there are considerable safety concerns for human operators of CO systems. CO_2 has been found to be acceptable for use as a killing method for birds by veterinary and scientific groups [8,14,33], although some research has identified that some bird species find CO_2 aversive [34,35]. In contrast, it has been definitively determined that CO_2 is aversive to mammals and been demonstrated to be aversive to rodents below the concentrations required to render the animals unconscious (>30%) [12,14,36].

Cervical dislocation presents several animal welfare concerns. First, recent science has demonstrated there is the possibility that cervical dislocation can result in lower spinal dislocation only and that the animal will continue to breathe and remain conscious [12]. For this reason, use of cervical dislocation must be followed by immediate use of a secondary killing method to ensure death. Second, proper implementation of cervical dislocation requires training that is often unavailable to technicians, who are generally unaffiliated with universities that provide such training to graduate students and animal care staff. Guidelines on cervical dislocation recommend that rodents be <200g for this method [8,9] while it can be used on birds up to 3kg [9]. Manually applied blunt trauma is only considered suitable for small animals with thin craniums and some neonates, however it is often the only option under field conditions and for individuals without access to controlled veterinary drugs [8,9]. Use of firearms also presents human safety concerns and is often not legal in residential areas.

Standard 12: Lethal 'kill-with-capture' rodent control methods causing the least possible pain and distress are used

12.1. Snap traps used to kill mice and rats must:

- a) be the correct size for the target species; and
- b) have springs with sufficient power to deliver an impact that quickly kills the target animal; and
- c) be enclosed in boxes or placed in an area that non-target animals cannot access.

12.2. Penetrating captive bolt traps used to kill mice and rats must be:

- a) the correct size for the target species; and
- b) placed in an area that squirrels and other non-target animals cannot access.

12.3. A method for killing mice or rats that are found injured but not killed by snap traps or penetrating captive bolt traps must be available during trap checking.

12.4. Injured mice or rats must be killed immediately when found.

12.5. Trained dogs (working animals) used to detect, capture and kill mice or rats must be:

- a) only used to kill mice or rats; and
- b) able to kill mice or rats immediately following capture; and
- c) under the control of the handler.

12.6. Technicians must conduct a safety assessment of the hazing location prior to releasing working animals in order to determine potential hazards for the working animals (e.g. roadways, hydro wires).

12.7. Mice or rats caught by dogs must be immediately retrieved by the WCSP and if necessary subjected to a secondary killing method, such as decapitation, to ensure death.

The best designed snap traps kill instantaneously by crushing the skull and are enclosed so only animals of the correct size can access the bait [11]. There is variability between the mechanical performance of different brands and types of snap traps and therefore some traps kill more efficiently than others [37]. However, various snap trap designs for rats were found to kill the target animal quickly and consistently enough to meet humane guidelines in New Zealand [38]. Due to the frequency of non-lethal captures, ideal practice would be to use a method of ongoing trap checking or monitoring, although this is not a requirement of the Standards.

Penetrating captive bolt traps have been shown to render rats irreversibly unconscious in less than 30 seconds (as determined by absence of palpebral reflex) [39] and field observations found just one rat remained alive out of 125 rats that entered the traps [40]. However, trap entries are currently accessible to squirrels and so there is potential for killing of these non-target animals if traps are placed outdoors.

The use of specially-trained dogs to capture and kill rodents appears to result in instant loss of consciousness and/or death when rodents are captured. However, this is based on anecdotal observations in trials conducted by the BC SPCA and has not been confirmed through scientific studies. Therefore, it is essential for animal welfare for technicians to retrieve captured mice and rats and confirm their death.

Standard 13: Rodenticides are only used when the continued presence of mice or rats is an ongoing threat to human health and safety

13.1. When lethal control is justified the following rodenticides may be used in accordance with the requirements of the Canadian *Pest Control Products Act* and the *BC Integrated Pest Management Act* and regulations:

a) diphacinone (indoor and outdoor use);

b) brodifacoum (indoor use only);

c) bromodialone (indoor use and outdoor use around structures only);

d) difethialone (indoor use only); and

e) chlorophacinone (indoor and outdoor use).

13.2. Rodenticides must be contained in locked, secured boxes (bait stations) and labelled with the name and contact information of the WCSP.

13.3. Written records of the following information must be maintained:

a) rodenticide bait station placement locations; and

b) bait station monitoring visits; and

c) retrieval of leftover bait; and

d) the method(s) used for killing any rodents found poisoned, but alive.

13.4. A method for killing rodents that are found poisoned, but alive, must be available.

13.5. Poisoned rodents found alive must be killed immediately upon detection.

13.6. The following rodenticides, although legal, are prohibited:

a) bromethalin; and

b) warfarin; and

c) zinc phosphide.

13.7. Placement of rodenticides in burrows is prohibited.

13.8. Rodent carcasses found at sites where rodenticide is being used must be collected and legally disposed of.

Rodenticides generally cause excessive pain and distress to the poisoned rodent and the TIU or time to death can be 3-7 days or longer [11]. The use of rodenticides also raises concerns regarding secondary poisoning of non-target animals that prey on rodents (particularly for anticoagulant rodenticides), as well as accidental poisoning of other animals and people [41]. Unfortunately, there are currently no fast-acting or pain-free rodenticides available in Canada. To minimize exposure to non-target wildlife, rodenticides should only be used for the length of time needed to achieve satisfactory control and the leftover bait should be retrieved [42,43].

Use of some legally available rodenticides is prohibited by the Standards due to animal welfare concerns related to secondary and accidental poisonings. Bromethalin affects the central nervous system and results in paralysis and convulsions prior to death and there is no antidote for accidental poisoning [44]. Zinc phosphide, once ingested, produces phosphine gas in the stomach and respiratory distress prior to death and the acute nature of this poison increases the risk to accidentally poisoned non-targets.

Standard 14: Rodent glue traps and multiple capture traps are only used in select locations when the continued presence of mice and rats is an ongoing threat to human health and safety

14.1. The use of rodent glue traps to capture rats is prohibited unless:

a) the rat is inside a building; and

b) the trap is being monitored continuously (i.e. not left unattended) by a technician who is physically present at the site; and

c) a method for killing the captured rat is available and used immediately.

14.2. The use of rodent glue traps and multiple capture traps to capture mice is prohibited unless:

a) the building is a food-handling facility that must comply with Health Canada and Canadian Food Inspection Agency regulations; or

b) a prior exemption is granted by the AnimalKind Accreditation Program.

14.3. When permissible, rodent glue traps used for the capture of mice must be enclosed in boxes or placed in an area that non-target animals cannot access.

14.4. A method for killing mice that are found trapped but alive must be available during trap servicing.

14.5. Trapped but alive rodents must be killed immediately upon detection.

14.6. Non-target animals caught in a glue trap must be transported to a professional wildlife rehabilitation centre or veterinarian for care.

14.7. The following written records must be kept when rodent glue traps and multiple capture traps are used:

a) trap placement locations; and

b) trap servicing dates; and

c) the number and types of animals trapped; and

d) the method(s) of killing used.

Rodent glue traps and multiple capture traps are used to capture mice when the alternatives, such as snap traps or rodenticides cannot be used or are ineffective. This is of particular concern in commercial food-handling facilities that must be compliant with Health Canada and Canadian Food Inspection Agency regulations.

Ideally glue and multiple capture mice traps would be checked on a schedule of short time intervals and trapped animals would be killed soon after discovery using a method of killing with a quick TIU or time to death. For example, in New Zealand glue traps are legally required to be checked for captured animals every 12 hours [45]. Presently there are many barriers to monitoring glue traps on a schedule of short time intervals in North America, including cost. As a result, captured animals often suffer physical injury from struggling against the restraint and may live for as long as 24 hours before eventually dying from dehydration or exhaustion [11,46]. For these reasons, the use of glue traps for rodent pest control is not condoned by the Canadian Veterinary Medical Association (CVMA) [47] and the AVMA states that glue traps are not considered an acceptable means of killing vertebrate animals [9]. Similar barriers exist to regular monitoring of multiple catch traps where mice are trapped alive, without access to food and water and die of dehydration, starvation and from injuries due to fighting with other trapped mice.

Standard 15: The welfare of working animals used for wildlife and rodent control is protected

15.1. Working animals used for wildlife and rodent control must be trained to perform the desired behaviours using force-free humane training techniques that do not include the use of released live prey or restrained live prey in training.

15.2. Working animals used for wildlife and rodent control must be provided with retirement plans that include re-homing options at the end of their working career; killing of healthy working animals for owner convenience is prohibited.

15.3. If euthanasia of a working animal is required, it must be carried out by a veterinarian.

15.4. Facilities housing working animals used for wildlife and rodent control must have a written emergency response plan and readily accessible, written emergency contact information.

15.5. Dogs used in wildlife control or insect detection must be:

a) healthy and in good condition and have no visible untreated injuries or illness;

b) housed in accordance with Section 1 of the Canadian Veterinary Medical Association (CVMA) *Code of Practice for Canadian Kennel Operations, Third Edition* [48];

c) provided with food and water in accordance with Section 2 of CVMA *Code of Practice for Canadian Kennel Operations, Third Edition* [48];

d) provided with veterinary care in in accordance with Section 3 of the CVMA *Code of Practice for Canadian Kennel Operations, Third Edition* [48];

e) licensed as per municipal bylaws; and

f) permanently identified with microchips.

15.6. Dogs used in insect detection must be certified in insect scent detection by a professional canine detection certification organization.

15.7. Dogs transported to the worksite must:

a) be secured inside a crate and/or in the interior of a vehicle;

b) have sufficient space to stand, turn around and lie down; and

c) be contained in a well-ventilated part of the vehicle.

15.8. Raptors used in wildlife control to haze birds must not be:

a) procured from the wild for the purposes of falconry; or

b) used in public display if showing signs of stress, aggression or other behaviour abnormalities.

15.9. Raptors used in wildlife control to haze birds must be:

a) healthy and in good condition and have no visible untreated injuries or illness;

b) housed and cared for in accordance with the European Association of Zoos and Aquaria (EAZA) *EAZA Falconiformes and Strigiformes Taxon Advisory Group Husbandry and Management Guidelines for Demonstration Birds* [49];

c) provided with food and water in accordance with the *EAZA Falconiformes and Strigiformes Taxon Advisory Group Husbandry and Management Guidelines for Demonstration Birds* [49];

d) provided with veterinary care from a veterinarian with avian expertise in accordance with the *EAZA Falconiformes and Strigiformes Taxon Advisory Group Husbandry and Management Guidelines for Demonstration Birds* [49];

e) held in captivity legally with the relevant government permits;

f) wear an identification tag (i.e. leg band); and

g) provided with daily exercise.

15.10. Raptors being transported to the worksite on public roadways must:

a) be secured inside a solid-sided, ventilated and darkened transport container;

b) have sufficient space to stand and turn;

c) have a suitable perch or floor covering for birds that prefer not to perch ; and

d) be contained in a well-ventilated part of the vehicle.

15.11. A written plan outlining the steps a WCSP will take following the loss of a working raptor must be in place and include:

a) name of person(s) and organization(s) to be notified;

b) equipment required for raptor recapture; and

c) locations to search.

There are welfare concerns associated with raptors cared for in captivity. Improper housing design and/or materials can result in physical damage such as leg and foot injuries, broken beaks and feather damage [50]. Raptors may also experience stress from the captive environment which may result in physical and behavioural changes. Physical signs of stress in captive raptors include feather plucking, chewing and self-mutilation [51]. Behavioural signs of stress in captive raptors include screaming for prolonged periods of time, excessive mantling (spreading wings to cover up food), and aggression to other raptors and human handlers [51].

The BC SPCA discourages bringing wild or exotic animals into a classroom or other unnatural setting for educational presentations, as observation of these animals outside of their natural habitat provide little educational benefit to students [52]. However, the BC SPCA recognizes that many raptors used in wildlife control are also used for display and educational purposes. In these cases, the hazing control work provides exercise and enrichment for captive raptors, as well as providing a non-lethal control option for human-wildlife conflicts.

Standard 16: Acts of cruelty and neglect are not tolerated

16.1. Acts of cruelty must not occur, including:

- capture using a prohibited method
- killing using a prohibited method
- dragging of a conscious animal by any part of its body
- malicious hitting or beating of an animal
- disposing of an animal's body without ensuring it is dead

16.2. Acts of neglect must not occur, including:

- failing to check on a set cage trap to see if it has been triggered
- failing to check on a cage-trapped animal once notified that animal is captured
- cage-trapping animals in conditions that lead to pain, distress and/or death
- holding cage-trapped animals for an excessive length of time before releasing or killing them
- failing to attempt to reunite a dependent young animal with its mother
- after confirmation of death of a mother animal or abandonment by a mother animal, failing to:
  - transport orphaned dependent young animals into the care of a professional wildlife rehabilitation centre; OR
  - kill dependent young animals if professional wildlife rehabilitation is not available
- failing to euthanize a severely injured animal in a timely manner
- releasing an injured animal
- failing to confirm the death of animal and/or use a secondary killing method

If an act of cruelty or neglect is witnessed, the Auditor may intervene when reasonably and safely possible. In accordance with the *PCA Act*, the activity may be reported to the BC SPCA Cruelty Investigations Department.

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Appendix 1 – Definitions

Animal welfare: An animal's quality of life. An animal's welfare depends upon both his/her physical health and affective state. Animals experience good welfare when they are able to experience positive feelings arising from pleasurable activities and the fulfillment of behavioural needs, and when they are free from poor physical health and negative feelings (e.g. pain, discomfort, hunger, fear, frustration).

Audit: An audit is a planned and documented activity performed by qualified personnel to determine by investigation, examination, or evaluation of objective evidence, the adequacy and compliance with established procedures, or applicable documents, and the effectiveness of implementation.

Audit instrument: The audit instrument is a document that is compiled by a qualified auditor to collect data on the implementation of the humane wildlife control accreditation standards.

Audit process: The audit process is the method by which the audit instrument is used to collect data.

Cage trap: A trap designed to capture a live animal(s) after they enter the enclosed space of the trap and cannot exit; includes box traps, tip traps and hoop traps (excludes multiple capture mouse traps).

Commensal rodents: Rodents with a close association to and reliance on humans for food and shelter.

Cull: Intentional and often indiscriminate killing of members of a wild animal population, regardless of age class or family status.

Decapitation: The severance of the head from the body.

Distress: A negative affective state caused by physical and/or psychological factors: physical distress may arise when an animal is hungry, thirsty, too hot, too cold, diseased, injured or in pain to an elevated degree; psychological distress may arise when an animal experiences fear, anxiety, frustration, depression or anger to an elevated degree.

Environmental modification: Changes made to modify the environment occupied by an animal in order to make the location less attractive to the animal so that it departs voluntarily.

Eradication: Complete removal of a population of animals from a location.

Euthanasia: An act of humane killing causing a minimum of pain, fear or stress for the purpose of ending suffering.

Exsanguination: The action of draining an animal of blood leading to death.

Exclusion: Non-lethal methods which aim to reduce conflict without direct animal contact, whereby animals are denied access to areas of interest (e.g., one-way door).

Feral animals: Domesticated animals who have partially or fully readapted to natural, wild habitats.

Free-living: Wild or domestic animals who are currently not living in captivity and may be independent of humans.

Hazing: A process of disturbing the animal's sense of security to such an extent that it decides to leave its location and move on.

Humane: Actions that promote good welfare and minimize suffering.

Humane killing: A method that ensures an animal is either killed instantly or that involves rendering an animal insensible to pain until death ensues.

Humane training: Training or caring for an animal without using pain, fear, physical or verbal intimidation techniques.

Humane wildlife control: Wildlife control through techniques that minimize animal pain and distress, are reliable, reproducible, irreversible, safe and rapid.

Human-wildlife conflict: The interaction between wild animals and people and the resultant negative impact on people or their resources, or wild animals or their habitat.

Invertebrate: An animal which does not possess a central nervous system and backbone (e.g., insects, worms, mollusks).

Introduced species: Alien, exotic, foreign, non-indigenous, non-native species living outside of its natural range as a result of human activity; does not presume impact on native species.

Kill-with-capture method: A control method that is designed to kill the animal at the moment the animal is physically captured.

Lethal control: A control method that is intended to kill the target animal.

Multiple capture trap: A box shaped trap that mice can enter but not exit; these can be used with glue traps inserted inside or without (i.e. tin cat traps, multi-catch traps and rodent repeater traps).

Non-lethal control: A control method not intended to kill or cause long-term harm to target animal.

Non-target animal: Animals or species that are not the object, or target of wildlife control activities that may incur unintended effects.

Nuisance wildlife (pest): Any wild animal who is perceived to be in conflict with humans, other animals or property.

Nuisance wildlife control: Lethal and/or non-lethal management of vertebrate animals defined as wildlife, which aims to restrict the activity (i.e., killing, relocation, translocation, exclusion) of animals that are deemed troublesome to people through their direct or indirect activities.

One-way door: A device installed over an existing entry point that allows an animal to exit a structure but not get back in.

Pest: An ambiguous, value-based term for unwanted wildlife; see "Nuisance wildlife".

Pest control: An industry term used to describe the lethal and/or non-lethal management of invertebrate and vertebrate animals, which aims to restrict activity (i.e. killing, relocation, translocation, exclusion) of animals that are deemed troublesome to people through their direct or indirect activities.

Primary killing method: The first killing method that is used on an animal; may be followed by a secondary killing method to ensure death.

Professional wildlife rehabilitator: An individual with formal training in wild animal care and natural history, permitted by applicable government agencies to provide medical treatment and husbandry to injured and orphaned wildlife. Such persons should adhere to international *Minimum Care Standards for Wildlife Rehabilitation*, participate in regular professional development and maintain membership to regional and national wildlife rehabilitation associations.

Relocation: Transfer of an animal between locations but remaining within the animal's home range.

Reunion box: A box in which young are placed after removing them from inside a structure that is secured next to the original entry point on the exterior of a structure, allowing the mother to retrieve her young and move them to an alternate den site.

Secondary killing method: A killing method employed after a primary killing method to ensure death of an unconscious animal before it can recover consciousness.

Standard operating procedure (SOP): Established or prescribed methods to be followed routinely for the performance of a designated operation or in designated situations.

Structural pest control: Commercial and industrial practices for controlling wood-destroying organisms or household pests (invertebrate and vertebrate) in and around commercial or residential buildings and structures.

Target animal: An animal or species that is the object of wildlife control activities.

Technician: Any individual performing the wildlife control services; can be owners of the wildlife control business or employees.

Translocation: Transfer of an animal from one location to another and outside the animal's home range, with the goal being the animal does not return to its original location.

Vertebrate: An animal member of the subphylum Vertebrata. Also known as chordates who have backbones and spinal columns, vertebrates include, but are not limited to, fish, amphibians, reptiles, mammals and birds.

Wild animals or Wildlife: Species that have not been domesticated. Wild animals have evolved in complex ecosystems resulting in mutual interdependencies with other animals and the surrounding environment. Wild animals may be introduced or native, and wild-born or captive-bred.

Wildlife control: Lethal and/or non-lethal management of vertebrate animals defined as wildlife, which aims to restrict animal activity (i.e. killing, relocation, translocation, exclusion).

Wildlife control service provider: An individual, organization or business that manages and/or provides the wildlife control services.

Appendix 2 – Standard Operating Procedure Required Topics

Standard 1.1. WCSPs must have a written wild animal welfare policy to communicate expectations for technicians regarding wild animal welfare.

The following elements must be included in the policy (a template is available from AnimalKind upon request):

- the business is committed to protecting the welfare of wild animals
- animals are handled and treated with respect
- employees report observations or information related to animal mistreatment by another employee
- name of person responsible for responding to allegations of employee mistreatment of animals

Standard 1.3. Technician training must: a) use Standard Operating Procedures (SOPs).

The following topics must be included in the SOPs that are used by the WCSP to train technicians. How to organize and integrate the topics into SOPs is at the discretion of the WCSP (an individual SOP for each topic is not needed). SOP templates are available from AnimalKind upon request.

Relevant Standard	**SOP Topics- General**
1.9	cleaning of equipment after contact with an animal
2.5	safety when working at heights
2.6	safe and effective use of gas chambers
2.7	safe and effective use of firearms (e.g. calibre, body placement, accuracy)
2.8	prevention of animal injuries (e.g. bites, scratches)
2.8	how and when to use of personal protective equipment
11.7	legal disposal of animal remains
15	care of working dog
15	care of working raptor
Relevant Standard	**SOP Topics- For Each Controlled Species**
6, 7, 8, 9	non-lethal control methods used for the species (e.g. exclusion, removal, live capture, release)
10, 12, 13, 14	lethal control methods used for the species (e.g. kill-with-capture, rodenticides; use of glue traps)
11	killing method(s) used for the species
11.6	procedures for confirming death in the species

Appendix 3 – Prohibited Poisons and Rodenticides

Standard 3.2 Use of poisons (other than specific rodenticides named in the Standards) is prohibited by the Program. This includes (but is not limited to):

- Alpha-chloralose rodenticide
- Avitrol Whole Corn (active ingredient 4-Aminopyridine)
- Avitrol Chop Corn (active ingredient 4-Aminopyridine)
- Calciferol and Cholecalciferol
- Hydrogen Cyanide fumigant
- Phosphine Gas fumigant
- Strychnine
- Sulphur Dioxide fumigant

Standard 13.6 The following rodenticides are prohibited from use by the Program:

Active Ingredient	**Brand Name (Manufacturer)**
Bromethalin	Fastrac Water-Resistant Blox (Bell)
Warfarin	*various*
Zinc phosphide	ZP Tracking Powder (Bell)

Appendix 4 – Brand Names of Permitted Rodenticides

Standard 13.1 When lethal control is justified the following rodenticides may be used in accordance with the requirements of the *Integrated Pest Management Act* and Regulations:

Active Ingredient	Brand Names (Manufacturer)	Legal Locations of Use
Diphacinone	Ditrac Blox (Bell) Ditrac Super-Size Blox (Bell) Liqua-Tox II (Bell)	indoor and outdoor
Brodifacoum	Final Blox (Bell) Final Pellets (Bell) RATAK Rodenticide Pellets (Syngenta) TALON Rodenticide Pellets (Syngenta) WEATHERBLOK XT Bait (Syngenta)	indoor
Bromodialone	Contrac All-Weather Blox (Bell) Contrac Meal Packs (Bell) Contrac Grain Bait (Bell) Contrac Rodenticide Pellets (Bell) Contrac Super-Size Blox (Bell) Maki Mini-Blocks (Liphatech) Maki Pellets (Liphatech) Rat XB Meal Bait Rat XB Baitpaks Resolv Soft Bait (Liphatech) Boothill (Vetoquinol) Revolver (Vetoquinol)	Indoor and outdoor around structures
Difethialone	First Strike Soft Bait (Liphatech) Generation Mini Blocks (Liphatech) Generation Pellets (Liphatech) Blue Max (Liphatech) FastDraw Soft Bait (Vetoquinol) Hombre Mini Blocks (Vetoquinol) Hombre Pellets (Vetoquinol) Hombre Mini Place Packs (Vetoquinol)	indoor
Chlorophacinone	Ground Force Mhouse (Vetoquinol)	indoor and outdoor use

Appendix 5 – Critical Criteria for Animal Welfare

Some standards have been identified as "critical criteria for animal welfare". Failing one or more of these during an audit may result in accreditation being withheld, regardless of conformance with other standards.

- Technicians with wildlife or animal cruelty convictions or animals seized (standard 1.5)
- Operating a non-accredited wildlife control business alongside the business intended for accreditation (1.6)
- Partnering, subcontracting or referring customers to another non-accredited wildlife control business (1.7)
- Displaying, selling, bartering, trading, given to persons or using wildlife or wildlife parts in another way that does not conform to the Standards (1.8)
- Releasing animals that are a) injured or diseases; b) orphaned young; or c) a species that is illegal to release (9.6)
- Killing animals to resolve nuisance complaints (i.e. minor property damage, noise or smell complaints) (10.1a)
- Killing animals to remove them from a location that will continue to have ongoing accessibility to other animals in the population (e.g. open air sheds, greenspaces, unmodified culverts) (10.1b)
- Culling populations of animals without scientific evidence supporting the feasibility of the cull goal and justification for the reason the animals are to be killed (10.1c)
- Placing rodenticides in burrows (13.7)
- Procuring raptors from the wild for the purposes of falconry (15.8a)
- Keeping raptors used in wildlife control on permanent public display (15.8b)
- Acts of cruelty or neglect (16.1 & 16.2)

Acts of cruelty include:

- capture using a prohibited method
- killing using a prohibited method
- dragging of a conscious animal by any part of its body
- malicious hitting or beating of an animal
- disposing of an animal's body without ensuring it is dead

Acts of neglect include:

- failing to check on a set cage-trap to see if it has been triggered
- failing to check on a cage-trapped animal once notified that animal is captured
- cage-trapping animals in conditions that lead to pain, distress and/or death
- holding cage-trapped animals for an excessive length of time before releasing or killing them
- failing to attempt to reunite a dependent young animal with its mother
    - after confirmation of death of a mother animal or abandonment by a mother animal failing to:
    - transport an orphaned dependent young animal into the care of a professional wildlife rehabilitation centre; OR
- killing the dependent young animal if a professional wildlife rehabilitation centre is not available
    - failing to euthanize a severely injured animal in a timely manner
    - releasing an injured animal
    - failing to confirm the death of animal and/or use a secondary killing method

Fur to Forest Finance Snapshot

Last Update: Oct 21, 202

Goods and Services

Current Expenditures	33,230		
Pending Expenditures	Expected expend	total commitment	
WLC Contribution Agreement	19,000	none? Via GINPR CA, need to JV	
Pauquachin Contribution Agreem	10,005	10,005	when submitted?
Coastal Conservation	39,705	?	Aug/Sept invoice = 13235
Sidney Social Contract (Bea)	26,127	34836 (June)	34836/8*6 26127
Working Group Chair	22,000		
BTD Contract	28,350		
HLRS Contract	19,000	25,000	guess based on WLC estin
Sallas Contribution Agreement	15,000	15,000	
staff training	6,600	CCT training	
online software subscriptions	1,000		
computers	1,400		
uniforms	3,000		
facility rental	800		
water taxi	4,000		
Youth Hunter Training	9,000	if we pay for 2 courses	
exclosure fencing	9,600	8 exclosures, 1200 each	
Hawthorn treatment	5,000		
camera grid	0	set up next year	
exclosure plants	3,200		
Fuel and boat maintenance	3,000	Shahina will JV to F2F	
Total Pending	223,787		

G&S Budget		would take some math to figure out, until MRT updated
G&S Expended	33,230	
G&S Pending spending	223,787	
G&S Total Forecasted Spending	257,017	
G&S Variance		

Salary and Wages

Budget	298,300			
EG04 (Becky + Chris)	61,000	estimate, becky and Chris get diff amnts		**Initial Sala**
EG03 (?) start Dec 1	17,925	53776/12* 17925.33		**EBP remov**
GT04 (Ben + ?)	63,003			**Additional**
PM03 (Stephanie)	62,179			**Additional**
EG04 Double bank (Chris)	22,182	59154/yr * 4.5 month:	22182.75	**Total Salar**
EG 01 (22 weeks)	18,804	44446/52*22	18804.08	**Total EBP**

PM04 (Mike + Becky)	67,867	lower cause of acting in RCM without backfill
PM04 (overlap?)		
Total Forecast Salary	312,960	
Salary and Wages Transfer Costs	3,958	*27% of transfer amount
Forecasted tansfer required	14,660	wait until EG03 solidified, then request transfer
Total Forcasted	316,919	

Total Forecasted Expenses	573,936	
Budget (2020/21)	880,800	carry forward evaporated, and after removing $
Balance	306,864	

20

. = 6617 *6 months 39705 115290-37705

nate

ry budget
ed
Salary
EBP Removed
y

	Check
149,998.00	MRT budget - finance budget = initial EBP removed
40,499.46	45832
19,752.00	
5,333.00	
169,750.00	
45,832.46	

886.7K

Coulson, Stephanie (PC)

From: Judson, Laura (PC)
Sent: October 6, 2020 4:04 PM
To: Janssen, Michael (PC); Coulson, Stephanie (PC)
Subject: RE: F2F Proactive Media Pitch

Well that's promising! DIA's still make my head spin so fill me in on Tuesday so I understand this and can communicate it properly to the Comms Sub-Committee!
Laura

Laura Judson
Public Relations and Communications Officer | Agente, Relations publiques et communications
Coastal BC Field Unit | Unité de gestion, Côte de la C.-B.
Parks Canada | Parcs Canada
Cel: 250-818-2509

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: Tuesday, October 6, 2020 4:00 PM
To: Judson, Laura (PC) <laura.judson@canada.ca>; Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>
Subject: RE: F2F Proactive Media Pitch

Awesome!
The DIA process starts now, as it includes the planning phase of a project. So we may be able to hit all elements, provided we can get the comms committee on board.
But yes, we need to be able ready for the next step beyond just an info push. ☺
Thank you for your continued involvement Laura!
Mike

Michael Janssen, MSc, PMP
Project Coordinator | Coordinateur de projet
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Parks Canada | Parcs Canada
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Government of Canada | Gouvernement du Canada

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From: Judson, Laura (PC) <laura.judson@canada.ca>
Sent: Tuesday, October 6, 2020 3:54 PM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>; Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>
Subject: RE: F2F Proactive Media Pitch

Thanks Mike! I'd love to be part of these conversations.

I completely agree with Judith that the ideal way to share this story with media would be to start with a reporter who is quite likely to frame it positively.
FYI- I discussed this issue with our Strategic Communications Advisor, Meaghan Bradley, today – letting her know that we're keen to profile this project through a proactive media pitch but our partners would prefer to be reactive at this time.
Meaghan stressed that we wouldn't want to take this step with media until our partners were ready and willing to speak to media themselves (which I think we all agree on). She also noted that it may be best if we wait until there is an opportunity for public input and consultation before proactively engaging media. She was concerned that we would ramp up outrage if we showcased the project through media and then shut the public out by saying we are only consulting with key project participants at this time.
On the other hand, if we waited until we were moving into the DIA phase – which I believe is when our partners want to share the project with media – then we can invite the public's input as we're sharing the project with them. This also has the advantage of bringing our preferred approach to eradication , black-tailed deer management, and plant restoration into focus. If we engage the public while many options are on the table, we could splinter support both within our participant circle and among the public.
Of course, it is certainly a risk not to jump out in front of this future news story with all of the key voices and information ready to go.
One last point - Meaghan did say however that we should update the webpage so that ongoing information is available to the public (Stephanie is already on top of this) and potentially a reporter.
We don't have to take this direction, but Meaghan did raise some interesting points to consider.
Looking forward to discussing this and more next Tuesday!
Laura

Laura Judson
Public Relations and Communications Officer | Agente, Relations publiques et communications
Coastal BC Field Unit | Unité de gestion, Côte de la C.-B.
Parks Canada | Parcs Canada
Cel: 250-818-2509

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: Tuesday, October 6, 2020 2:53 PM
To: Judson, Laura (PC) <laura.judson@canada.ca>; Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>
Subject: F2F Proactive Media Pitch

Hi Laura!
We have an F2F "social engagement group" standing call on Tuesdays at 1pm where we discuss elements of social engagement on F2F. This includes stakeholder, participant and public engagement. It would be fantastic if you would be willing to join us. We can shift to another time that works for you if you like?

At today's meeting (Mike, Stephanie, Bea, Judith) it was generally agreed that the time has come to start thinking seriously about a proactive media pitch for the project, as a way to mitigate potential public outrage down the line. What would the next steps be if we wanted to think seriously about engaging in this?
Judith suggested targeting a friendly reported, which I know was already on your mind as well.

We would want to incorporate the public comms in to the DIA process as well, to the extent possible.

Thanks Laura!
Mike

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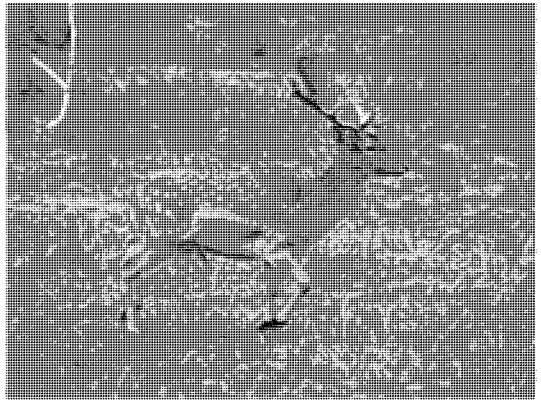


ASSESSING THE OPTIONS FOR FALLOW DEER ERADICATION

SIERP DEER WORKING GROUP, OCTOBER 2020

MEETS THE PRINCIPLES

- **Rule 1:** All individuals in the target population must be put at risk by the methods employed during the eradication. The removal methods chosen must not compromise the ability to remove the last individual, thus this rule determines the methods that must be employed.
- **Rule 2:** The target population must remain naive to the methods employed while the population is being reduced.
- **Rule 3:** Individual animals must be removed faster than the population increases (due to reproduction and immigration) at all densities. This will influence the intensity and length of the campaign.
- **Rule 4:** Re-colonization must be zero, or as close to zero as possible (i.e., biosecurity is essential).
- **Rule 5:** The local regulatory, social, and economic conditions must be conducive to meeting Rules 1–4.

Start by thinking about the one last deer

Don't educate the deer

Act fast

Plan for biosecurity

TECHNICAL CONSIDERATIONS

- Proven methods
- Will enable complete eradication (one last deer)

SOCIAL CONSIDERATIONS

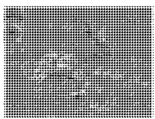
- Does not require access to all private properties
- Avoids/minimises cost and impact on Sallas owners
- Creates opportunities for Indigenous youth training
- Safe
- Ethical (meets SPCA approvals)
- Avoids unwanted media attention
- Supported by all project partners

REGULATORY CONSIDERATIONS

- Meets federal and provincial regulations
- Respects Sallas Forest Strata bylaws
- Respects Indigenous processes

OTHER CONSIDERATIONS

- Cost
- Timeline
- Impacts on black-tailed deer population



ASSESSING THE OPTIONS FOR FALLOW DEER ERADICATION

1

MEETS THE PRINCIPLES

- **Rule 1**: All individuals in the target population must be put at risk by the methods employed during the eradication. The removal methods chosen must not compromise the ability to remove the last individual, thus this rule determines the methods that must be employed.
- **Rule 2.** The target population must remain naive to the methods employed while the population is being reduced.
- **Rule 3**: Individual animals must be removed faster than the population increases (due to reproduction and immigration) at all densities. This will influence the intensity and length of the campaign.
- **Rule 4**: Re-colonization must be zero, or as close to zero as possible (i.e., biosecurity is essential).
- **Rule 5**: The local regulatory, social, and economic conditions must be conducive to meeting Rules 1–4

Start by thinking about the one last deer

Don't educate the deer

Act fast

Plan for biosecurity

2

PHASES OF ERADICATION

- Rapid population reduction:
  - remove ~~80-90%~~ of the animals: methods need to put all animals at risks; they generally have to be unconventional methods that deer aren't familiar with
- Last 10% of deer:
  - these deer are wary, so you need new, strategic methods (e.g., aerial hunting)
- Final phase:
  - confirming success; when you have 0-1 deer left; techniques at this stage are completely different. e.g., hunting with detection dogs.

3

TECHNICAL CONSIDERATIONS

- Proven methods
- Will enable complete eradication (one last deer)

4

SOCIAL CONSIDERATIONS

- Does not require access to all private properties
- Avoids/minimises cost and impact on Sallas owners
- Creates opportunities for Indigenous youth training
- Safe
- Ethical (meets SPCA approvals)
- Avoids unwanted media attention
- Supported by all project partners

5

REGULATORY CONSIDERATIONS

- Meets federal and provincial regulations
- Respects Sallas Forest Strata bylaws
- Respects Indigenous processes

6

OTHER CONSIDERATIONS

- Cost
- Timeline
- Impacts on black-tailed deer population

7

Coulson, Stephanie (PC)

From: Coulson, Stephanie (PC)
Sent: October 13, 2020 11:34 AM
To: Miller, Becky (PC); Janssen, Michael (PC);
Cc: Tooby, Ben (PC)
Subject: RE: SPCA questions re: deer populations

Thanks Becky, SPCA basically said it would help our case in some ways if the deer did show signs of distress or illness, or did catch AHD—as the SPCA endorses wildlife control when their health is compromised.

From: Miller, Becky (PC) <becky.miller@canada.ca>
Sent: October 13, 2020 11:32 AM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>; Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>
Cc: Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject: RE: SPCA questions re: deer populations

A couple things to note:
We're considering using wildlife cams to get a better idea of deer health – right now we're relying on anecdotal evidence or sign of significant deer mortality.
The newly identified disease (AHD) can spread rapidly in high density populations, the Ministry is keeping its eye on Gulf Islands but an outbreak is indicative of overpopulation.

Becky Miller, MSc
Forest Ecologist | Écologiste Forestier
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s.19(1)

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From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: Friday, October 9, 2020 3:02 PM
To: Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>
Cc: Miller, Becky (PC) <becky.miller@canada.ca>; Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject: RE: SPCA questions re: deer populations

Thank you to you both!

1. Super coarse estimate is 500 Fallow, less than 100 black-tailed
2. No evidence of starvation right now, though there definitely has been in the past when the population was at/above carrying capacity of the island.
3. We would very likely be working with the Provincial vet – Helen Swantje (sp?) – at the very least she will need to review permits and operations. She has been involved in the past. We would also work with the PCA vet that heads up the PCA animal care committee.

Michael Janssen, MSc, PMP
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From:
Sent: Friday, October 9, 2020 1:55 PM
To: Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>; Janssen, Michael (PC) <michael.janssen@canada.ca>
Cc: Miller, Becky (PC) <becky.miller@canada.ca>; Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject: RE: SPCA questions re: deer populations

Stephanie (as usual) has captured it all well.

Judith

From: Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>
Sent: Friday, October 9, 2020 1:52 PM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>
Cc: Miller, Becky (PC) <becky.miller@canada.ca>; Tooby, Ben (PC) <ben.tooby@canada.ca>;
Subject: SPCA questions re: deer populations

Howdy folks,

Judith and I just had a great chat with Sara Dubois from the SPCA. Sara asked a couple questions that I couldn't definitely answer, so I'm hoping you can help:

1. Do we have an estimation of the approximate fallow deer population on Sidney Island? BTD?
2. Are there any signs that the current deer populations (either fallow or BTD) are unhealthy, e.g., any signs of starvation due to overpopulation?
3. Are we working with any local (i.e., CRD-based) vets on this project? I believe with have an in-house vet that oversees this project, but I don't know where they're located. Would they be present on the ground during eradication activities?

I don't need this info urgently, but I did tell Sara I'd report back when I had more information. ☺ **s.19(1)**

The summary of our conversation was:

a) SPCA has already heard from a handful of residents on Sidney Island who are concerned about eradication. She asked if an estimate of 20% opposition within Sallas was accurate, which I think it is, though I think the entrenched opposers are more like 10%, and not all due to animal welfare concerns. I could spend some time with Bea to do the actual math at some point.
b) The best thing we can do for the SPCA (and ourselves) is keep the SPCA apprised of the project as it develops, so that they are prepared to respond to the public if/when needed.

c) SPCA will not endorse this project unless we are proceeding with eradication due to animal welfare concerns. They will take a "non-position", i.e., they will not oppose the project, providing we meet international standards for humane animal control (which is one set of filters Judith will use to ensure the WG selects appropriate and acceptable methods).
    a. For example, if a member of the public (or a Sidney Islander) contacts them, they won't say that they support the project, but they will confirm that the proposal meets the standards for ethical animal control (assuming that they do).
d) SPCA will review our proposed methods at any point during development; they'll weigh-in if/when the WG is deciding between methods, and will review the final proposal as well to offer feedback and flag anything that will likely trigger negative reactions from the public, to help us prepare. Basically, she said she was happy to be a resource throughout the planning process.

Judith, feel free to add anything I missed.

Cheers,
Stephanie

Stephanie Coulson (she/her/elle)
Partnering and Engagement Officer, Gulf Island National Park Reserve
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Mcpherson, Michèle (PC)

From: Janssen, Michael (PC)
Sent: Wednesday, October 14, 2020 2:44 PM
To: Geraldine Van Gyn
Subject: RE: Mike Janssen chat

Shelley Marshall's contact info in case it is useful:
250-739-8428, shelley.marshall@gov.bc.ca

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s.19(1)

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From: Geraldine Van Gyn <gvangyn@uvic.ca>
Sent: Wednesday, October 14, 2020 12:00 PM
To:
Cc: Janssen, Michael (PC) <michael.janssen@canada.ca>; Ross McCutcheon <ross@rcmadvisers.com>
Subject: Re: Mike Janssen chat

Good point - will include.
G

From:
Sent: Wednesday, October 14, 2020 11:51 AM
To: Geraldine Van Gyn
Cc: Janssen, Michael (PC); Ross McCutcheon
Subject: Re: Mike Janssen chat

Thanks Geri. One of the things I have wondered is the cost to repair damage cover the Sidney island factor? i.e. transport of trade, oversight etc. When things have needed to be repaired here on Sidney I often find that the part can be worth about $30 but then it costs like $300 to get the person here and back and perform the work and I also have to figure out when to coordinate that with me being here.

So I wonder if that aspect would be included?

On Wed, Oct 14, 2020 at 11:00 AM Geraldine Van Gyn <gvangyn@uvic.ca> wrote:

I had a chat with Mike Janssen, who is included in this email, about the indemnity issue. He noted that these processes take time but in general agreed with the direction I was taking. He also alerted me to the fact that the 'contractors' will also have to have insurance.

I have made some changes, to my original indemnity document, as a result of this conversation. Obviously I am not a lawyer so this document will have inappropriate language for a true legal description (but not impolite language :) and is a starting point for discussions.

As a 'check', I discussed 'the gist' of the areas of indemnity with who has thought long and hard about the issues of insurance related to the fallow deer eradication process, with input from They have raised this issue repeatedly. From the general description of the areas of indemnity that I identified, she felt it was comprehensive and only suggested that I add a clause about 'expediency' of compensation, which I have done.

So give this a read and identify additions or deletions as you see fit.
Geri

s.19(1)

DEER WORKING GROUP

MEETING #4 Oct 13, 2020

1

2

SPCA – 7 PRINCIPLES

An interdependent and step-wise set of 7 principles for managing human–wildlife conflict:

- Modify human practices when possible
- Justify the need for control
- Have clear and achievable outcome-based objectives
- Cause the least harm to animals
- Consider community values and scientific information
- Include long-term systematic management
- Base control on specifics of the situation

3

SPCA

- Will review and give feedback on options
- Will help us to understand potential for public opposition
- Aim for a "non-position" (i.e., SPCA does not oppose the project)
- Be clear about why we are eradicating (benefits to other animals)
- Be clear about how we are eradicating – and that it will not be cruel or inhumane
- Have a local we involved
- Note that the deer population is already human
- Also reach out to the Urban Wildlife Stewardship Society

4

Coulson, Stephanie (PC)

From: Janssen, Michael (PC)
Sent: October 27, 2020 8:39 AM
To: Miller, Becky (PC); Madsen, Chris (PC)
Subject: RE: Cost estimate

Thanks Becky,
Can you please remind me, what is the scope of the hawthorn treatment for the calculation below?
Full Island eradication, experimental areas, PCA land only? Thanks ☺
Mike

Michael Janssen, MSc, PMP
Project Coordinator | Coordinateur de projet
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From: Miller, Becky (PC) <becky.miller@canada.ca>
Sent: Thursday, October 22, 2020 1:38 PM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>; Madsen, Chris (PC) <chris.madsen@canada.ca>
Subject: RE: Cost estimate

Camera grid material and setup costs
Approximately $45,000 first year + ~ $25,000 per subsequent year.
This rough estimate includes purchasing equipment, data analysis and reporting.

Hawthorn treatment costs:

$1,515.42	5.051385	Garlon RTU 13 litre jugs to treat total area
	8.472333	full days of herbicide application to both meadows + a couple day buffer
$11,052.00	4	full days of contractor application on sallas side (4 of the 8 total days for herb application in both meadows)
X	23	days of boat travel between SOC & Sidney Island
$22,400.00	14	full days of sawyer team cutting/piling (rough estimate based on how much PCA accomplished but accounting for a slightly larger crew + rough estimate of hourly rate from Sellentin)
X	23	field days, 2 PCA staff (driving boat + herbicide application)
$34,967.42		Total cost of paying felling crew for both meadows, for herbicide contractor applying in Sallas meadow & PCA staff applying in PCA meadow, not considering boat travel or salary dollars for PCA staff

$23,915.42	Total cost of paying felling crew for both meadows, for PCA staff applying herbicide in both meadows, not considering boat travel or salary dollars for PCA staff)

Becky Miller, MSc
Forest Ecologist | Écologiste Forestier
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From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: Wednesday, October 21, 2020 11:32 AM
To: Madsen, Chris (PC) <chris.madsen@canada.ca>; Miller, Becky (PC) <becky.miller@canada.ca>
Subject: Cost estimate
Importance: High

Hi Becky, Chris,
Can you please hit me with approx. cost estimates from now until Mar 31 for:

- Exclosure Fence materials
- Camera Grid material and setup costs
- Costs for plants to be planted in exclosures
- Hawthorn treatment costs.

If you can do this before end of day tomorrow, I would be appreciative. Don't spend too much time on it, and don't pad your answers to be safe ☺
I will include contingency on my end.

I'm working in $1k increments.

Thanks!
Mike

Michael Janssen, MSc, PMP
Project Coordinator | Coordinateur de projet
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Mcpherson, Michèle (PC)

From: Gregg Howald <gregg@coastalconservation.ca>
Sent: Friday, November 20, 2020 1:28 PM
To: Janssen, Michael (PC)
Subject: Re: Quick question re alternatives

And besides, It's the purpose statement that drives this analysis. And guess what- you write it, the rest follows.

You can state categorically that control won't meet purpose and need of project.

Sent from my iPhone

On Nov 20, 2020, at 13:01, Janssen, Michael (PC) <michael.janssen@canada.ca> wrote:

Hi Gregg!
Do you think that somewhere in the DIA should be an explanation of why control was dismissed?
The issue keeps coming up and right now, we don't have anything down on paper.
From a risk management perspective, it feels like we should write down why that's a bad idea, so in the future we can say, "yeah, control was evaluated and is not appropriate because of... blah blah blah. That was in the DIA..."

Michael Janssen, MSc
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From: Gregg Howald <gregg@coastalconservation.ca>
Sent: Friday, November 20, 2020 12:52 PM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>
Subject: RE: Quick question re alternatives

Hi Mike,

I see your purpose and need statement for the DIA is about forest restoration. No issues there. However, you have an opportunity for the DIA to reframe the purpose.

If the purpose and need of the project is to eradication fallow deer to facilitate natural restoration/active restoration, then you can narrow your alternatives dramatically.

Alternatives that should be analyzed are those that meet the purpose and need. If they don't meet the p/n, then you reject them and don't carry them forward in the analysis. You put these in a section called something like: "Alternatives considered but dismissed from further consideration" then you outline the methods and why you dismissed them.

This way people see you considered them, but dismissed them because they don't meet the P/N.

Gregg

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: November 20, 2020 12:41 PM
To: De Montreuil, Leah (PC) <leah.demontreuil@canada.ca>; Greenfield, Joyce (PC) <joyce.greenfield@canada.ca>
Cc: 'Gregg Howald' <gregg@coastalconservation.ca>; Tooby, Ben (PC) <ben.tooby@canada.ca>; Miller, Becky (PC) <becky.miller@canada.ca>; Madsen, Chris (PC) <chris.madsen@canada.ca>; Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>; BEATRICE FRANK <frankbea@hotmail.com>
Subject: Quick question re alternatives

Hi Leah and Joyce,
Quick question for you while I am striving for clarity on the output of our collaborative planning process.

Regarding "consideration of alternative means":
The purpose of the project is forest restoration, and the primary element of the DIA is the fallow deer eradication, because that will be most controversial. When we think of "alternative strategies", we tend to think of alternative methods for eradication (helicopter vs dogs vs night hunting etc..).

As part of the DIA, would we also need to consider alternatives to eradication such as:

a) No action
b) Control of Fallow Deer at pre-determined levels
c) Control of Fallow Deer at pre-determined levels + fertility control **s.19(1)**
d) Removal of Fallow Deer via live capture and sale to Fallow Deer Farm
e) Complete removal of Fallow deer via lethal means.

This is the decision facing Sidney Islanders, and some individuals there are raising (b) as a preferred option. Assessing these options has not been done on paper, for this project. I would also suspect the public to be asking why not use contraception like Oak Bay? Why not move all the deer, so you don't have to shoot them?
If we need to address these alternatives to eradication, I will need to inform Sidney Strata Council asap, as they are currently discussing whether they can devote resources to evaluating alternatives, which is a waste of their time and money if we are going to do it anyway.

The feedback I received from CoRe is that we should not put resources in to assessing these alternatives, because PCA is unlikely to fund them. But if it is necessary as part of a DIA process, that is a different reason to addressing the alternatives, and I need to devote resources to it.

Thank you!
Mike

Michael Janssen, MSc

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Coulson, Stephanie (PC)

From: Greenfield, Joyce (PC)
Sent: November 23, 2020 7:09 AM
To: Miller, Becky (PC); Janssen, Michael (PC); De Montreuil, Leah (PC)
Cc: 'Gregg Howald'; Tooby, Ben (PC); Madsen, Chris (PC); Coulson, Stephanie (PC); BEATRICE FRANK
Subject: RE: Quick question re alternatives

Good morning,

Thinking about this more over the weekend, I wonder if Mike's option "d" *Removal of Fallow Deer via live capture and sale to Fallow Deer Farm* is better grouped with the eradication option "e". I guess it depends on how effective live capture is likely to be. I mention because it would then justify the evaluation of removal via live capture as an option under alternative means.

This isn't my field, but I suspect Becky is right, in that the use of existing academic and other "high" quality literature should provide sufficient evidence necessary for the development of a defensible argument in support of your choice of options.

Thanks,
Joyce

Joyce Greenfield

Pronom : Elle
Pronouns: She/Her

Environmental Assessment Scientist, Natural Resource Conservation Branch
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s.19(1)

From: Miller, Becky (PC) <becky.miller@canada.ca>
Sent: November-20-20 5:46 PM
To: Greenfield, Joyce (PC) <joyce.greenfield@canada.ca>; Janssen, Michael (PC) <michael.janssen@canada.ca>; De Montreuil, Leah (PC) <leah.demontreuil@canada.ca>
Cc: 'Gregg Howald' <gregg@coastalconservation.ca>; Tooby, Ben (PC) <ben.tooby@canada.ca>; Madsen, Chris (PC) <chris.madsen@canada.ca>; Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>; BEATRICE FRANK <frankbea@hotmail.com>
Subject: RE: Quick question re alternatives

Hi All,

Just wanted to mention that consideration of these alternatives has been done on other control or eradication projects so we'll have plenty of material and research to work from. The writing will still take time but we can use a skeleton framework from similar projects conducted both locally and globally. I'm happy to pull that info together if need be.

Cheers,
Becky

Becky Miller, MSc
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From: Greenfield, Joyce (PC) <joyce.greenfield@canada.ca>
Sent: Friday, November 20, 2020 3:32 PM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>; De Montreuil, Leah (PC) <leah.demontreuil@canada.ca>
Cc: 'Gregg Howald' <gregg@coastalconservation.ca>; Tooby, Ben (PC) <ben.tooby@canada.ca>; Miller, Becky (PC) <becky.miller@canada.ca>; Madsen, Chris (PC) <chris.madsen@canada.ca>; Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>; BEATRICE FRANK <frankbea@hotmail.com>
Subject: RE: Quick question re alternatives

Hi Mike,

Impact assessment guidance tells us the circumstances under which we have to do an impact assessment, but we have quite a bit of latitude as to how we actually go about the assessment itself. So, it's not so much about what we must do, with respect to the consideration of alternatives, as what we should do, to be sure we are making the best decisions with respect to the achieving our objectives while minimizing impacts to the environment.

As you say, the purpose or justification for the project is to **achieve forest restoration**. It's reasonable for the impact assessment to demonstrate that you've considered your various options for achieving forest restoration. One option is to do nothing (your option "a" below). Another is to allow revegetation to occur by completely eliminating the disturbance that's currently supressing vegetative growth (option "e") . A third option is to allow revegetation to occur, albeit more slowly and selectively, through the reduction of the disturbance (options "b" through "d"). Given that these are all inherently environmental issues and that the public is going to want transparency, I think they are worth addressing at some level. Especially since it seems to be something people are interested in. Better now, than down the road when the issue keeps coming up and you may not have a defensible answer. Evaluating the various ways to control deer populations through fertility manipulation or whatever isn't something I think you need to do, for reasons I give below.

Do consider how much effort is reasonable to invest when evaluating these three options. There might not be much on paper presently, but I suspect that your group has discussed these various options at some point. Investing some effort in briefly documenting the likely outcomes of the three scenarios may help support your overall project justification, which is part of the point of the consideration of alternatives related to the "need for" or "purpose of" the project. It's important to remember here that the purpose of the project is to achieve forest restoration (not to kill deer – that's the means to the end). You can then move on to the consideration of alternative means. The consideration of alternate means doesn't mean that you have to rehash everything. You just consider the various ways to go about achieving your chosen course of action/project. For example, assuming that the "best" option to achieve forest restoration is to eliminate the disturbance and eradicate fallow deer on the island, then you would evaluate options like helicopter vs

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dogs vs night hunting etc., as you say. You wouldn't go back and revisit the various ways to go about just controlling deer populations, because you've already shown why it wasn't a preferred option earlier.

I hope this helps. Please give me a call next week if you'd like to talk further. It's an important part of the whole project planning piece, imo, and is worth thinking about, as you've obviously been doing.

Have a good weekend.
Joyce

Joyce Greenfield

Pronom : Elle
Pronouns: She/Her

Environmental Assessment Scientist, Natural Resource Conservation Branch
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joyce.greenfield@canada.ca /Tel: 403-292-4797, Mobile: 403-463-3759

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Thank you!
Mike

Michael Janssen, MSc
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Mcpherson, Michèle (PC)

From: Gonzales, Emily (PC)
Sent: Monday, November 23, 2020 3:06 PM
To: Janssen, Michael (PC)
Cc: Tooby, Ben (PC)
Subject: RE:

Hi Mike and Ben,

Sorry I've been remiss in properly greeting you, Ben!
I sent you a BBME, but maybe not on that platform?

...just quickly for now...

OMNR & beaver: http://www.kapuskasing.ca/en/Living/resources/Documents/AnimalServices_BeaverNotes.pdf

I'd recommend reaching out to the network (ie WHAM or/and hyper COP) for specific examples.

Emily

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: Monday, November 23, 2020 12:58 PM
To: Gonzales, Emily (PC) <emily.gonzales@canada.ca>
Cc: Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject:

Hi Emily,
Ben and I just chatted with Jim Rossiter, legal counsel for PCA,

Thank you!
Mike

Michael Janssen, MSc
Project Coordinator | Coordinateur de projet
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Mcpherson, Michèle (PC)

From: Janssen, Michael (PC)
Sent: Tuesday, November 24, 2020 9:19 AM
To: Davies, Helen (PC); Gatt, Tony (PC); Poirier, Solange (PC)
Subject: RE: For FUS approval: Sallas Contribution Agreement

Good morning Helen!
Excellent question. I would love to have a phone call, but I'm sending this now as I'm on calls most of today.

- The rate for the coordinator is estimated at $200/day, 2 days per week. The initial intent for this fiscal was 6 months, which adds to $9,600.
- The other $5k for this fiscal is for restoration planning, meant to cover expenses related to having community dialogue about the project and initiating initial restoration activities as trials to inform planning, such as using their excavator to remove invasive hawthorn on Sallas property, to determine whether the remaining roots re-sprout.
- For the second fiscal year of the agreement, the coordinator is estimated at $200/day, 2 days per week, 12 months, which adds to $19,200.

The intent is for Sallas to contract a community coordinator. The coordinator would do work similar to what Eric Pelkey does for WSANEC Leadership Council ($250/day), which we pay for via CA with WLC.
Duties for the Sallas Coordinator would include:

- Coordinate internal dialogue between members of the project steering committee, 2 project specific technical working groups, and Sallas Strata Council.
- Field questions from the community and direct them to the appropriate rep within Sallas, or to the Fur to Forest Project team as appropriate.
    - Track these questions and keep a record of questions and responses.
- Track communications out to the Sallas Community, whether coming internally from Sallas Strata Council, or from PCA.

The position is necessitated by the vocal and engaged nature of much of the Sallas community. The Sallas reps on the project steering committee are feeling overwhelmed and we are risking project burnout with them because they are volunteers doing this work off the side of their desks. The other issue is that Strata Council turns over every two years, so a community coordinator may provide some much needed stability.

Please let me know if that is enough information, I'm more than happy to expand or to give you a call at a time that works for you ☺

I hope you're well,
Mike

Michael Janssen, MSc
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From: Davies, Helen (PC) <helen.davies@canada.ca>
Sent: Monday, November 23, 2020 4:20 PM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>; Gatt, Tony (PC) <tony.gatt@canada.ca>; Poirier, Solange (PC) <solange.poirier@canada.ca>
Subject: RE: For FUS approval: Sallas Contribution Agreement

Hello Michael, before signing the documents, I have a question with respect to the remuneration. Can you please clarify for me how GINPR determined the amount of $15k for 2020/21 and $30k for 2021/22? It seems that this funding is principally intended to cover the cost of a coordinator position. Is this a full time position? I would be helpful to have a better sense as to the scope of work that the coordinator will do. Mike, if it's easier for us to have a call vs and e-mail exchange, that's fine. Best, Helen.

Helen Davies

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Directrice de l'unité de gestion, Unité de gestion, côte de la Colombie-Britannique
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helen.davies@canada.ca / Tel: (250) 654-4048 / Cel: (250) 812-1701

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: November 23, 2020 12:29 PM
To: Gatt, Tony (PC) <tony.gatt@canada.ca>; Poirier, Solange (PC) <solange.poirier@canada.ca>
Cc: Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject: For FUS approval: Sallas Contribution Agreement

Good morning Tony and Solange,
Please find attached several files associated with a contribution agreement for Sallas Forest Strata Corporation. This has been reviewed and approved by Marcia.

Next steps:
Transmittal Form: to be reviewed and signed by FUS
Approval Form: To be reviewed and signed by FUS
Communications Form: To be reviewed and signed by FUS
Briefing note: to be reviewed by FUS

Please note, the Contribution Agreement and Letter to the MP should only be signed once the contribution has been approved by the ED.

Upon your review and approval, would it be possible to please forward the Briefing note, comms approach, Contribution agreement and letter to the MP, to the ED's office?

Thank you very much!
Mike

Background:
The purpose of the agreement is to provide Sallas with the means to organize as a community for the purpose of discussing Fur to Forest. Currently, the Sidney Islanders involved in the project committees do so as volunteers, often off the side of their desk. They do not communicate appropriately within the community, and they do not have the capacity to organize any kind of structured discussion. This agreement is to help fund a community coordinator, to be hired by Sallas, whose duties include:

- Communication between Strata Council, the project steering committee and the Sallas community regarding the project.
- Coordinating participation in project related activities
    - Including booking and scheduling meetings among Sallas reps participating in the project (8)
- Function as a central hub of information for the community, as they have a lot of information produced that is internal to Sallas.

Please don't hesitate to ask if you have any questions at all.
Thank you!

Michael Janssen, MSc
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Mcpherson, Michèle (PC)

From: Marshall, Shelley FLNR:EX <Shelley.Marshall@gov.bc.ca>
Sent: November 27, 2020 9:05 AM
To: Janssen, Michael (PC)
Cc: Tooby, Ben (PC)
Subject: RE:

Hi Mike

Cheers
Shelley

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: November 25, 2020 9:02 AM
To: Marshall, Shelley FLNR:EX <Shelley.Marshall@gov.bc.ca>
Cc: Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject: RE:

Thank you very much Shelley.

Michael Janssen, MSc
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From: Marshall, Shelley FLNR:EX <Shelley.Marshall@gov.bc.ca>
Sent: Tuesday, November 24, 2020 3:43 PM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>
Cc: Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject: RE:

Cheers!

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: November 23, 2020 12:39 PM
To: Marshall, Shelley FLNR:EX <Shelley.Marshall@gov.bc.ca>
Cc: Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject:

Hi Shelley,
I hope you're well.
Ben and I just had a chat with our legal counsel.

Thank you!
Mike

Michael Janssen, MSc
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s.23

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Mcpherson, Michèle (PC)

From: Grande-McNeill, Geneva AG:EX <Geneva.GrandeMcNeill@gov.bc.ca>
Sent: Monday, November 30, 2020 11:31 AM
To: Janssen, Michael (PC); Rossiter, Jim (PC)
Cc: Marshall, Shelley FLNR:EX; Tooby, Ben (PC)
Subject: RE:

Hi All:

I'm available to review this week,

Looking forward to the discussion,

Geneva Grande-McNeill (she/her)
Legal Counsel | Ministry of Attorney General
Resource and Environment Unit | Natural Resources, Transportation and Indigenous Legal Group

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: Friday, November 27, 2020 9:36 AM
To: Grande-McNeill, Geneva AG:EX <Geneva.GrandeMcNeill@gov.bc.ca>; Rossiter, Jim (PC) <jim.rossiter@canada.ca>
Cc: Marshall, Shelley FLNR:EX <Shelley.Marshall@gov.bc.ca>; Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject

Good morning Jim and Geneva,

Ben Tooby is also cc'd here as he will be taking over as project manager on Dec 18.

The three of us (Shelley, Ben and I) can assist with any questions about the project.

Thank you!
Mike **s.19(1)** **s.23**

Michael Janssen, MSc
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Mcpherson, Michèle (PC)

From: Janssen, Michael (PC)
Sent: Tuesday, December 1, 2020 3:07 PM
To: Bishop, Margot (PC)
Subject: FW:

Hi Margot,
Thanks for your help with this. I have a call with Jim Rossiter tomorrow. Tentatively booked for 10am. Let me know if you would like to join, but I'm also happy to report back if you are booked up.
Thanks,
Mike

Michael Janssen, MSc
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From: Nathan Cardinal <Nathan.Cardinal@natureconservancy.ca>
Sent: Tuesday, December 1, 2020 8:35 AM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>; Gonzales, Emily (PC) <emily.gonzales@canada.ca>
Subject: RE:

Hi Mike,

Nathan

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: December 1, 2020 8:22 AM
To: Gonzales, Emily (PC) <emily.gonzales@canada.ca>; Nathan Cardinal <Nathan.Cardinal@natureconservancy.ca>
Subject: RE:

s.23

Thank you very much Emily,

Thank you!!!
Mike

Michael Janssen, MSc
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From: Gonzales, Emily (PC) <emily.gonzales@canada.ca>
Sent: Tuesday, December 1, 2020 8:09 AM
To: Nathan Cardinal <Nathan.Cardinal@natureconservancy.ca>; Janssen, Michael (PC) <michael.janssen@canada.ca>
Subject: RE:

Hi Mike,

I reached out and here is 1 response:

Emily

From: Nathan Cardinal <Nathan.Cardinal@natureconservancy.ca>
Sent: Monday, November 30, 2020 4:39 PM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>; Gonzales, Emily (PC) <emily.gonzales@canada.ca>
Subject: RE:

s.23

Hi Mike,

Emily – curious to hear your thoughts

Nathan

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: November 30, 2020 4:26 PM
To: Gonzales, Emily (PC) <emily.gonzales@canada.ca>; Nathan Cardinal <Nathan.Cardinal@natureconservancy.ca>
Subject:

ATTENTION:External Email|Courriel Externe

Hi Emily and Nathan,

Thank you Thank you Thank you!!
Mike

s.23

Michael Janssen, MSc
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Mcpherson, Michèle (PC)

From: Janssen, Michael (PC)
Sent: Tuesday, December 1, 2020 8:24 AM
To: Gregg Howald
Cc: Tooby, Ben (PC)
Subject: RE:

Thank you Gregg!

Michael Janssen, MSc
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From: Gregg Howald <gregg@coastalconservation.ca>
Sent: Monday, November 30, 2020 8:02 PM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>
Cc: Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject: RE: s.23

OK, email out to the TNC owner of Santa Cruz Island...

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: November 30, 2020 4:30 PM
To: Gregg Howald <gregg@coastalconservation.ca>
Cc: Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject: RE:

Hi Gregg,

Thank you!!!!
Mike

Michael Janssen, MSc
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From: Gregg Howald <gregg@coastalconservation.ca>
Sent: Monday, November 30, 2020 10:09 AM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>; 'Erin Shaw' <erin@erinshawfamilylaw.ca>; 'Geraldine Van Gyn' <gvangyn@uvic.ca>;

Cc: Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject: RE:

Gregg

s.19(1)
s.23

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: November 30, 2020 8:27 AM
To: Erin Shaw <erin@erinshawfamilylaw.ca>; Geraldine Van Gyn <gvangyn@uvic.ca>;

Cc: Tooby, Ben (PC) <ben.tooby@canada.ca>; Gregg Howald <gregg@coastalconservation.ca>
Subject: RE: I

Thank you everyone for your ongoing dialogue on the topic.

We can absolutely bring Gregg in. I've cc'd him here.

My very best,
Mike

Michael Janssen, MSc
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s.23

From: Erin Shaw <erin@erinshawfamilylaw.ca>
Sent: Saturday, November 28, 2020 4:09 PM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>; Geraldine Van Gyn <gvangyn@uvic.ca>;

Cc: Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject: RE:

Hi Mike,

There has been some discussion at council about this and we make the following suggestion for moving this issue forward. (I have copied a couple of council members involved in this discussion.)

Erin

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: November 23, 2020 12:51 PM
To: Geraldine Van Gyn <geri.van.gyn@gmail.com>; Erin Shaw <erin@erinshawfamilylaw.ca>
Cc: Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject:

Hi Geri and Erin,
Ben and I just spoke with our legal counsel.

Then I can work to set up that dialogue?

Thank you ☺
Mike

Michael Janssen, MSc
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s.23

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Appendix A: Detailed Plan for Eradication of Fallow Deer

"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."[1]

Contents

[1] Gill, C., G. Howald, T. DeNicola, and M. Shuert. 2018. Restoring forest health through removal of invasive fallow deer (*Dama dama*) from Sidney Island, BC. Unpublished report prepared for Parks Canada Agency.

A.6. Methods Considered

The Working Group was fortunate to have advice from experienced eradication teams as well as knowledgeable local hunters (both Indigenous and Sallas).

Deer eradication begins with focusing on the "one last deer" and how this will be removed. Fallow deer are extremely wily and will rapidly adapt their behaviour to avoid getting caught. This means using a process of adaptive management—beginning with one or two techniques and then changing methods as the deer modify their behaviours. For this reason, there is no single preferred method. Eradication will involve a series of techniques that will change over time. It may also be necessary to use "field adaptation"—modifying approaches to the unique circumstances on Sidney Island and rapidly changing techniques in response to deer behaviours.

Several methods were discussed by the Working Group, and/or presented in the 2018 "Scoping Document" prepared for Parks Canada.[2] These methods are outlined below, and the proposed approach is identified in Section A.9.

A.6.1. Indigenous hunts

(to be added)

- Both Indigenous and Sallas hunts have been successful in helping to manage the population of fallow (and black-tailed) deer over many years. There are many experienced and able hunters who are willing to assist in the eradication.

Advantages:

Challenges and concerns:

Work required:

A.6.2. Recreational hunt (Sallas)

(to be added)

Advantages:

Challenges and concerns:

Work required:

[2] Gill, C., G. Howald, T. DeNicola, and M. Shuert. 2018. Restoring forest health through removal of invasive fallow deer (*Dama dama*) from Sidney Island, BC. Scoping document. Prepared for Parks Canada Agency - Gulf Islands National Park Reserve. Unpublished report. 100pp.

A.6.3. Professional eradication teams

(to be added)

- Will be required at least for final stages of eradication, as deer are lower in number and more wary
- Will need to have high levels of insurance (likely millions of $)
- Need trained professionals to work with dogs, working together, safety (especially near homes)

Advantages:

Challenges and concerns:

Work required:

A.6.4. Baiting

Baiting is used to encourage fallow deer to become accustomed to visiting specific locations at specific times of day (or night), and to feel safe in that location. This enables the dispatch of several deer at one time. The amount of bait is limited, so that deer learn to visit when bait is readily available.

Baiting trials took place in 2019, to determine the optimal food for baits.[3] This was done by baiting several locations with alfalfa, whole kernel corn and sweet feed, and using night cameras to record deer activity at these sites. A combination of corn and alfalfa seems to work best. (Sweet feed was eaten by birds.) Trials in December–January saw more deer than November trials, and the most popular time for feeding was just after dusk (1730 – 1930) or during the night (2330 – 0600). The greatest number of deer seen at any one time was 11.

The Sallas Deer Management Committee has also baited deer into their capture facility using alfalfa.

Baiting could be used within the park, on Sallas common property, individual private lots where access is granted, and on covenant lands.

A.6.4.1. Bait Station Shooting

Bait stations could be strategically placed in areas of known deer activity (one or two stations every 50 hectares). Each station would be pre-baited for several weeks prior to the eradication operation, using alfalfa and/or corn. The bait stations would be set up to maximize shooter accuracy (e.g., considering wind direction) and resident safety. Some bait stations would be

[3] Coastal Conservation and Parks Canada Agency. 2019. Sidney Island fallow deer (*Dama dama*) bait preference & bait leverage trial. Unpublished report. 19pp.

placed near road networks to allow multiple sites to be accessed in one night. Others would be situated at sites requiring a marksman to be positioned in a nearby tree stand.

Advantages:

Challenges and concerns:

Work required: Identification of best locations for bait stations; daily pre-baiting for several weeks.

A.6.4.2. Drop Netting

Drop netting could be used if larger groups of deer are found to frequent particular bait stations. Drop nets would be installed and baited but not triggered for several days to ensure that any deer visiting the station becomes habituated to the drop net (as shown by monitoring deer usage via trail cameras). The drop net can be remotely triggered from up to 180 metres away. Any deer captured would be dispatched by the professional marksmen operating the drop net.

Advantages:

Challenges and concerns:

Work required: Installation of drop nets in addition to baiting.

A.6.5. Capture Facilities

Deer could be drawn into capture facilities using bait (s. A.6.4) or some form of herding (s. A.6.6). A one-way gate would prevent deer from leaving the facility. Deer numbers in the facility would be monitored via personnel or using trail cameras. Deer in the facility would be humanely dispatched by qualified personnel.

A.6.5.1. Sallas Capture Facility

The Sallas Capture Facility could play an important role in both fallow deer eradication and/or in protection of the black-tailed deer population during fallow deer eradication.

Options discussed were:

- Herd fallow deer into the capture facility. Once deer are inside, the gate would be closed and deer humanely dispatched.

  Advantages: Facility already exists, has already been used for this purpose.

  Challenges and concerns:

  Work required: Some work is required to repair fencing, and to create a one-way gate.

- Use the capture facility as a bait station location to lure deer in. This could be a location for bait station shooting and/or drop-netting.

  Advantages: The capture facility already exists, with deer already using this for grazing.

  Challenges and concerns: Bait trials found that deer do not stay long at the bait station.

  Work required: Some work is required to repair fencing.

- Use the capture facility as a holding area for black-tailed deer during fallow deer eradication. Depending on the fallow deer eradication methods used, it may be possible to chemically immobilize some black-tailed deer and move them into the capture facility where they will be safe for the duration of the eradication process (potentially several months). While there are no accurate counts of black-tailed deer populations on the island, "best guesses" are that the number is relatively small, and could be reasonably accommodated in this 40 acre area. If used for black-tailed deer, the facility should be expanded to expanded to include a portion of forested land, to provide the deer with a greater sense of security. Black mesh fencing could also be used to create a sense of security.

  Advantages: There is sufficient water and food within this area to support a small black-tailed deer population.

  Challenges and concerns: Myopathy (muscle death caused by stress) can occur in deer. Steps will be required to minimise deer stress.

  Work required: Expansion of facility to include forest area.

A.6.5.2. New Capture Facilities

In addition to the existing Sallas facility, new capture facilities could be placed on in the park or on Sallas common property. Potential locations include the radar field and central meadow.

Advantages: More opportunities to capture and dispatch fallow deer.

Challenges and concerns: Additional cost.

Work required: Would require fencing and other works to create new facilities.

A.6.6. Herding

There are ways to herd the deer into a specified location, either a capture facility, another part of the island, or to a cinch point where deer can be dispatched as they try to go through.

A.6.6.1. Roped raceways with line drives

Ropes with ribbons hung every 4 feet could be erected as temporary fencing. (Sallas trials have found that every 4 ft is effective). A team of spaced personnel would move behind the deer, pushing them along the roped raceway to the desired location.

These could be used with line drives to direct deer into a capture facility or cinch point. They could also be used to move deer off private properties. Sallas and Indigenous hunters could assist with the line drives, but it would require training for safety and efficacy (making sure deer don't double back and break through the line).

Plans to test this approach in 2020 were delayed by COVID restrictions.

Advantages: Inexpensive and flexible approach. Easy to trial for efficacy.

Challenges and concerns:

Work required: Requires personnel to set up and move the raceways.

A.6.6.2. Fenced zones

This approach would see the island strategically divided into a series of zones (each 50-60 acres), with a plan to systematically clear all deer from each section before moving to the next.

Coast to coast nets would be placed across the island (east to west) to create sections, with sub-zones within each section (see sample map). Each zone would be systematically cleared through line drives with professional teams, likely with dogs. As each section is cleared, a new coast to coast net would be placed further north, and this new section divided into zones for clearing.

[can we add something on how the private properties are managed pls?]

If black-tailed deer are encountered, they could be tranquilized and moved to the Sallas capture facility.

It would be important to trial this approach to determine efficacy.

Advantages:

- *Good probability of success, especially if combined with other methods.*
- *It is predicable where the team will be at all times*
- *Can control where an animal is dispatched (predictable, can choose locations where easier to manage carcasses).*
- *Deer can be moved off private property to a place where they can be safety and humanely dispatched (e.g., if property owners do not want shooting to occur on their property)*
- *Reduces need for aerial hunting*

- *Greater likelihood of retaining black-tailed deer*

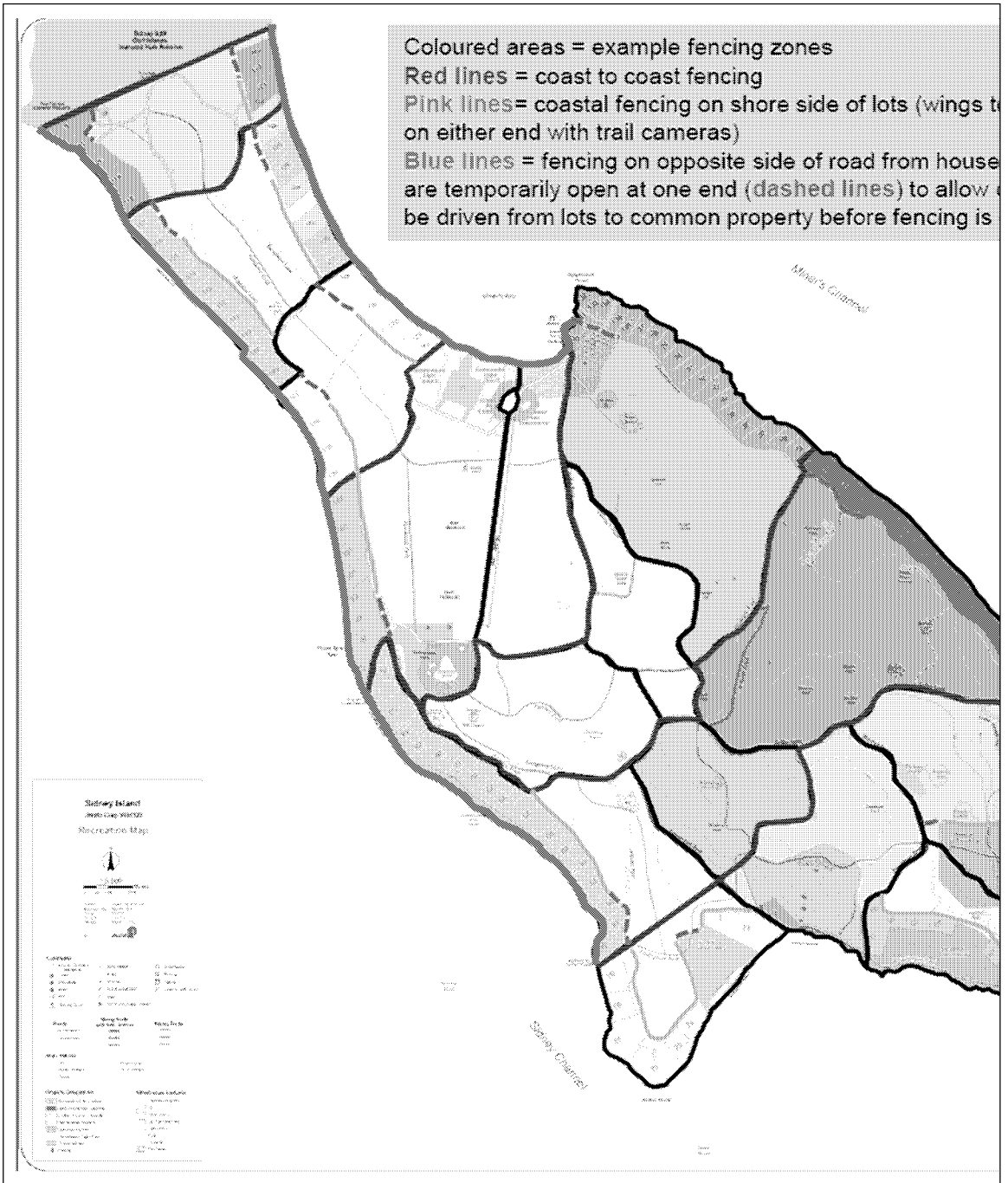

Figure XX; Sample sections and zones. Gill and DeNicola 2020.

Challenges and concerns:

- *Need to include techniques to prevent deer from moving back around fences to previously cleared zones, e.g., along the foreshore. In some areas, there will be a need*

to run nets down to the water between properties. This will require landowner permissions and there are ecologically sensitive slopes where fencing cannot be installed due to impacts.

- *There will be a need to provide road access to owners even when nets are erected. This will require the use of deer gates, which may be accidentally or intentionally left open (risk of deer moving into previously cleared zones). Fence "curtains" may be an option but need to be tested.*
- *There is a risk of people intentionally sabotaging the nets and allowing deer to escape into cleared zones.*
- *Cost could be higher than using dogs, aerial hunting, judas deer (equipment costs, more personnel needed especially setting up/moving nets, more time on island)*
- *Fencing materials will be very expensive given the amount that would be required.*
- *Cost of conducting trials (e.g., of fence curtains).*

Work required:

- *Setting up and taking down nets will be very laborious and time consuming. An efficient and reliable support team is critical to success (ATVs and trucks can be used to transport netting to different areas of the island).*

A.6.6.3. Aerial herding

Deer herding could include aerial herding using an experienced aerial herding expert and a helicopter in combination with professional hunters using trained indicator dogs.

Advantages: Proven as a highly effective technique.

Challenges and concerns: Noise may be a concern for some residents. Will be important to provide clarity around use of helicopters.

Work required:

A.6.7. Aerial Hunting

Aerial hunting from helicopters is a proven, safe and cost-effective method of rapidly removing deer. This approach is used after the rapid reduction phase, and targets individual deer or small groups of animals.

Aerial hunting has been used for more than 40 years to control deer populations around the world. The aerial marksman uses a firearm fitted with a noise suppressor to reduce noise disturbance to landowners and the public. When deer densities are extremely low, the aerial hunting team often works in concert with dog hunters to detect and dispatch individual deer.

Aerial hunting flights would generally take place in the morning and again before sunset, although some flights can take place at other times of the day, depending on deer density and changes in deer behaviour throughout the course of the operation. There is no night hunting. The helicopter might be in use 3–5 hours per day.

All eradication personnel, including the aerial team, would be equipped with GPS devices and radios during active hunting, allowing the aerial team to see where all ground personnel and dogs are located in real-time.

Sallas residents could choose not to permit hunting (including aerial hunting) on their property.

Advantages: Proven technique, will help to reduce overall time for eradication project

Challenges and concerns:

Work required:

A.6.8. Ground Hunting

Ground hunting already takes place on Sidney Island, as both the Indigenous hunt (park side) and Sallas recreational hunt. These hunts could contribute to the rapid reduction phase.

During the "last 10%" phase professional marksmen would also employ some proven ground-hunting methods that have not been used previously on Sidney Island. These strategies include hunting with trained indicator dogs, night hunting, and sentinel deer monitoring.

Traditional ground hunting has been one of the most common methods used to manage the fallow deer population on Sidney Island. During an eradication operation,

Marksmen would use firearms fitted with noise suppressors to reduce noise disturbance to landowners and avoid disturbing or educating nearby deer, which is standard practice during deer management operations.

This method could be employed within Gulf Islands National Park Reserve, on Sallas common property, individual private lots where access is granted, and on land covenants.

A.6.8.1. Line hunting

A team of professional marksmen positioned a specific distance apart would systematically walk through an area of the project island in a line and dispatch any deer that they encounter. During eradication operations, this method is often combined with use of trained dogs to maximize the probability of detecting deer, especially when population densities are low.

Advantages:

- *If combined with the use of trained hunting dogs and/or barrier fencing, it is effective at eradicating deer at low deer population densities.*

Challenges and concerns:

- *Success rate is low, even at high population densities, unless trained hunting dogs are utilized.*
- *If more than one deer is encountered there is a high probability that the other deer will escape and become educated to the eradication method.*

Work required: No on-the-ground works.

A.6.9. Trained Hunting Dogs

Trained hunting dogs have a keen sense of smell and ability to search large areas in a relatively short amount of time. They are one of the most effective methods for detecting animals at low densities 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. Each hunting dog is fitted with a GPS radio collar, so its location can be monitored, either on the ground or from the air by an aerial marksman and their track is recorded to show where they have searched.

A.6.9.1. Indicator Dogs

Indicator dogs are an essential tool for any deer eradication operation. The dogs and their handler comprise an effective functional unit, similar to an avalanche dog or a police dog. The dogs are friendly and typical domestic breeds such as Vizslas or Labradors. They do not represent a safety risk to people or pets. Indicator dogs track deer and identify the location of the animal to the handler through a pointing signal. Indicator dogs are generally used during the later stages of the eradication, when deer densities are low, thereby allowing individual animals to be effectively targeted. Indicator dogs can also be used to confirm eradication success.

Given that black-tailed deer density appears to be low on Sidney Island , hunting with indicator dogs should be effective until fallow deer densities are greatly reduced. In the event that an indicator dog locates a black-tailed deer, the professional marksman would not dispatch the animal.

Advantages:

- *The most effective method for detecting deer at low densities.*
- *Effective for target animals that have evaded other methods*
- *Indicator dogs (not bailing dogs) can also be effectively employed at moderate deer densities.*
- *If it is not safe to dispatch a deer that has been detected because of public or property safety concerns, the dog can continue tracking the deer until it is safe to do so.*

- *Very effective for biosecurity purposes unless more than one deer species is present on the project island.*

Challenges and concerns:

- *Cost*
- *Indicator dogs cannot distinguish between fallow deer and black-tailed deer. This will increase hunter effort as the fallow deer population is reduced to individual animals.*

Work required:

A.6.9.1. Bailing Dogs

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. Bailing dogs are only incorporated into an eradication operation when deer densities are extremely low.

Bailing dogs cannot be used on islands where more than one deer species is present but only one is being targeted, as is the case with Sidney Island, due to the stress imposed on the deer during the chase and the possibility of a bailing dog coming into physical contact with the deer.

Advantages:

Challenges and concerns:

- *The only deer-hunting dogs available worldwide are in New Zealand. Shipping, kenneling, and vet treatment costs can be considerable (~$25,000 CDN per dog as of 2018).*
- *The dog handler/professional marksman and hunting dog must have considerable experience working as a team to be effective so that subtle cues from the dog can be interpreted by the dog handler/professional marksman.*
- *Bailing dogs can only be utilized when deer densities are extremely low to avoid educating animals to the eradication method (e.g., the bailing dog chases two deer but only one is dispatched).*
- *Bailing dogs cannot be used on islands where more than one deer species is present but only one is being targeted for removal, as is the case with Sidney Island, given the stress imposed on the deer during the chase.*

Work required:

A.6.10. Night Hunting

A.6.10.1. Night hunting using FLIR

Deer are often more active at night. A Forward Looking Infrared (FLIR) device can be used to detect the body heat of deer. When properly employed, deer do not associate the FLIR with risk and can thus be quickly dispatched by a professional marksman. Night hunting would be undertaken from vehicles and boats in areas of the island where it is safe to do so. Spotlights could also be used but FLIR is more effective.

The efficacy of night hunting may be further increased by baiting sites that provide a safe place to dispatch deer.

Advantages:

- *Targets individual deer that may be more active at night than during daylight hours; success rates are high when deer densities are high*

Challenges and concerns:

- *It can be hard to distinguish black-tailed deer at night, so there is a risk of collateral loss*
- *Potential to educate nearby animals*
- *Can require considerable personnel effort, e.g., boat hunting requires a boat operator, a FLIR operator, and marksman*
- *Success rates rapidly decline during the later phases of the operation when deer numbers are low*

Work required:

A.6.10.2. Pit lamping

Pit lamping is a more traditional Indigenous method, where headlights or lamps are used to locate the deer.

(need more information here)

Advantages:

Challenges and concerns: It can be hard to distinguish black-tailed deer at night, so there is a risk of collateral loss

Work required:

A.6.11. Sentinel Deer Monitoring

Fallow deer are social animals and prefer to be with others. A sentinel or "Judas" deer is one that has been fitted with a radio telemetry collar, so that marksmen know where this deer is (and therefore others are). The sentinel deer also have highly visible ear tags or collars, so that marksmen can dispatch all deer except this one, leaving it to seek out other deer.

Advantages: If the deer are not in a place where they can be safely dispatched, marksmen can follow them until this is safe.

Challenges and concerns:

Work required:

A.6.12. Management of Carcasses

[to be added]

A.6.13. Distribution of meat

[to be added]

A.6.14. Biosecurity

(to be added)

A.7. Information gaps

A.8. Other Considerations

A.8.1. Access to Private Property

A.8.2. Indemnification of Sallas owners

A.8.3. Training Opportunities (Indigenous and Sallas Hunters)

A.8.4. Black-Tailed Deer Management following Eradication

(will be in black-tailed deer management plan)

A.9. Proposed Methods

This is the section where we set out or recommended approach

Importance of many tools in the toolkit – will likely use many of these techniques on combination

A.9.1. Rapid Reduction

A.9.2. "Last 10%"

A.9.3. Confirming Success

Mcpherson, Michèle (PC)

From: Cuthbert, Joanne (PC)
Sent: Tuesday, December 8, 2020 10:18 AM
To: Janssen, Michael (PC)
Cc: Tooby, Ben (PC)
Subject: RE: Question re coastal conservation

Hi Mike,

When would be a good time for a call? I'm fairly open, only one scheduled meeting tomorrow at 13:00 MST.

Joanne S. Cuthbert
Contracts, Procurement and Material Management Officer
Procurement, Contracting and Contributions Branch, Chief Financial Officer Directorate
Parks Canada / Government of Canada
Suite 720, 220 - 4th Ave SE Calgary, AB T2G 4X3
Email: joanne.cuthbert@canada.ca / Tel. : 587-436-5732 / Facsimile: 1-866-246-6893

Parks Canada - 450 000 km2 of memories / Parcs Canada - 450 000 km2 de souvenirs

Agente d'approvisionnement, des achats et de la gestion du maté
Direction de l'Approvisionnement, Marchés et Contributions, Direction générale du dirigeant principal des finances
Parcs Canada / Gouvernement du Canada
Pièce 720 - 220 4ième avenue SE, Calgary, AB T2G 4X3
Courriel: joanne.cuthbert@canada.ca / Tél. : 587-436-5732 / Télécopieur: 1-866-246-6893

Parcs Canada - 450 000 km2 de souvenirs / Parks Canada - 450 000 km2 of memories

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: December 8, 2020 10:46 AM
To: Cuthbert, Joanne (PC) <joanne.cuthbert@canada.ca>
Cc: Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject: Question re coastal conservation

Hi Joanne,
I have a Sidney Islander (stakeholder) who is questioning whether coastal conservation currently chairing the steering committee presents a conflict of interest.
My answer is no, because there is no contract in place for implementation of eradication, and the procurement process will follow treasury board guidelines and legislation.

Would you be able to guide me to a publicly available link that outlines the means through which procurement of large contracts (this one will be over $1M) happens in a fair and transparent way? I tried to find it but got lost in the website.

Thank you Joanne!
Mike

Michael Janssen, MSc
Project Coordinator | Coordinateur de projet
Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf
Parks Canada | Parcs Canada

2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6
michael.janssen@canada.ca
Telephone | Téléphone (250) 418-5746 (**please note new phone number**)
www.parkscanada.gc.ca | www.parcscanada.gc.ca
Government of Canada | Gouvernement du Canada

Parks Canada - 450 000 km of memories / Parcs Canada - 450 000 km de souvenirs

Mcpherson, Michèle (PC)

From: Janssen, Michael (PC)
Sent: Wednesday, December 16, 2020 8:53 AM
To: Gregg Howald; Tooby, Ben (PC)
Subject: RE: Control vs Eradication for Sallas

Agreed. We just need to be very clear about context.
Control is not within the boundaries of the project. Yes.
An evaluation of control vs eradication, while outside what is being proposed, is nevertheless necessary because

1. Required by DIA
2. This will be the first question we need to answer from the public/media
3. Sidney Islanders need to make their choice. We can help them with that.

But yes. Crystal clear clarity is necessary. Everytime we mention control we should say "to be clear, control is not within the bounds of the project and will not be supported by Parks Canada."

Michael Janssen, MSc
Project Coordinator | Coordinateur de projet
Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6
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Government of Canada | Gouvernement du Canada

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From: Gregg Howald <gregg@coastalconservation.ca>
Sent: Wednesday, December 16, 2020 7:47 AM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>; Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject: Control vs Eradication for Sallas

Hi Mike/Ben

The concept of control of fallow deer coming into the conversation is concerning me because it is not in line with the Purpose of the project as we defined it last year, or in the Mou. I completely respect the community can reject eradication options/plan that are produced, and , they have every right to talk about controlling deer, but I have to point out that this is outside the scope of the project as it was defined.

From the deer perspective, we defined the Purpose as to **"facilitate the restoration of the Sidney Island forest ecosystem by eradicating invasive fallow deer and preventing their re-establishment."**

Thus, all documents that we are producing are in keeping with the purpose, and we are **not**comparing and contrasting the value of eradication vs. control. We have debated this at length, and have closed that door on control. The document that will be widely shared will of course cover WHY control was not carried further. For decision making, there is really either the eradication options (if we produce more than one), or doing nothing (or No Action).

If the community rejects the eradication plan(s), the only fall back is what is called a "No Action" alternative, and what that No Action alternative is usually the actions that would be occurring if this project was not started in first place.

A rejection of the eradication would effectively kill the project *as visioned currently*, and management falls back to where it was before this planning was started.

I suggest that your discussions with Sallas should focus on the "No Action" alternative, which is typically what was happening prior to the initiation of the project, and from what I understand there is no organized "control" program in place. Loading in a "control" program where it doesn't exist currently I suspect would violate Parks Canada's DIA process, and is in effect adding in another Action alternative. However, we know based on the definition of the purpose of the project, that Control does not meet the Purpose and need of the project and cannot be loaded in.

Happy to talk it through.

Gregg

Sent from my iPhone

Coulson, Stephanie (PC)

From: Tooby, Ben (PC)
Sent: January 6, 2021 10:41 AM
To: Coulson, Stephanie (PC)
Subject: FW: Sidney Island deer population

FYI;
We can chat about the below email during our Direct Report.
Thank you,
Ben

From:
Sent: Monday, December 28, 2020 6:44 PM
To: Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject: Re: Sidney Island deer population

Wonderful

On Mon, Dec 28, 2020, 11:56 Tooby, Ben (PC), <ben.tooby@canada.ca> wrote:

I hope you had

Thank you very much for reaching out with the below inquiries and suggestions.

Do you mind if I bring your suggestions and questions to the deer working group and steering committee? I will also ask internally how we arrived at that population estimate.

Thank you,

Ben Tooby

Hunt Coordinator / Safety Officer

Coordonnateur de la Sécurité des Visiteurs et de la chasse traditionnelle

Gulf Islands National Park Reserve | Réserve de parc national des Îles-Gulf

2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220 chemin Harbour, Sidney, C-B V8L 2P6

Ben.Tooby@Canada.ca

s.19(1)

Mobile (250) 507-6653 | téléphone portable (250) 507-6653

From:
Sent: Saturday, December 19, 2020 3:56 PM
To: Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject: Sidney Island deer population

I would like to comment on Michael Janssen's estimates of 300-700 fallow deer on Sidney Island.. Please let us know what method that you chose for putting forward these numbers, which appear to be very speculative and have so large of a range as to make them meaningless. A walking tour of our side of the island would suggest much lower numbers. From the beginning we have known that the only scorecard that could tell us what our efforts are having on the deer population would be the return of increased biodiversity and the finding of new plants not previously recorded on the island. No practical method including aerial spotting will give a worthwhile number to work with.

Fallow deer are herd animals with females staying in 100 acre areas and male wandering up to 400 acres. On the first hunt of 2020 the herd of a dozen fallow deer that occupy the neck of the peninsula that leads to the park was harvested. Soon the deer that live mostly in the park will wander down and start using that area again. Next season we will harvest them. This is a small example of the knowledge our hunting community has learned about our fallow deer.

Sidney Island owners want increased biodiversity, Parks Canada states that it also wants biodiversity. Instead of trying to put together speculative reports to support an eradication program that many believe will never find funding in a post pandemic world, could Parks Canada not emulate our proven hunting program and work with the First Nations to bring the deer that our program can't reach under control? The park has always been a sanctuary for our deer, It would be good to work with Parks Canada to record the number of deer annually taken in the park by First Nations. Working together, our efforts to control our deer population would be enhanced.

There are not 700 fallow deer on Sidney Island and there are not 600, 500 or even 400. To include these numbers just adds to distrust of Parks Canada that began with its assertion, without any justification and was debunked by our last biodiversity report, that fallow deer eradication was "critical" to restore the biodiversity of Sidney Island.

s.19(1)

Show quoted text

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Parks Canada Parcs Canada

UNCLASSIFIED

BRIEFING NOTE TO THE EXECUTIVE DIRECTOR, BRITISH COLUMBIA AND YUKON

SALLAS FOREST STRATA CORPORATION: CONTRIBUTION AGREEMENT FOR FISCAL YEARS 2020-21 to 2021-22

(For Decision)

TIMELINE

Your decision is requested at your earliest convenience.

PURPOSE

To recommend that you approve the contribution agreement described herein.

SUMMARY

- Your approval is being sought to enter into a contribution agreement (GC-1382) of up to $45,000 with the Sallas Forest Strata Corporation of Sidney Island, BC for the implementation of the project entitled "Sidney Island Ecological Restoration Planning" over fiscal years 2020-21 to 2021-22.
- Under Parks Canada's General Class Contribution Program (GCCP), authority to approve contributions up to $100,000 rests with the Executive Director.
- This is the first agreement with this for-profit recipient.
- This contribution agreement will be funded within the Coastal BC field unit's existing budget and I confirm that those funds are available.
- The communications approach for this project is attached.

CONTEXT AND CURRENT STATUS

Gulf Islands National Park Reserve (GINPR), together with the Sidney Island community, participating First Nations, Island's Trust Conservancy, and the Province of BC are co-developing a multi-jurisdictional forest restoration project funded by the Conservation and Restoration (CoRe) program. The goal of the project is to work respectfully towards a healthy, sustainable and balanced native forest ecosystem on Sidney Island. The objectives of the project include the removal of invasive fallow deer, co-development of a forest restoration strategy, and co-development of a viable management strategy for black-tailed deer. All project participants have expressed a desire to work collaboratively towards these shared restoration objectives.

This contribution agreement is with the Sallas Forest Strata Corporation, who will use the funds to coordinate the incorporation of the values, perspectives and knowledge of the Sallas community in to the collaborative development of the multi-jurisdictional Sidney Island Ecological Restoration Project.

CONSIDERATIONS

The contribution directly supports several Agency priorities, including maintenance and preservation of ecological integrity, and cross-boundary collaboration to support conservation at scale.

The funding is provided by B-base CoRe funding. Parks Canada is providing 100% of the funding associated with this projects. An estimated amount of $264,825 of in-kind contribution is being provided by members of the Sallas Forest Strata Corporation, including human resources costs, which fully accounts for the minimum of 10% cash contribution towards the total eligible expenditures required in the case of for-profit businesses.

Parks Canada (GINPR) has a positive working relationship with the Sallas Forest Strata Corporation. The Sallas Forest Strata Corporation has expressed a desire to be involved in this restoration initiative, but requires funding to facilitate coordination and participation of the community during the planning phase.

The project is considered low risk as determined by a PCA risk assessment. This would be the first contribution agreement with the recipient. The recipient has the ability and capacity to manage projects of this size. Parks Canada will mitigate risk by providing funds on an annual basis, contingent upon meaningful participation in the project.

No communications activities are planned for this agreement, beyond notifying the local Member of Parliament.

RECOMMENDATION

I recommend that you approve this $45,000 contribution to The Sallas Forest Strata Corporation for Sidney Island Ecological Restoration Planning in Gulf Islands National Park Reserve by indicating your concurrence below.

Helen Davies
Field Unit Superintendent, Coastal BC

_X_ I concur **___ I do not concur** **___ Please discuss**

Nadine Spence
Executive Director Yukon and British Columbia

Attachments (3):

- Contribution Agreement
- Communications Approach
- Letter to MP

Prepared by: Michael Janssen, 250 418 5746
Approved by: Marcia Morash, 250 654 4021

Parks Canada Parcs Canada

CONTRIBUTION AGREEMENT – GC-1382

Parks Canada General Class Contributions Program

This Contribution Agreement ("Agreement") made in duplicate on _____.

BETWEEN: Parks Canada Agency a body corporate established under section 3 of the *Parks Canada Agency Act* ("Parks Canada") represented by the President and Chief Executive Officer;

AND: Sallas Forest Strata Corporation ("the Recipient"), a legal entity having its head office / principal place of business at:
Sallas Forest Strata Corporation
Bare Land Strata Sidney Island VIS 5122
c/o Proline Management Ltd.
201-20 Burnside Road West
Victoria BC V9A 1B3

WHEREAS the Recipient wishes to implement a project or initiative ("Project") as described in Annex "B";

AND WHEREAS Parks Canada wishes to make a contribution to the Recipient toward the implementation of the Project entitled Sidney Island Ecological Restoration Planning.

Therefore, Parks Canada and the Recipient agree as follows:

1. Purpose and Maximum Amount of Contribution

1.1 Parks Canada hereby makes a contribution to the Recipient ("contribution") solely for the implementation of the Project in accordance with the terms specified in this Agreement.

1.2 Subject to the terms of this Agreement, Parks Canada agrees to make a contribution to the Recipient of an amount not exceeding $45,000 over fiscal years 2020-21 to 2021-22 towards the eligible expenditures as described in Annex A of this Agreement.

1.2.1 The maximum amount payable by fiscal year is as follows:
2020-21: $15,000;
2021-22: $30,000.

1.2.2 The maximum amount payable by fiscal year may be modified by amending the Contribution Agreement.

2. Payment

In consideration of the implementation of the Project and the fulfillment of all of the Recipient's other obligations pursuant to this Agreement, Parks Canada agrees to pay a contribution to the Recipient in accordance with the following:

2.1 Upon receipt of a request for advance payment, Parks Canada agrees to provide an initial advance of up to $15,000 covering the cash flow requirements of the Recipient for the Project for fiscal year 2020-21.

2.2 Parks Canada agrees to provide a second advance in 2021-22 covering the cash flow requirements of the Recipient for the Project for the fiscal year. The advance will be for an amount of up to $25,000. A holdback of $5,000 is to be released upon completion of the project by the Recipient.

2.3 If the amount of the advances exceeds the eligible costs incurred for which the advance was approved, the Recipient shall reimburse the difference to Parks Canada or Parks Canada shall recover the surplus from any sums payable to the Recipient, at Parks Canada's discretion.

2.4 Advance payments made during a fiscal year will not exceed the Recipient's estimated cash flow requirements with respect to Parks Canada's share of eligible expenditures incurred by the Recipient in that fiscal year. However, an advance payment may be made in one fiscal year to cover Parks Canada's share of expected eligible expenditures to be incurred by the Recipient during the month of April of the following fiscal year.

2.5 On or before January 15, 2022, the Recipient shall submit to Parks Canada's satisfaction a request for a final payment of up to $5,000 accompanied by final financial and final narrative reports as described in Annex B. Upon Parks Canada's approval of the final reports, Parks Canada will release the final payment under this Agreement.

2.6 All payment requests should include the Recipient's name and address, the Agreement number, the type of payment (advance or final payment) and the period covered. Advance requests must be accompanied by an estimate of eligible costs to be incurred during the period of the advance.

3. Duration

This Agreement comes into effect on the date of signature of both parties. Unless sooner terminated as provided for in the Agreement, the Agreement shall remain in effect until April 30, 2022.

4. Applicable Laws

This Agreement shall be governed by and construed in accordance with the laws in force in the Province of British Columbia and the laws of Canada if applicable.

5. Notice or Communication

Any notice, information or document required under this Agreement shall make reference to the title of the Project and be given if it is delivered, sent by facsimile, email or mail (stamped or prepaid). Any notice delivered, sent by facsimile or e-mail shall be deemed to have been received one working day after it is sent. Any notice that is mailed shall be deemed to have been received eight (8) calendar days after it is mailed.

Either Party may change the address shown in this Agreement by informing the other Party of the new address, and such change shall take effect fifteen (15) days after the notice is received.

All notices must be sent to the following addresses:

To Parks Canada:
Marcia Morash, Superintendent
Gulf Islands National Park Reserve
Facsimile: 250-654-4014
E-mail: Marcia.Morash@canada.ca
Telephone number: 250-654-4021

To the Recipient:
Sallas Forest Strata Corporation
Bare Land Strata Sidney Island VIS 5122
c/o Proline Management Ltd.
201-20 Burnside Road West
Victoria BC V9A 1B3
Company Representative: Ross C. McCutcheon
Email: ross@rcmadvisers.com

Tel: 604.889.2804
Copy to: Dwight Mueller
Email: @prolinemanagement.com
Tel:

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6. Public Acknowledgement

In any promotion programs, advertising and publicity for the activities funded under this Agreement, acknowledgement shall be given to Parks Canada in a manner reflecting Canada's contribution. This acknowledgement shall be in both official languages, where possible. Timing and location of recognition events will be agreed to between the two Parties. Parks Canada reserves the right to waive this requirement at its discretion.

The Recipient's name, the amount of the contribution and the general nature of the activities supported may be made publicly available by the Government of Canada.

7. Evaluation

The Recipient will cooperate fully with Parks Canada to provide all required information that may be necessary for the proper conduct of any evaluation of the contribution. The criteria to be used to assess the effectiveness of the contribution relative to its objectives will be determined by Parks Canada.

8. Entire Agreement

This Agreement together with Annexes "A", "B", and the "General Clauses" constitute the entire Agreement between the Parties with respect to the Project and supersede all previous negotiations and communications and other agreements relating to it, unless they are expressly incorporated by reference.

9. Signatures

Signed on behalf of **Sallas Forest Strata Corporation**:

Signature_____ Date_____

Name: Ross McCutcheon Title: Strata Council President

Signed on behalf of the **Parks Canada Agency**:

Signature_____ Date_____

Name: Helen Davies Title: Field Unit Superintendent, Coastal BC

CONTRIBUTION AGREEMENT – GC-1382

Parks Canada General Class Contributions Program

ANNEX A

A.1 ESTIMATE OF ELIGIBLE EXPENDITURES

2020-21

Project Activity Breakdown	**Parks Canada**	**Recipient**	**Project Total**
	Dollar Amount	Dollar Amount	Dollar Amount
Community Coordinator	$10,000		$10,000
Restoration Planning	$5,000	$86,625 (in-kind)	$5,000 (cash) $86,625 (in-kind)
Total for 2020-21	**$15,000**	**$86,625 (in-kind)**	**$15,000 (cash)** **$86,625 (in-kind)**

2021-22

Project Activity Breakdown	**Parks Canada**	**Recipient**	**Project Total**
	Dollar Amount	Dollar Amount	Dollar Amount
Community Coordinator	$20,000		$20,000
Restoration Planning	$5,000	$178,200 (in-kind)	$5,000 (cash) $178,200 (in-kind)
Ecological Restoration	$5,000		$5,000
Total for 2021-22	**$30,000**	**$178,200 (in-kind)**	**$30,000 (cash)** **$178,200 (in-kind)**
Project Total	**$45,000**	**$264,825 (in-kind)**	**$45,000 (cash)** **$264,825 (in-kind)**

A.2 LIST OF ELIGIBLE EXPENDITURES

The following expenditures for the implementation of the Project described in this Agreement are eligible for reimbursement by Parks Canada:

(A) Remuneration: Rate (per hour, day, month or year) applicable to employees of the Recipient for time spent working on the implementation of the Project. Rates include:

(i) Direct salaries: actual sums paid to employees for the time directly spent on the implementation of Project activities described in the Agreement and not exceeding the market rates for the specific type of services;

(ii) Fringe benefits including paid absences for statutory holidays, annual vacation and sick leave at the rate the paid leave is earned and not at the point of consumption; and

(iii) Paid benefits such as the employer's contribution to employment insurance and workers' compensation plans (where applicable), etc. in accordance with the Recipient's policies.

(B) Reimbursable expenditures: The following actual and reasonable expenditures directly related to the implementation of the Project:

(i) Actual cost of subcontractor's fees. Individual rates shall not exceed the market rates that apply to the specific type of service;

(ii) Actual and reasonable honoraria costs;

(iii) Actual and reasonable travel costs not exceeding the rates permissible under the Treasury Board travel policy;

(iv) Actual costs arising from the purchase, rental, maintenance and transportation of goods, equipment, vehicles and supplies;

(v) Communication costs, such as telephone, facsimile, mail and messenger services, translation and word processing costs, printing and production costs (such as photocopying, printing, etc.); and

(vi) Other actual expenses required to implement the Project as approved in advance by Parks Canada.

The Recipient shall not include profit, directly or indirectly, in the calculation of remuneration or in any other of the costs except when the profit is included in an acceptable subcontractor agreement with a for-profit entity with which the Recipient does not hold any direct or indirect interest.

Parks Canada will not contribute to the indirect costs of the Recipient such as a general administrative or overhead cost applied as a percentage to other project expenses.

Expenditures incurred before the signing of the Agreement are not eligible for reimbursement.

A.3 OTHER SOURCES OF FUNDING FOR THE PROJECT

In addition to Parks Canada's contribution, the Recipient undertakes to contribute an amount of $264,825 in kind from its own funds or other sources for the implementation of the Project.

Where the Recipient receives additional funding for the same expenses as referred to above, Parks Canada may at its discretion: (a) reduce the contribution by such amount as it considers

appropriate, up to the amount of additional funding received; or (b) if the contribution has already been paid, require repayment of a portion or all of the contribution, as it considers appropriate.

The Recipient shall repay all amounts claimed pursuant to the paragraph above, within the time specified in the notice requesting such repayments. The amounts that the Recipient shall repay pursuant to this paragraph constitute debts to Her Majesty.

CONTRIBUTION AGREEMENT – GC-1382

Parks Canada General Class Contributions Program

ANNEX B

Project Description
This contribution supports the participation of the Sidney Island community in the collaborative Sidney Island Ecological Restoration Project.

Background
Parks Canada, together with the Sidney Island community, participating First Nations, and Island's Trust Conservancy are co-developing a multi-jurisdictional forest restoration project. The goal of the project is to work respectfully towards a healthy, sustainable and balanced native forest ecosystem on Sidney Island. The objectives of the project include the removal of invasive fallow deer, co-development of a forest restoration strategy, and co-development of a viable management strategy for black-tailed deer. All project participants have expressed a desire to work collaborative towards these shared restoration objectives.

Parks Canada Agency Result Supported by this Project
Canada's natural heritage is protected for future generations.

Expected Results
- Incorporation of the values, perspectives and knowledge of the Sallas community in collaborative development of the multi-jurisdictional Sidney Island Ecological Restoration Project.

Key Activities
- Facilitate the participation of the Sidney Island Community in the Sidney Island Ecological Restoration Project, including:
    - Coordinate and support meetings and events such as focus groups, engagement sessions, and project planning sessions.
    - Coordinate representation of the Sidney Island community on the project steering committee and the project's two technical working groups.
    - Support Sallas Strata Council discussion regarding the Sidney Island Ecological Restoration Project
- Facilitate project related communication between the Sidney Island community, Sallas Strata Council, Steering Committee, and technical working groups.

Reporting
By March 31, 2021, the Recipient will submit to Parks Canada an annual narrative project progress report describing activities conducted, progress towards achieving results, and future plans, and an annual financial report, detailing all project expenditures incurred during the year.

No later than 30 days before the end of the Agreement, the Recipient will submit to Parks Canada a final narrative project report summarizing the activities conducted and results achieved, and a final financial report detailing all project expenditures incurred for the Project.

CONTRIBUTION AGREEMENT – GC-1382

Parks Canada General Class Contributions Program

GENERAL CLAUSES

The "General Clauses" shall form an integral part of this Agreement.

1. DEFINITIONS

1.1 "Agreement" means the Contribution Agreement; the "General Clauses" and such amendments and appendices which are or may be expressed to form part of the Agreement;

1.2 "Recipient" means the organization or person receiving the contribution and being responsible for the performance and administration of the Agreement;

1.3 "Financial Audit" means any examination of the accounts and records of a "Recipient" or other information deemed necessary in the circumstances;

1.4 "Fiscal Year" refers to the fiscal year of the Government of Canada spanning April 1 of one year until March 31 the following year.

2. REPRESENTATIONS BY THE RECIPIENT

2.1 The Recipient represents:

2.1.1 that it has the capacity and authority to enter into this Agreement to carry out the Project and that it knows of no reason, fact or event, current, imminent or probable, that would diminish this capacity and authority;

2.1.2 that payments to the Recipient by way of advance payments are essential for the timely carrying out of the Project;

2.1.3 that it is in compliance with the laws that govern it;

2.1.4 that it has no interest, pecuniary or otherwise, in any business matter that would put it in an actual or apparent conflict of interest in carrying out the Project.

3 AMENDMENTS

3.1 This Agreement may be amended by the mutual written consent of the Parties. To be valid, any amendment to this Agreement shall be in writing and signed by the Parties within the duration of the Agreement.

4 ADVANCE PAYMENTS

4.1 Where the terms of the Agreement permit advance payments to be made, such advance payments shall be considered debts owed to Canada until such time as the Recipient has accounted for the said advance payments in accordance with the terms of the Agreement and to Parks Canada's satisfaction.

4.2 Advance payments made under this Agreement shall be deposited in an interest-bearing bank account of a commercial banking establishment and accounted for separately by the Recipient. Interest on outstanding balances will be calculated and compounded monthly in accordance with the Treasury Board *Interest and Administrative Charges Regulations.* Any interest accumulated by the Recipient is to be used for activities related to the achievement of project results or be subtracted from the maximum amount payable under this Agreement.

5 OVERPAYMENT

5.1 In the event that payments made to the Recipient under this Agreement exceed the amount thereof required or expended by the Recipient in accordance with this Agreement, any such surplus is payable forthwith to Parks Canada. Where any surplus payable has not been repaid,

5.1.1 an amount equal to the surplus may be retained by way of deduction from or set-off against any sum of money that may be due or payable to the Recipient; or

5.1.2 the Recipient shall repay all amounts claimed pursuant to paragraph 5.1, within the time specified in the notice requesting such repayments. The amounts that the Recipient shall repay pursuant to paragraph 5.1 constitute debts to Her Majesty. The Recipient shall issue repayment cheques to the Receiver General of Canada and forward them to Parks Canada. Interest

will be charged on all overdue repayments in accordance with the Treasury Board *Interest and Administrative Charges Regulations.*

6 DISPOSAL OF ASSETS

6.1. The Recipient agrees that, at the end of the Project or upon termination of this Agreement if earlier, and if directed to do so by Parks Canada, any capital assets that have been preserved by the Recipient shall be:

6.1.1 sold at fair market value and the funds realized from such a sale applied to the eligible expenditures of the Project to offset its contribution to the eligible costs of the Project;

6.1.2 turned over to another organization or person designated or approved by Parks Canada; or

6.1.3 disposed of in such other manner as may be determined by Parks Canada.

6.2 Any intellectual property created as a result of this Project will remain the property of the Recipient.

7 MEMBERS OF THE SENATE OR THE HOUSE OF COMMONS

7.1 No member of the Senate or the House of Commons shall be admitted to any share or part of the Agreement, or to any benefit arising from it, that is not otherwise available to the general public.

8 ASSIGNMENT

8.1 The Recipient shall not assign this Agreement or any part thereof or any payments to be made thereunder without the written permission of Parks Canada, but nothing shall preclude the Recipient from enlisting the assistance of others in carrying out the obligations under this Agreement.

9 RELATIONSHIP

9.1 The Parties acknowledge that no principal-agent, employer-employee, partnership or joint venture relationship is created by virtue of this Agreement. The Recipient will not represent itself as an agent, employee or partner of the Crown, including in any agreement with a third party.

10 CERTIFICATION - CONTINGENCY FEES

10.1 The Recipient certifies that it has not directly or indirectly paid or agreed to pay any covenants that it will not directly or indirectly pay a contingency fee for the solicitation, negotiation or obtaining of this Agreement to any person other than an employee acting in the normal course of the employee's duties. All accounts and records pertaining to payments of fees or other compensation for the solicitation, obtaining or negotiation of the Agreement shall be subject to the Accounts and Audit provisions of the Agreement.

10.2 If the Recipient certifies falsely under this section or is in default of the obligations contained therein, Parks Canada may either terminate this Agreement for default as per the provisions of the Agreement or recover from the Recipient by way of reduction to the contribution or otherwise the full amount of the contingency fee.

11 APPLICABLE LEGISLATION

11.1 The Recipient shall ensure that the activities or programs will be conducted in compliance with applicable laws.

11.2 The Recipient agrees to comply with the spirit and intent of the *Employment Equity Act* and the *Canadian Multiculturalism Act*.

11.3 The Recipient agrees to comply with the spirit and intent of Part VII of the *Official Languages Act* of Canada.

11.4 The Recipient shall ensure that the Recipient or any person lobbying on behalf of the Recipient to obtain funding is in compliance with the *Lobbying Act*.

11.5 The Recipient shall meet any applicable requirements of the *Impact Assessment Act*.

11.6 The Recipient shall ensure that any information which may be brought to the attention of the Recipient and its employees or agents will be dealt with according to the provisions of the *Privacy Act*.

12 CONFIDENTIALITY

12.1 The Recipient shall ensure that any information of a confidential nature, relating to the affairs of Parks Canada, or Her Majesty, to which the Recipient or its officers, servants or agents become privy, shall be treated as confidential and shall not disclose such information to third parties without obtaining the prior written consent of Parks Canada.

13 CONFLICT OF INTEREST

13.1 The Recipient confirms that no current or former federal public servant or public office holder to whom the *Conflict of Interest Act*, *Conflict of Interest and Post-Employment Code for Public Office Holders* or *The Values and Ethics Code for the Public Service* applies shall derive direct benefit from this Agreement, unless the provision or receipt of such benefits is in compliance with such legislation and codes.

13.2 The Recipient shall at no time during the duration of this Agreement pursue interests that are inconsistent with the interests served by this Agreement.

14 OBLIGATIONS OF THE RECIPIENT

14.1 During the term of this Agreement the Recipient shall:

14.1.1 take all necessary action to maintain itself in good standing, to preserve its legal capacity and to inform Parks Canada without delay of any failure to do so;

14.1.2 complete the Project and take all necessary action to carry it out successfully within the limits and the agreed budget in accordance with good business practice and using qualified staff;

14.1.3 disclose to Parks Canada, without delay, any fact or event that would or might compromise the Project's chance of success or its ability to carry out any of the

terms and conditions of this Agreement, either immediately or in the long term, including, but not limited to, pending or potential lawsuits and audits;

14.1.4 in the acquisition of assets and the letting of service contracts for the execution of the Project, the Recipient shall call upon professionals, merchants and subcontractors to the extent that they are competitive and available; and

14.1.5 declare any amounts owing to the federal government under legislation or contribution agreements and recognize that amounts due to the Recipient may be set-off against amounts owing to the government.

14.2 The Recipient agrees to give access to Parks Canada and/or its representatives as well as to representatives of the Auditor General of Canada to visit the premises or site where the activities funded under this Agreement are being carried out and to review documents for the purpose of conducting an audit or monitoring compliance with the Agreement.

15 LIABILITY

15.1 Her Majesty the Queen in Right of Canada and Parks Canada, their officers, employees or agents, shall not be liable for any injury or death caused to the person of any agent, official or employee of the Recipient or for loss or damage to property or the same, unless resulting from a negligence of an officer, employee or agent of Parks Canada or of the Government of Canada in the exercise of their office.

16 INDEMNIFICATION

16.1 The Recipient agrees to indemnify and save harmless Her Majesty the Queen in Right of Canada and Parks Canada, their officers and agents from and against all claims, damages, loss, costs and expenses (including reasonable legal fees) which they or any of them may at any time incur or suffer as a result or arising directly or indirectly out of the carrying out of this Agreement, except to the extent caused by a breach of duty on the part of Parks Canada, its officers, employees or agents.

16.2 Further, the Recipient agrees to indemnify and save harmless Her Majesty and Parks Canada, their officers, employees and agents for any deficit incurred by the Recipient during the term of this Agreement.

17 DEFAULT AND REMEDIES

17.1 The following constitute events of default:

17.1.1 the Recipient becomes bankrupt or insolvent or is placed in receivership or takes the benefit of any statute relating to bankrupt and insolvent debtors;

17.1.2 an order is made or a resolution passed for the winding-up of the Recipient or the Recipient is dissolved, or the Recipient dies;

17.1.3 if in Parks Canada's opinion, there is a change in risk which would jeopardize the successes of the Project;

17.1.4 the Recipient, either directly or through its representatives, makes or has made a false or misleading statement to Parks Canada;

17.1.5 in Parks Canada's opinion, a term or condition or a commitment provided for in the Agreement has not been respected;

17.1.6 the Recipient is no longer eligible under the "Eligibility Criteria" of the Program.

17.2 Where there is an event of default or where, in Parks Canada's opinion, there is likely to be a default under this Agreement, Parks Canada may avail itself of one or more of the following remedies:

17.2.1 reduce the level of the contribution and inform the Recipient accordingly;

17.2.2 suspend any payment of the contribution, either with respect to sums already owing or future payments;

17.2.3 rescind this Agreement and immediately terminate any financial obligation arising out of it;

17.2.4 by written demand, require any guarantee or security from the Recipient that Parks Canada considers appropriate within a set time limit;

17.2.5 by written demand, require repayment of amounts already paid which were spent contrary to the terms of the Agreement; the amount claimed becoming a debt

owing to the Crown as soon as the demand is made on the Recipient. The Recipient shall immediately comply with such a written demand.

17.3 The fact that Parks Canada refrains from exercising a remedy it is entitled to exercise under this Agreement shall not be considered to be a waiver of such right and, furthermore, partial or limited exercise of a right conferred on it shall not prevent it in any way from later exercising any other right or remedy under this Agreement or other applicable law.

18 DISPUTE RESOLUTION

18.1 In the event of a dispute arising under the terms of this Agreement, the Parties agree to make a good faith attempt to settle the dispute. In the event that the Parties could not resolve the dispute through negotiation, they agree to submit to mediation. The Parties will bear the costs of mediation equally.

19 ACCOUNTS, FINANCIAL STATEMENTS AND OTHER DOCUMENTS

19.1 The Recipient agrees to keep proper accounts and records of the revenues and expenditures for the subject matter of the Agreement, including all invoices, receipts and vouchers relating thereto. The Recipient will provide financial statements and other documents stipulated in the Agreement and as required from time to time by Parks Canada, and shall conduct its financial affairs according to generally accepted accounting principles and practices. For the purposes of this Agreement, the Recipient will keep all financial accounts and vouchers and other records for a period of at least seven years after the expiry of the Agreement.

19.2 The Recipient shall ensure that all costs for the implementation of the Project include, where applicable, the GST, HST and provincial sales tax that the Recipient shall pay on all goods and services, less any credits or reimbursements to which it is entitled.

20 AUDIT

20.1 Parks Canada and/or the Auditor General of Canada reserves the right to audit or cause to have audited the accounts and records of the Recipient to ensure compliance with the terms and obligations of the Agreement, and the Recipient shall make available to such auditors any records, documents and information that the auditors

may require. The scope, coverage and timing of such audit shall be as determined by Parks Canada and/or the Auditor General of Canada and if conducted may be carried out by employees of Parks Canada, the Auditor General of Canada or its agent(s).

21 AUDIT RESULTS

21.1 Parks Canada agrees to inform the Recipient of the financial results of any audit, and to pay to the Recipient as soon as possible after the completion of the audit any monies that the audit may show to be then due and owing to the Recipient. The Recipient agrees to pay to Parks Canada, on being informed of the results of such audit, any monies which the audit may show to be then due and owing to Parks Canada.

22 APPROPRIATION

22.1 The payment of any money under this Agreement is subject to there being an appropriation by Parliament for the fiscal year in which the payment is to be made. Parks Canada may also cancel or reduce the contribution amount in the event that the Agency's funding levels are reduced by Parliament.

23 TERMINATION

23.1 Parks Canada reserves the right to terminate this Agreement for convenience, without cause or due to the default of the Recipient.

23.2 The Recipient may terminate this Agreement at any time prior to receiving any part of the contribution by giving written notice of termination to Parks Canada, in which case the parties shall be relieved of all obligations under the Agreement, and in particular and without affecting the generality, Parks Canada shall have no obligation to pay to the Recipient the contribution or any part thereof.

23.3 Where the Recipient has received payment of part of the contribution, it may give notice in writing to Parks Canada that it does not wish to receive further payment of the contribution, in which case the Agreement shall remain in effect with regard to the reporting and audit requirements for the portion of the contribution already received.

24 SURVIVAL OF TERMS

24.1 All obligations of the Recipient (or of the Parties) herein, including, without limitation, clause 7, Annex A.3, and General Clauses 5,12,15,16,19, 20, 21 and 24 shall, expressly or by their nature, survive termination or expiry of this Agreement, until or unless they are fulfilled or by their nature expire.

From: Tooby, Ben (PC)
Sent: Monday, January 25, 2021 1:33 PM
To: Bishop, Margot (PC)
Subject: Purchase Approval Request "Gear"

Margot,
I hope you are having a good day so far.
You are correct that previously purchase approvals were just sent to Mike. Moving forward I will have you approve. Let me know if you would appreciate these requests in a different format or more details. I am hopeful to have Kyle use his MC to purchase the below this week.

Purchase approval request;
$2,780

Trotac Marine

- 3 @ Mustang hydrostatic PFD's Orange $1,000/3
  - Sarah, EG-04, Kyle
- 12 @ "Right in the Rain" field books $150/12

Radio Works Victoria

- 4 @ Handheld radio Motorola T400 $350/4
  - Hunters have requested for safety, majority don't have cell phones. PCA handhelds are too expensive, bulky, and contain secure channels so cannot be loaned out. These would be loaned out while PCA is on site.
- 1@ Chestpacks for radio and notebook $60/1
  - Sarah

MEC

- 5 @ Leatherman Multi-tool $750/5
  - 1 for each field staff. Same model as what Assets and Fire program carries.
- 4 @ Basic First Aid Kit $110/4
  - Sarah, Stephanie, Kyle, EG-04
- 2 @ Pelican waterproof case $60/2
  - Storage for memory cards and batteries
- 5 @ Fox40 Whistle $30/5

Robinsons Sporting Goods

- 1 @ Sealline backpack $210
  - Sarah

Thank you,
Ben

Fur to Forest Finance Snapshot

Goods and Services

Current Expenditures (total)		74,188	
Goods and services (actuals)		64,183	
Contribution Agreements (actuals)		10,005	
Pending Expenditures	Expected expenditures		
WLC Contribution Agreement		19,000	Via GINPR CA, need to JV
Pauquachin Contribution Agreement		0	paid 10005 already
Coastal Conservation		35,572	calculation to the right
Beatrice Frank		16,671	calculation to the right
Judith Cullington		22,000	draft fallow and BTD, veg plans
UBC BTD Contract		28,350	
HLRS Contract		19,000	25,000
Sallas Contribution Agreement		15,000	solicit invoice to get this money o
staff training		3,340	CCT training expense remaining
online software subscriptions		1,000	
computers		1,400	1 new comp (GT04 backfill)
uniforms		1,000	sarah
water taxi		4,000	for hunters.
Youth Hunter Training		4,500	if we pay for 1 course
exclosure materials		9,600	8 exclosures, 1200 each
Hawthorn treatment		5,000	pesticide if needed.
camera grid		0	buy if need to.
exclosure plants		0	unlikely exclusres will be ready
Fuel and boat maintenance		3,000	Shahina will JV to F2F
	Spent		
Gear. Kyle M.C.	2,780		Gear for the team
Radio's X3	2,134		Kyle, Sarah, and house
Exclosure Fence / Gates_Ben M.C.	6,380		Fence for 6 exclosures + 6 gates /
Data storage bank_IT	~8K		secure storage for trail cam foota
lap top X2_IT procurement	3,402		Kyle Nelson, EG-04, + Monitors, k
Dange tree training Kyle	350		
Phone X3			Kyle, Sarah, Ben
Total Pending		203,479	
G&S Budget		257,000	Note: this is amount requested in
G&S Expended		74,188	
G&S Pending spending		203,479	

G&S Total Forecasted Spending	277,667	
G&S Variance	-20,667	Note: want to be overspent by 5%

Salary and Wages

Budget	298,300	*Money allocated to salary by FU
Mike PM04	36,505	55,757 - 3.3 months @ (70013/12
Ben PM 04	18,549	67449/12 = 5621/month
Becky PM04	11,242	67449/12 = 5621/month x 2 mont
Becky EG04	41,040	61560/12= 5130/mnth * 8 month
Chris EG04	24,650	59154/12= 4930/month x 5 mont
TBD Becky Backfill EG04	9,860	59154/12 = 4930/month x 2 mont
Ben GT04	45,675	63002/12 = 5250/mnth x 8.7 mnt
TBD GT04 backfill	13,071	62741/12=5228 x 2.5 mnths = 13(
Kyle EG03	10,664	58165/12 = 4847 x 2.2 months
Stephanie PM03	62,179	
Sarah EG 01	9,234	44446/52 = 855 *0.6 = 513. $513/
Total Forecast Salary	282,669	
Salary and Wages Transfer Costs	0	*27% of transfer amount
Forecasted tansfer required	-15,631	if negative number, then no trans
Total Forcasted	282,669	

Employee Benefit Plan Taken off	80,541	*Taken off when money goes fror
Total Forecasted Expenses	640,877	
Budget (2020/21)	654,500	* in 1636.07 RPA
Balance	13,623	

Last Update: Feb 10, 2020

21750

Sept/Oct/nov/dec average = $7250/mnth $7250.month x 4 months (Dec, Jan,Feb, March) = 21,750
Sept/oct/nov average = $5335/4 = 1334/month $1334/month x 4 months (Dec, Jan, Feb, March = $5336.
invoices by deliverable - see contract

guess. $25k available. based on WLC estimate
ut the door.

hardware
ge
eyboard, mouse, and bag.

RPA submitted in Oct. Not approved yet as of Dec, but likely will be and then budget will change to this am

; at year end. Do NOT want to be underspent.

: = 5834/mnth) (= 36505. note, 2 months in RCM + 3.3 off, so only half of annual salary this year.
5621*3.3=18549
ths =
s = 41040 Note: 2 months in PM04, 2 months on
hs =
ths =9860
hs = 45675
071

/wk x 18 wks = 9234

Check
MRT budget - finance budget = init
45832

fer required.

n G&S to S&W

s.19(1)

+ 8 extra days of Chris' time (8x$750/day = $6000) = 27750, + 7822 for Nov invoice =
+ major ramp up of recorded sessions = $6k???. Total pending = 5335+5336+6000 =

ıount

ial EBP removed

Tooby, Ben (PC)

From: Tooby, Ben (PC)
Sent: Tuesday, February 4, 2020 3:02 PM
To: Janssen, Michael (PC)
Cc: Pelletier, Aimee (PC)
Subject: FW:

Mike,
Did Daphne respond to the below email?

Thank you,
Ben

From: Nadon-Pender, Suzanne (EC) <suzanne.nadon-pender@canada.ca>
Sent: Thursday, September 5, 2019 9:10 AM
To: Janssen, Michael (PC) <michael.janssen@canada.ca>
Cc: Cardinal, Nathan (PC) <nathan.cardinal@canada.ca>; Tooby, Ben (PC) <ben.tooby@canada.ca>; Porter2, Daphne (EC) <daphne.porter2@canada.ca>
Subject: RE:

Hi Michael,

Daphne Porter will respond to your request. She will be in touch shortly. Let me know if you have any additional questions. Thanks

Suzanne

Suzanne Nadon-Pender
Manager and Senior Counsel / Gestionnaire et avocate conseil
Environment Legal Services (Parks Canada Agency) / Service juridique de l'environnement (Agence Parcs Canada)
351 boulevard St. Joseph, 9th floor (Annex)
Gatineau (Québec) K1A 0H3
819-938-4907

From: Janssen, Michael (PC) <michael.janssen@canada.ca>
Sent: Thursday, September 5, 2019 12:03 PM
To: Nadon-Pender, Suzanne (EC) <suzanne.nadon-pender@canada.ca>
Cc: Cardinal, Nathan (PC) <nathan.cardinal@canada.ca>; Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject:

Hello Suzanne,
I am a project manager in the Gulf Islands National Park Reserve.

s.23

Thank you very much Suzanne, have a wonderful day,
Mike Janssen

s.23

Michael Janssen, MSc, PMP, RPBio
Project Coordinator | Coordinateur de projet
Gulf Islands National Park Reserve | Réserve de parc national des iles-Gulf
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6
michael.janssen@canada.ca (**please note new e-mail address**)
Telephone | Téléphone (250) 654-4015
www.parkscanada.gc.ca | www.parcscanada.gc.ca
Government of Canada | Gouvernement du Canada

Parks Canada - 450 000 km of memories / Parcs Canada - 450 000 km de souvenirs

From: Bishop, Margot (PC)
Sent: Monday, February 15, 2021 11:22 AM
To: Banovich, Melissa (PC); Tooby, Ben (PC)
Cc: Mcpherson, Michèle (PC)
Subject: RE: FOR APPROVAL: Sole Source Contract Request F2F - Trail Cameras

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Hi Melissa,

Here are the responses to Helen's key questions. Below includes: an plan for storage and use, standing offer status (outstanding...still waiting on input), additional rationale on use of Reconyx.

We can chat further. I'm interested to know what route PacRim took to secure the cameras when Helen didn't support a second sole source for Wild About Wolves.

Thanks,
Margot

Plan for Inventory/Tracking Assets

- Fur to Forest is arranging a secure metal cabinet to store and track these cameras when not deployed. A detailed tracking spreadsheet will be used to monitor when and where each camera is deployed (will include tracking for memory cards, data, and batteries).
- All Cameras will have inventory #, and be labelled as per PCA "Standards for use of wildlife cameras for NRC".
- As the cameras will be in the field for a long period of time at once, they will also be labelled (see mountain park label below – GINPRs will be similar). Professional cable locks will be used to secure units when in field. Small padlocks will be used to secure batteries and memory cards in cameras.
- There is no licensing costs for the software. No ongoing maintenance anticipated. However, as with any piece of equipment, if damaged repairs may be needed.

Use Plan

- Summer 2021-Fall 2022: Installed to pattern Fallow deer pre-eradication, and identify Black Tail deer on Sidney Island
- Fall 2022-Fall 2023: During the eradication, monitor cleared zones and fencelines to insure no Fallow are circling back into cleared areas on Sidney Island.
- 2023-2025: Post eradication, robust biosecurity phase to ensure no Fallow remain or migrate back to Sidney Island for many years to come. Cameras will monitor any movement.
- 2025 onward:
    a. Majority of cameras used for hyperabundant Black tail deer management throughout GINPR (starting with Cabbage, Tumbo, and D'Arcy), used to establish baseline and determine where best to facilitate First Nation hunts.
    b. Small number of cameras to ensure biosecurity – Cameras installed at Saturna Island Winter Cove to identify if fallow dear swim from Mayne.
    c. Additional uses: Cultural Monitoring (sensitive sites for winter erosion impacts), Winter Cover Monitoring, Large mammal monitoring (wolf/cougar on Sidney Island). Other functions may use by request (LE for enforcement monitoring).

Standing Offer Status

Awaiting confirmation from National Office on status of SO development.

Justification of Reconyx

Additional rationale for use of Reconyx for GINPR from F2F research and other FU findings:

- Are what is currently in use at GINPR / compatible.
- Field tested and proven to be reliable, durable, and provide consistent imaging above and beyond alternatives.
- Specifications: Wide field of view, coated electronics for longevity and resiliency (marine impacts), rated for low temperatures, high security features to prevent theft and vandalism, passive infra-red sensor zones and trigger sensitivity proven to provide most consistent imaging.
- 2019 Bait trials GINPR tested 3 other trail camera brands. None tested compared to existing Recoynx.
- Larger parks and CoRe programs have had capacity to trial alternate cameras but continue to all use Recoynx.

Margot Bishop

margot.bishop@canada.ca
Telephone | Téléphone: (250) 217-8008

Parcs Canada - 450 000 km^2 de souvenirs | Parks Canada - 450 000 km^2 of memories

From: Banovich, Melissa (PC) <melissa.banovich@canada.ca>
Sent: Sunday, February 14, 2021 9:30 PM
To: Bishop, Margot (PC) <margot.bishop@canada.ca>; Tooby, Ben (PC) <ben.tooby@canada.ca>
Cc: Mcpherson, Michèle (PC) <michele.mcpherson@canada.ca>
Subject: FW: FOR APPROVAL: Sole Source Contract Request F2F - Trail Cameras

HI Folks,

Can we discuss s.t. tomorrow or can one of you kindly provide an email update? I have a bi-lat with Helen at 2pm and would like to bring her up to speed. I'm in meetings most of day, but just work with Michele to find a spot after 11am if one of you would rather brief me by phone.

Many thanks, Melissa
778-867-4776

From: Davies, Helen (PC) <helen.davies@canada.ca>
Sent: Friday, February 12, 2021 3:00 PM
To: Banovich, Melissa (PC) <melissa.banovich@canada.ca>
Subject: FW: FOR APPROVAL: Sole Source Contract Request F2F - Trail Cameras

Melissa, I am not prepared to sign this until I understand the plan for inventorying/tracking these assets, given the value of $18k, as well, I would like to know whether there are any maintenance requirements/costs or any licencing aspects for software.

I understand that this is a preferred/"superior" product, however, it is problematic, in my view, that there is no standing offer with the company, given the thousands of dollars the Agency is investing in this equipment. I would like

Back in 2018 and 2019, PacRim purchased Reconyx cameras for the Wild about Wolves project. I didn't support the 2nd sole source purchase and can clarify for you why. I was assured at that time that the Jasper field unit was leading work to put in place a Standing Offer arrangement. It would see that that has not been done, but I would appreciate you confirming this. I wonder what incentive there is to finalize a SO if the Agency continues to use the Sole Source tool?

One of the fundamental principles of federal contracting is openness and the practice of providing potential suppliers with opportunities to submit bids for government contracts. An objective is to acquire goods and services in a manner that supports access, competition and fairness and that results in best value or, if appropriate, the optimal balance of overall benefits to the Crown and the Canadian people.

"Industry Standard" or 'preferred' or noting that 'nothing compares' doesn't necessarily warrant a Sole Source. I would like to know the status of the Standing Offer work.

Thanks, Helen.

Helen Davies

Field Unit Superintendent, Coastal BC Field Unit
Parks Canada / Government of Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6
helen.davies@canada.ca / Tel: (250) 654-4048 / Cell: (250) 812-1701

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From: Bishop, Margot (PC) <margot.bishop@canada.ca>
Sent: February 11, 2021 5:33 PM
To: Davies, Helen (PC) <helen.davies@canada.ca>
Cc: Poirier, Solange (PC) <solange.poirier@canada.ca>; Banovich, Melissa (PC) <melissa.banovich@canada.ca>; Mcpherson, Michèle (PC) <michele.mcpherson@canada.ca>
Subject: FOR APPROVAL: Sole Source Contract Request F2F - Trail Cameras

Hello Helen

Attached is a sole source contract request for your review. Melissa and I have discussed following her review and she has asked me to send it up following

Please let me know if you have any questions and happy to discuss further.

Purpose of Request
Sole source contract to purchase 45 trail cameras for the Fur to Forest (F2F) CoRe project for a total of $18,923 USD. These cameras will be used for monitoring species movement and support the eradication of hyperabundant deer on Sidney Island and elsewhere in GINPR.

The same cameras were used to support deer eradication in Gwaii Haanas, and have been used for wildlife monitoring in the Mountain Park block and Pacific Rim. This is the only camera that PCA uses that we are aware for wildlife monitoring. There is no Standing Offer with the company however, we will make that recommendation to PAEC.

The firm is based in the United States. National Contracting Services has been working with the F2F team and has confirmed that we will be able to complete this request before the end of FY.

I have also attached the sole source submitted previously by Banff FU as well as further rationale for the equipment.

This is a significant investment by the F2F project that can be used by Resource Conservation in many monitoring efforts following the completion of F2F.

Who has been consulted
Kristin Sage (National Contracting Services Advisor)
Steve Michel, National Human Wildlife Conflict Management Officer
Consulted previous sole source records from Banff FU
Melissa Banovich

Requested approval date
At your earliest convenience

Coulson, Stephanie (PC)

From: Nelson, Kyle (PC)
Sent: March 16, 2021 10:44 AM
To: Gonzales, Emily (PC); Tooby, Ben (PC); Gregg Howald; BEATRICE FRANK; Coulson, Stephanie (PC); Jim, Sarah (PC); Bishop, Margot (PC); Judson, Laura (PC)
Subject: RE: Restoration without eradication

Follow Up Flag: Follow up
Flag Status: Completed

Hi Ben,

I had a read through Robin's Kaweka report and decided to add it to the annotated bibliography while I was at it.

I agree with Emily regarding the take home message. If anything I'd say it supports a case for eradication, as the most reliable data from the study confirms that deer slow seedling growth, which in turn increases seedling mortality and intensive effort is required to mitigate this. The results he's focusing on – that regeneration occurs regardless of fencing, aerial hunting, or recreational hunting, although at different time scales – is not based on empirical data. It's modeled, based on open forest, and only relates to one tree species. There's also a bit of work on a handful of understory species, in which they didn't evaluate deer exclusion and found no difference in impacts between aerial and recreational hunting. However, I have to wonder how those two hunting treatments were differentiated in a continuous landscape where deer are free to move around.

I would also be interested in the Highlands and Nara documentation if those were sent as well.

Thanks,
Kyle

From: Gonzales, Emily (PC)
Sent: March 15, 2021 8:10 AM
To: Tooby, Ben (PC) <ben.tooby@canada.ca>; Gregg Howald <gregg@coastalconservation.ca>; BEATRICE FRANK <frankbea@hotmail.com>; Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>; Jim, Sarah (PC) <sarah.jim@canada.ca>; Nelson, Kyle (PC) <kyle.nelson@canada.ca>; Bishop, Margot (PC) <margot.bishop@canada.ca>; Judson, Laura (PC) <laura.judson@canada.ca>
Subject: RE: Restoration without eradication

Hi Ben,
Thank you for sharing.
There was only 1 attachment in the email that I received – which was a report.
I was curious, so a quick google scholar search turned up this paper about the site.
Latham, A. D. M., Latham, M. C., Herries, D., Barron, M., Cruz, J., & Anderson, D. P. (2018). Assessing the efficacy of aerial culling of introduced wild deer in New Zealand with analytical decomposition of predation risk. Biological Invasions, 20(1), 251-266.
I only took a quick skim of the abstracts - but isn't the "take home" from the paper and report is that these deer were causing substantial ecological damage and that reversing that was quite difficult? That intensive culling (using aerial hunting) was needed to produce some ecological results?

Just checking, were there papers associated with the Scottish Highlands and Nara, Japan that didn't come along with this forwarded email?

PS I met the deer in Nara, Japan in the 1980s.
Perhaps it is different now.
Back then, there was literally no "ecosystem" – lots of deer in a park with no vegetation.

Emily

From: Tooby, Ben (PC) <ben.tooby@canada.ca>
Sent: Saturday, March 13, 2021 1:13 PM
To: Gregg Howald <gregg@coastalconservation.ca>; ca; BEATRICE FRANK <frankbea@hotmail.com>; Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>; Jim, Sarah (PC) <sarah.jim@canada.ca>; Nelson, Kyle (PC) <kyle.nelson@canada.ca>; Gonzales, Emily (PC) <emily.gonzales@canada.ca>; Bishop, Margot (PC) <margot.bishop@canada.ca>; Judson, Laura (PC) <laura.judson@canada.ca>
Subject: FW: Restoration without eradication

FYI;
No action required. s.19(1)
If interested, see below most recent email from Mr. Bassett.
Have a great weekend,
Ben

From: Robin Bassett <rtbassett@shaw.ca>
Sent: Friday, March 12, 2021 9:58 AM
To: Paul McNally <paumcnally@me.com>; Erin Shaw <Erin@erinshawfamilylaw.ca>; Julia Hedley <hedley@shaw.ca>; Geraldine Van Gyn <geri.van.gyn@gmail.com>; Tooby, Ben (PC) <ben.tooby@canada.ca>; BEATRICE FRANK <frankbea@hotmail.com>
Subject: Restoration without eradication

Sadly I am unable to attend the webinar this morning. (March 12) I thought it would be useful to share examples where eradication is NOT being used as a Deer Management technique in Restoration. All these examples may be distinguished from Sidney Island but they all point to the conclusion that eradication is NOT critical to restoration.

1) **Consequences of Deer Control for Kaweka Mountain Beach Forest Dynamics(Dept of Conservation, New Zealand):**

This is the most sophisticated and objective academic analysis I can find regarding deer management. 'Im sure there are others. It looks at three possible management techniques (fencing, aerial shooting and recreational culling). It concludes each would lead to successful restoration. The difference would be in the time it takes to

achieve restoration. The paper also looks at the impact of unknowable disturbances and events. I wish we had the resources to do such a thorough analysis on Sidney Island.

2) **Scottish Highlands: Glenfeshshie hunting estate.** Overabundance of deer is a major problem in the Scottish Highlands. This describes how successful culling can be over a 10 year period.

3) **Nara ,Japan:** Deer are considered sacred by the Buddhist and Shinto religion. This has caused overabundance and problems with local farmers. Culling is being used to ameliorate the situation.

All 3 are attached below.

This is just for info and to suggest that eradication is not the only way to go inspite of the fact it too, is successful.

Robin
lot 112

Nelson, Kyle (PC)

From: Nelson, Kyle (PC)
Sent: February 23, 2021 1:50 PM
To: 'BEATRICE FRANK'; Jim, Sarah (PC); Judson, Laura (PC); Tooby, Ben (PC); Gregg Howald; Coulson, Stephanie (PC)
Cc: Bishop, Margot (PC); Gonzales, Emily (PC)
Subject: RE: for F2F discussion; "moral claim"

A little late to the party, but here's my two cents:

I would say that in some ways what we're doing reflects the paradigm shift that Robin has mentioned in their paper. Humans placed fallow deer on Sidney Island without ethical consideration for the species that were already there. It has since become obvious that this action was unethical due to the impact it had on the native ecosystem. I see eradication as an act of ecological reconciliation, righting a previous wrong. It comes at the cost of this one fallow deer population, but as Laura has pointed out, we're carrying it out in a way that has been well thought-out and limits the number of fallow deer impacted over the longer term.

I think it's quite presumptuous to think that we don't take into account the moral considerations of the animals when we do this type of work. My first job with Parks was doing brook trout eradication from a lake in Banff to create habitat for a species at risk. I had a lot of time to think about ethics as I pulled thousands of dead brook trout from gill nets, often with a heavy heart. In the last veg working group meeting Tiffany raised a point that often crossed my mind while doing that work: these individual plants or animals don't know they're invasive nor did they choose to be placed there. I don't think this changes the fact that they should be removed, but it helps remind me that we must do it in the most ethical way possible that limits the suffering of *all* species involved. From what I've seen, that consideration has been a guiding principle of this project all along.

Kyle

From: BEATRICE FRANK [mailto:frankbea@hotmail.com]
Sent: February 23, 2021 10:08 AM
To: Jim, Sarah (PC) <sarah.jim@canada.ca>; Judson, Laura (PC) <laura.judson@canada.ca>; Tooby, Ben (PC) <ben.tooby@canada.ca>; Gregg Howald <gregg@coastalconservation.ca>; Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>; Nelson, Kyle (PC) <kyle.nelson@canada.ca>
Cc: Bishop, Margot (PC) <margot.bishop@canada.ca>; Gonzales, Emily (PC) <emily.gonzales@canada.ca>
Subject: R: for F2F discussion; "moral claim"

Hello all,

looks really good, I just added a couple of comments:) It would be great to include the comment Sarah just did below in our communication, I think she really uses powerful words (thank you for sharing Sarah)

Ciao Bea

Da: Jim, Sarah (PC) <sarah.jim@canada.ca>
Inviato: martedì 23 febbraio 2021 09:56
A: Judson, Laura (PC) <laura.judson@canada.ca>; Tooby, Ben (PC) <ben.tooby@canada.ca>; Gregg Howald <gregg@coastalconservation.ca>; judith@cullington.ca < BEATRICE FRANK

<frankbea@hotmail.com>; Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>; Nelson, Kyle (PC) <kyle.nelson@canada.ca>
Cc: Bishop, Margot (PC) <margot.bishop@canada.ca>; Gonzales, Emily (PC) <emily.gonzales@canada.ca>
Oggetto: RE: for F2F discussion; "moral claim"

Laura, your justification was really well put and solidifies why eradication is necessary. We have such rich biodiversity without the presence of fallow deer that contribute to the beauty, health, and culture of this place.

Hunting with good intentions is built into our W̱SÁNEĆ origin story of SMÍEŦ (deer). We knew that if we didn't hunt SMÍEŦ, the ecosystem would collapse and there would be an imbalance on the land. The story also states that killing for the sake of killing is wrong and we need to honour those who's lives we take. Just wanted to share some cultural teachings.

I appreciate your gentle and practical approach,
Sarah Jim

https://www.firstvoices.com/explore/FV/sections/Data/THE%20SEN%C4%86O%C5%A6EN%20LANGUAGE/SEN%C4%86O%C5%A6EN/SEN%C4%86O%C5%A6EN/learn/words/5e67612e-8121-4964-863b-96382e6eb559

From: Judson, Laura (PC) <laura.judson@canada.ca>
Sent: February 23, 2021 6:12 AM
To: Tooby, Ben (PC) <ben.tooby@canada.ca>; Gregg Howald <gregg@coastalconservation.ca>; BEATRICE FRANK <frankbea@hotmail.com>; Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>; Nelson, Kyle (PC) <kyle.nelson@canada.ca>; Jim, Sarah (PC) <sarah.jim@canada.ca>
Cc: Bishop, Margot (PC) <margot.bishop@canada.ca>; Gonzales, Emily (PC) <emily.gonzales@canada.ca>
Subject: RE: for F2F discussion; "moral claim"

Hi Ben,
I think it is very important that people on Sidney Island and partners in the project feel ethically comfortable with eradication because it could suddenly seem very real once an operation is about to take place. This content from the 2018 newsletter (below) explains how an eradication decision can be considered under the seven principles for ethical wildlife control, developed by an international panel of biologists and published in Conservation Biology (http://onlinelibrary.wiley.com/doi/10.1111/cobi.12896/full).
In my personal opinion, I also think it's worth noting that species who have been present on Sidney Island for thousands of years and are disappearing as a result of introduced species warrant protection and consideration, including songbirds. And as we've noted before, on Sidney Island an eradication effort would likely involve the destruction of fewer than 1,000 deer, while ongoing hunting and culls have killed approximately 14,000 deer to date.
It is a good idea to brush up our response to this ethics questions since it will be very relevant when we engage media and the broader public.
I hope this content is helpful, **s.19(1)**
Laura

Laura Judson
Public Relations and Communications Officer | Agente, Relations publiques et communications
Coastal BC Field Unit | Unité de gestion, Côte de la C.-B.
Parks Canada | Parcs Canada
Cel: 250-818-2509

When is eradication ethical?

One resource that Parks Canada refers to for guidance on culling or eradicating a species is a framework on ethical wildlife control developed by an international panel of experts. Below is a breakdown of how the seven principles outlined by the panel apply to the possible eradication of Sidney Island's fallow deer. Check out 'Further reading' on page 10 for an in-depth look at the panel's recommendations.

Principle 1: Consider whether the problem can be solved by changing human practices.
Public education efforts by both Parks Canada and Sidney Island's Strata Council have reduced conflict between people and deer by outlining behaviours to avoid such as feeding or approaching deer. While conflict can be minimized, no change in human behaviour can effectively solve the problem of fallow deer overbrowsing.

Principle 2: Consider whether the harm caused by the animal justifies removing or eradicating the species.
Substantial evidence gathered by Parks Canada and other researchers 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.

Principle 3: Determine whether eradication is a clear and achievable goal.
Parks Canada conducted a feasibility assessment that confirmed eradication of fallow deer from Sidney Island is possible, factoring in animal behaviour, island geography, and preferred methods. We are currently working with contractors to develop an eradication operation plan. Eradication methods would be tested in advance to ensure effectiveness. Parks Canada is prepared to cover the full costs of the operation.

Principle 4: Ensure the proposed eradication methods minimize suffering.
Animal welfare is important to Parks Canada. Any plan to eradicate fallow deer from Sidney Island would ensure the humane treatment of wildlife. Eradication techniques would need to meet requirements from Parks Canada's Animal Care Committee, which involve reducing animal stress and suffering, while also avoiding non-target animals. Parks Canada would also work with the Society for the Prevention of Cruelty to Animals to review eradication plans and ensure high animal welfare standards.

Principle 5: Consider community values on eradication.
Parks Canada's proposal to eradicate fallow deer from Sidney Island will not proceed without support from local First Nations and Sidney Island landowners. If there is support, Parks Canada will continue to reach out to all involved throughout the eradication process to ensure other's values are respected.

Principle 6: Consider how eradication fits into long-term area management.
Eradication planning is a continuation of the significant work already undertaken on the island by private residents, 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 a deteriorating forest ecosystem.

Eradication would serve as a crucial step forward in a long-term forest restoration project. Following the removal of fallow deer from Sidney Island, Parks Canada would develop strategies to control invasive plants, support the growth of native plants, and ensure black-tailed deer population numbers remain at healthy levels. Find out more on page 10 'Working together after eradication'.

Principle 7: Check that labels aren't influencing management decisions.
If fallow deer weren't an invasive species introduced for sport, would Parks Canada take steps to control their population numbers? Yes. Parks Canada is not considering the eradication of fallow deer simply because they are an introduced species – their habits and numbers differ greatly from black-trailed deer.

Fallow deer are able to reach higher densities than the solitary black-tailed deer. Since fallow deer eat both grasses and shrubs, they remove much more of a forest's understorey than black-tailed deer. Fallow deer have also proven that they are able to bounce back from any culling effort. It is for these key reasons that Parks Canada has determined that fallow deer eradication provides the best opportunity for the forest ecosystems on Sidney Island to thrive.

Davies, Helen (PC)

From: Davies, Helen (PC)
Sent: February 24, 2021 5:04 PM
To: Bishop, Margot (PC)
Cc: Banovich, Melissa (PC); CorrespondanceExecutiveUGCBC-CBCFUExecutivecorrespondence (PC)
Subject: Sole Source Fur-to-Forest/GINPR
Attachments: sole-source-Requires Signature_F2F_FUS Signed.docx

Hello Margot, please find attached the signed Sole Source document. I ended up making some revisions to the text. So, I would appreciate it if you and Ben would have a look at the final version vs. what was shared with me. If you have questions as to why I made the revisions I did, please don't hesitate to let me know, as I would be pleased to talk you through my rational.

Thanks, Helen.

Helen Davies

Field Unit Superintendent, Coastal BC Field Unit
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Nelson, Kyle (PC)

From: Brookes, Lauren (PC)
Sent: March 18, 2021 9:59 AM
To: Nelson, Kyle (PC); Tooby, Ben (PC); Jim, Sarah (PC)
Cc: Zakaluzny, Jay (PC); Kvakic, Sasha (PC)
Subject: Sidney Island Burn Piles, Next Steps
Attachments: Sidney Hawthorn Piles, 2021 Map.png; Sidney Broom Piles, 2021 Map.png

Hello,

Just wanted to send a quick update following our site visit to Sidney Island yesterday. It was great to get out with the F2F team! Looking forward to getting this burned.

Attached are two (rough) maps of the burn piles identified in the two fields.

1. Sidney Hawthorn Piles (main field)

- Before burning, it would be great to have another day on site. I'd like to move pile B to avoid damaging the trees it's currently adjacent to. I'd like to condense and re-pile pile C. Weed whipping and additional site prep is not required.
- A water source is identified behind the campground area. While it's unlikely we will need water (the piles will burn down fairly simply in spring conditions), I'd like to have the pump set up and hose strung out to each area in case, especially as there is some thicker grass thatch in the field, and this is a high traffic area for any possible visitors.

2. Sidney Broom Piles (radar field)

- Site prep isn't required. The grass in the field is very short and has already greened up.
- A water source is identified, but it is unlikely that the piles will require water. A pump set up would be good training, but it's not required.

If it works in the next couple weeks, it would be good to get another day on site to prep before burn day. I could also bring a chainsaw and buck the fallen trees on the path to the radar field. Safety wise, it would be nice to have this path cleared before burning the radar field broom piles.

Please let me know if there is a date in the next weeks that works for you folks?

Thanks,
Lauren

Lauren Brookes
Pronouns: She/Her
Pronom: Elle

Fire Technician, Gulf Islands National Park Reserve
Parks Canada, Government of Canada
2220 Harbour Road, Sidney, BC V8L 2P6
Lauren.Brookes@canada.ca / New Telephone : 236-330-8960

Tecnhicienne, gestion des incendies, Réserve de parc national du Canada des Îles-Gulf
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UPDATE: Sidney Island Ecological Restoration Project

Background:

- SIERP is a collaborative, cross-jurisdictional project working towards forest restoration on Sidney Island. SIERP is proposing to eradicate invasive fallow deer from Sidney Island, re-introduce native and culturally-significant forest vegetation, and develop a long-term strategy for the sustainable management of native black-tailed deer.
- The project is composed of a Steering Committee and two technical working groups, each made up of representatives from the following project partners: Parks Canada, the Province of BC, Islands Trust Conservancy, the W̱SÁNEĆ Leadership Council, Pauquachin First Nation, Cowichan Tribes, and Sidney Island residents.

Recent Updates:

- On March 11th 2021, first drafts of both the fallow deer eradication proposal and the forest restoration proposal were presented to the Steering Committee for consideration. These plans will be reviewed and revised by project partners between March and June 2021 to ensure that all questions and concerns about the proposals are addressed.
- Parks Canada is beginning the Detailed Impact Assessment (DIA) process to ensure that the project will not cause any lasting negative impacts to the ecological, cultural, or visitor experience values of the park reserve.
- The public engagement component of the DIA process will begin late April 2021. At this time, there will likely be media interest in the project. A shared communications plan is being developed and reviewed by project partners.
- For more information about the project or the DIA process, please contact Stephanie Coulson (Project Engagement Officer) stephanie.coulson@canada.ca or 250-661-5227.

Next Steps:

- We anticipate that the final versions of the fallow deer and vegetation restoration proposals will be ready by June 2021. At this time, the plans will be presented to all project partners for approval. Support must be unanimous in order to move forward with implementation.
    - If approved, eradication will not begin until fall 2023, though some short trials may occur between October 2021 and Feb 2022.
- Indigenous hunt activities will occur as usual between October 2021 and Feb 2022, with the possibility of extending the closure dates to accommodate additional Indigenous hunt activities.
    - These activities contribute to the ongoing management of existing deer populations on Sidney Island. Any fallow deer harvested during the 2021-22 hunt season directly contributes to the overall future success of the eradication operation.
- For more information about hunting in the Gulf Island National Park Reserve, please contact Ben Tooby (Hunt Coordinator / Acting Project Manager) at ben.tooby@canada.ca or 250-507-6653.

Coulson, Stephanie (PC)

From:
Sent: March 26, 2021 12:26 PM
To: Tooby, Ben (PC); Gregg Howald; Coulson, Stephanie (PC)
Subject: FW: Deer Control without Eradication // Black-tailed deer control
Attachments: Deer Control without Eradication Ross Hedley 21 Feb 2021.pdf; Deer Control Without Eradication ESC Feb 2021.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

shared these with me – note that he says these have already gone to the owners (so not possible to make changes).

I think we need to make sure any communications from parks and the Steering Committee (including the draft docs and FAQs) reflect these, otherwise we will create confusion.

Judith

s.19(1)

From:
Sent: March 26, 2021 9:41 AM
To: Judith Cullington
Subject: Deer Control without Eradication // Black-tailed deer control

Hi, Judith, attached are the two pieces on deer control without eradication -- one authored by me and and one from the Ecological Stewardship Committee (ESC). As mentioned, Council requested an informational piece for owners to consider when they vote on eradication. These docs have been circulated to owners (whether they read them is another matter, but I expect they will be re-circulated when appropriate.)

Toward the end of my piece is my view of blacktail deer control.

--

Coulson, Stephanie (PC)

From: Judson, Laura (PC)
Sent: March 30, 2021 11:39 AM
To: Coulson, Stephanie (PC); Tooby, Ben (PC)
Subject: RE: For Review: New Qs and As based on Triana's suggestions

Great edits! Thanks Stephanie!

Laura Judson
Public Relations and Communications Officer | Agente, Relations publiques et communications
Coastal BC Field Unit | Unité de gestion, Côte de la C.-B.
Parks Canada | Parcs Canada
Cel: 250-818-2509

From: Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>
Sent: Tuesday, March 30, 2021 11:29 AM
To: Judson, Laura (PC) <laura.judson@canada.ca>; Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject: RE: For Review: New Qs and As based on Triana's suggestions

I've made some suggestions that should show up below in a different text colour. I'm not sure if my edits to the last question are appropriate.

Q. How much would eradication cost?
A. The cost of eradicating invasive fallow deer from Sidney Island is not yet known since the techniques for eradication are still under consideration. The safe removal of fallow deer in a short time period would require the use of experienced and certified eradication specialists. This would involve a significant investment in the short term, but eliminate the costs of managing the fallow deer indefinitely. It would also support the recovery of at-risk ecosystems, enabling rare flowering plants, songbirds and many other species to thrive on the landscape.

Q. Why aren't Sidney Island community members being asked to cover part of the costs?
A. Parks Canada protects places of national significance, including the at-risk Coastal Douglas fir forests in Gulf Islands National Park Reserve. One of the most effective ways Parks Canada can improve the health of the park reserve is by addressing low biodiversity on Sidney Island due to intense over-grazing by invasive fallow deer, confirmed by ongoing monitoring and academic research. Eradication would only be feasible is if was conducted island-wide. Parks Canada recognizes that the small community on Sidney Island cannot finance the project. We are grateful for the many hours of volunteer time community members have invested in collaborating on the project so far, as well as that past 30 years of volunteer time and financial investment made by Sidney Island community members to manage fallow deer numbers and protect the island's forests. Without that work, the island's forests would be in much worse health and the potential pace of ecosystem recovery after eradication would be much slower.

Q. How can the Government of Canada justify investing in this project during a pandemic that has already been so costly to Canadians?
A. Parks Canada has a responsibility to protect natural places for the appreciation and enjoyment future generations, and is looking ahead to the long-term conservation and human well-being outcomes that this project supports. The Sidney Island Ecosystem Restoration Project steering committee formed in 2018, before the onset of the COVID-19 pandemic. Project partners have continued to find safe ways to work together through challenging circumstances because of a shared belief that this work is important. The restoration of Sidney Island's forest through the removal of fallow deer would have lasting benefits to the ecosystem that could be appreciated by national park reserve visitors, First Nations, and Sidney Island community members for generations to come.

From: Judson, Laura (PC) <laura.judson@canada.ca>
Sent: March 30, 2021 10:55 AM
To: Tooby, Ben (PC) <ben.tooby@canada.ca>; Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>
Subject: For Review: New Qs and As based on Triana's suggestions

Hi Stephanie! Would you mind reviewing these Qs and As while I work on other edits suggested by Triana? I took a swing at these but I'm not sure if they work!
Thank you!
Laura

Q. How much would eradication cost?
A. The cost of eradicating invasive fallow deer from Sidney Island is not yet known since the techniques for eradication are still under consideration. The safe removal of fallow deer in a short time period would require the use of professional eradication specialists. This would involve a significant investment in the short term, but eliminate the costs of managing the fallow deer indefinitely. It would also support the recovery of at-risk ecosystems, enabling rare flowering plants, songbirds and many other species to thrive on the landscape.

Q. Why aren't Sidney Island community members being asked to cover part of the costs?
A. Parks Canada protects places of national significance, including the at-risk Coastal Douglas fir forests in Gulf Islands National Park Reserve. One of the most effective ways Parks Canada can improve the health of the park reserve is by addressing low biodiversity on Sidney Island due to invasive fallow deer grazing, confirmed by ongoing monitoring and academic research. Eradication would only be feasible is if was conducted island-wide. Parks Canada recognizes that the small community on Sidney Island cannot finance the project. We are grateful for the many hours of volunteer time community members have invested in collaborating on the project so far, as well as that past 30 years of volunteer time and financial investment made by Sidney Island community members to manage fallow deer numbers and protect the island's forests. Without that work, the island's forests would be in much worse health and the potential pace of ecosystem recovery after eradication would be much slower.

Q. How can the Government of Canada justify investing in this project during a pandemic that has already been so costly to Canadians?
A. Parks Canada places are protected for future generations, so we continue to look ahead and ensure that conservation efforts that can be done safely during the pandemic continue. The Sidney Island Ecosystem Restoration Project steering committee formed in 2018, before the onset of the COVID-19 pandemic. Project partners have continued to work together because of a shared belief that this work is important. The restoration of Sidney Island's forest through the removal of fallow deer would have lasting benefits to the ecosystem that could be appreciated by national park reserve visitors, First Nations, and Sidney Island community members for generations to come.

Laura Judson
Public Relations and Communications Officer | Agente, Relations publiques et communications
Coastal BC Field Unit | Unité de gestion, Côte de la C.-B.
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Cel: 250-818-2509

Coulson, Stephanie (PC)

From: Gonzales, Emily (PC)
Sent: April 2, 2021 1:12 PM
To: Coulson, Stephanie (PC)
Cc: Tooby, Ben (PC); Prior, Kent (PC)
Subject: RE: For review: SIERP draft proposal + media pitch
Attachments: 2021-04-01_Proactive Media Pitch for SIERP_For Partners_DRAFT_EG.docx

Hi Stephanie and Ben,

Thanks for this and I will aim for another read through the plan by the deadline – quick scan suggests a lot has been done – kudos.

The media lines are overall excellent...definitely written by a professional.

I have added a few comments on the attached draft and wanted to highlight a few lines that I strongly recommend that you reconsider:

A) "The current population of invasive fallow deer is still at least 4 times greater than a healthy ecosystem can support. Until the invasive fallow deer population is removed, effective restoration of Sidney Island's forests will not be possible."

(at statement repeated throughout the Qs & As).

1. The 2 sentences in (A) contradict each other.
This says that the ecosystem can support some number (4x less presumably) of fallow deer. In that case, we could consider them naturalized and work to maintain the species. The justification for eradication - an expensive and dramatic option – is predicated on there being no (zero) fallow deer in a healthy ecosystem.

2. What is your evidence that there are 4x too many fallow deer?
Could you please share with me the evidence so that I understand where this is coming from? I know of no papers about fallow deer that could justify this number. Further, population estimates for fallow deer on Sidney have too much uncertainty to make a claim like this.

I realise it would be nice to be able to make statements like this and you will be pressured by your managers and the media to say something along these lines (ie what is the "right" number of deer for the island?).

And our experience in the many wildlife operations that precede this one is that doing so is something you'll regret because they aren't defensible values and don't even make ecological sense (1 deer with a taste for a SAR is a problem for PCA).
This will happen with BTD too (moreso).
And it is the classic mistake every new hyperabundant wildlife management program makes, so I get it.

I have commented on the different variations of this statement since the beginning of the project, so after 4 years, I'm frustrated.
Straight up – one of my challenges with this project has been that I provide advice/feedback and some key problematic issues (IMO) keep showing up and I don't know what this means.

- Does it mean it was missed in all the hubbub?
- Does it mean I wasn't clear?

- Does it mean it was considered and I'm missing something?
- *Does it mean it was heard but disregarded?*

If the last point, you need to tell me, because my head and the wall are hurting.

B) "the long-term vision for Sidney Island is to have a balanced ecosystem including native black-tailed deer"

3. (B) perpetuates the myth of balance and for wildlife populations in particular, we need to start communicating that fluctuation as the natural state (and more generally for ecological processes). This is related to the previous point as getting stuck on the "right number" of animals is wrong ecologically and problematic when it a) doesn't happen and b) doesn't work (i.e., recovery of the ecosystem is not what we expected). Again, inconvenient for public communication but if we don't, it is going to come back to bite us because wildlife populations should not be stable and nor were they ever "balanced". Current hypothesis is that deer would be locally extirpated by predators or would overeat on one island then move on, as would the predators. Fluctuating populations is normal and it would help us to normalize that idea (and for environmental processes in general).

C) "Since invasive fallow deer eat both grasses and shrubs, they remove much more of a forest's understorey than black-tailed deer."

There's several things wrong with this (ie 1. very few grasses in forest understory, 2. we're more worried about the herbs than the grasses, 90% of which are invasive – eating grasses is helpful in this ecosystem, 3. while fallow graze more than BTD, BTD also have very broad diets (Gonzales 2008), 4. fallow deer don't necessarily remove more of the forest's understory due to their dietary preferences, there are just more of them so they eat more).
I'd suggest removing it entirely.

D) **"and consider the potential impacts of black-tailed deer** if their numbers begin to rise." (add hyperabundant? BTD don't generally have a negative impact on this ecosystem...only when they are hyperabundant).
I'm not particularly attached to this recommendation.

E) "**If Parks Canada receives support from project partners**," This describes PCA as an unequal partner in decision-making and at this point, the decision is in the hands of the partners.
What about "If project partners decide to move ahead with eradication"?
This was important feedback from Mike on the draft plan review process – to not put PCA front and centre all the time as it misrepresents the decision-making relationship in this collaboration.

F) We've learned from other projects in Ontario and Nova Scotia that "cull" can be a problematic word in communication and recommend against it in our draft guidelines. We've used "herd/population reduction" instead.

Emily

From: Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>
Sent: Thursday, April 1, 2021 3:14 PM
To: Gonzales, Emily (PC) <emily.gonzales@canada.ca>
Cc: Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject: For review: SIERP draft proposal + media pitch

Hi all,

There are two documents attached to this email, both related to the Sidney Island Ecological Restoration Project:

1. A PDF version of the **DRAFT** eradication + forest restoration proposals

   a. A Word document version is available here: https://www.dropbox.com/sh/bx82dkgepromk66/AAAqG0pnKEHvLl7z_hyog_6oa?dl=0
2. Parks Canada's **DRAFT** media pitch for this project

Action items for EVERYONE: Review draft proposal

- Judith has done her best to incorporate everyone's feedback so far (thanks Judith!)
- Is this document ready to be shared with your community or organisation for feedback? If no, what needs to be added or changed to make it ready?
- If possible, **please provide feedback to Judith Cullington by April 7th at noon** for inclusion on the Steering Committee agenda on April 8th.

Action items for Steering Committee reps: Review the Parks Canada media pitch.

- The key messages and Q+A in this document outline what Parks Canada project representatives will say to members of the media or public when speaking about this project.
- **Do these messages align with what your community/organisation would say to members of the media or public if asked?**
    - We won't all have the exact same messaging, but official spokespeople for each of the project partners should plan not to contradict each other if speaking to the public about the project. ☺
- Parks Canada is hoping to meet with trusted reports in the park reserve on Sidney Island during the week of April 12th – 16th.
    - **Who, if anyone, would like to join Parks Canada in meeting with reporters?** A more diverse group of voices is ideal and places emphasis on the collaborative nature of this project, which makes it a stronger and more appealing story overall. If you cannot be on-site, a telephone or Zoom interview with the reporters is also an option.

As always, please feel free to contact me with questions or concerns.

Very best wishes for the long weekend,
Stephanie

Stephanie Coulson (she/her/elle)
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Proactive Media Pitch for Proposed Eradication of Invasive Fallow Deer on Sidney Island

Proposed Date of Pitch: Week of April 12-16, 2021

Reporter & Media Outlet: - Times Colonist, - Peninsula News Review

Approach: Invite reporter to visit Parks Canada lands on Sidney Island to meet project participants.

Pitch (Drawing on Key Messages below):

I'm writing to invite you to Sidney Island to learn about a proposal currently underway to remove invasive fallow deer from the island and restore at-risk forest ecosystems.

Invasive fallow deer were introduced to select Gulf Islands for recreational hunting in the 1900s and have significantly degraded the health of Sidney Island's at-risk Coastal Douglas-fir forests, including Garry oak forests and meadows. Fallow deer overgrazing has made Sidney Island one of the least ecologically diverse islands in the region.

As you may be aware, Sidney Island is part of the unceded territory of Coast Salish First Nations, home to a community of privately-owned strata lots, part of Gulf Islands National Park Reserve, and the location of Islands Trust Conservancy lands. It will take a collaborative effort to bring balance back to Sidney Island and that work is currently underway.

Sidney Island community members, local First Nations, Parks Canada, the Province of BC, and Islands Trust Conservancy have been working together on a proposal to remove of invasive fallow deer, manage invasive plant species, and actively restore native plants on Sidney Island. The work is being funded by Parks Canada.

Eradication is now being considered after many years of ongoing fallow deer management. Tremendous investment by Sidney Island community members over the last 30 years, together with traditional harvesting by local Coast Salish First Nations, has reduced the population of fallow deer population and led to some native plant recovery on the island in certain areas.

However, Parks Canada's monitoring program has found that there has yet to be significant increases in plant diversity or abundance. The current population of invasive fallow deer is still at least 4 times greater than a healthy ecosystem can support. Until the invasive fallow deer population is removed, effective restoration of Sidney Island's forests will not be possible.

Commented [EG1]: Ahhhhhhhhhh!!!!!!!!!!!!!!!!

If you are interested in visiting Sidney Island, we can set up a time for the excursion between April 14th and 16th. Parks Canada would provide boat transportation to the island, following COVID-19 protocols. Project partners could potentially meet you on the island to share their perspectives. This would also be a chance for you to see firsthand, the impact of fallow deer and management efforts to date.

s.19(1)

Please note that the project is still in the proposal phase and no decisions around fallow deer eradication have been made yet. A period for public input on this proposal is opening on April 21st, which is why we're hoping to raise awareness and understanding of this work.

I have visuals available to support your story, including photos of invasive fallow deer on Sidney Island, deer exclosures on the island that have supported studies on the impact of deer grazing, forest ecosystems on the island, and comparison photos from nearby Portland Island.

Thank you very much for considering this.

Key Messages and Qs and As:

BACKGROUND:

- Invasive fallow deer introduced to select Gulf Islands for recreational hunting in the 1900s have significantly degraded the health of Sidney Island's at-risk Coastal Douglas-fir forests, including Garry oak forests and meadows. Fallow deer overgrazing has made Sidney Island one of the least ecologically diverse islands in the region.

- Eradication is now being considered after many years of ongoing fallow deer management. Tremendous investment by Sidney Island community members over the last 30 years, together with traditional harvesting by local Coast Salish First Nations, has reduced the population of fallow deer population and led to some native plant recovery on the island in certain areas. However, Parks Canada's monitoring program has found that there has yet to be significant increases in plant diversity or abundance. The current population of invasive fallow deer is still at least 4 times greater than a healthy ecosystem can support. Until the invasive fallow deer population is removed, effective restoration of Sidney Island's forests will not be possible.

- Local First Nations have shared that Sidney Island was historically an important place to gather medicinal plants such as devil's club and Indian celery. Local First Nations have harvesting rights in Gulf Islands National Park Reserve but the degraded ecosystem on Sidney Island no longer supports this cultural activity.

COLLABORATIVE APPROACH:

- Sidney Island is part of the unceded territory of Coast Salish First Nations, home to a community of privately-owned strata lots, part of Gulf Islands National Park Reserve, and the location of Islands Trust Conservancy lands. It will take a collaborative effort to bring balance back to Sidney Island and that work is currently underway.

- Sidney Island community members, local First Nations, Parks Canada, the Province of BC, and Islands Trust Conservancy have been working together on a proposal to remove of invasive fallow deer, manage invasive plant species, and actively restore native plants on Sidney Island. The work is being funded by Parks Canada.

- Parks Canada is taking a "one island, one-project" approach to forest restoration Sidney Island. By focusing on ecosystem-level restoration with partners, rather than national park reserve lands in isolation, we can realize more significant and lasting conservation gains.

- If a path forward is found that meets the needs and values of all involved, this work could one day serve as a model for landscape-level restoration projects in other parts of Canada and the world.

- Parks Canada will respect the decision of all project participants.

Q. What will happen is the proposals are rejected by a project partners? What will have been gained from the resources invested to date if eradication does not go forward?

A. Through this proposal, Parks Canada has taken a "one island, one-project" approach to forest restoration on Sidney Island. By focusing on ecosystem-level restoration with partners, rather than national park reserve lands in isolation, we have the potential to realize more significant and lasting conservation gains. With collaborative conservation, comes the risk that project partners may not reach a consensus.

If ~~the project does not receive adequate support from~~ project partners decide not to go forward with eradication, Parks Canada will respect that decision. While working on this project, we have established a hunting-mentorship program with local First Nations that will continue and we will consider further native plant restoration opportunities in the national park reserve. We have also conducted studies on deer

management and invasive plant management that will inform ecosystem restoration in several areas of Gulf Islands National Park Reserve.

Q. How have local First Nations been involved in this project?

A. Sidney Island has significant cultural value to local First Nations who have been present on the land since time immemorial. Local First Nations have shared that among many purposes, Sidney Island was historically an important place to gather medicinal plants such as devil's club and Indian celery. The degraded ecosystem on the island no longer supports this cultural activity.

Representatives from local W̱SÁNEĆ and Pauquachin communities are part of the project steering committee and technical working groups. These representatives are contributing to the collaborative development of an eradication proposal as well as a forest restoration proposal, and will continue to be involved with project planning, implementation, and post-project monitoring. Representatives from Historic Cowichan Nations have also contributed to this project through numerous meetings. Further consultation with local First Nations is part of the Parks Canada Detailed Impact Assessment process, beginning in April 2021.

ERADICATION:

- Eradication of an invasive animal is always a difficult decision. But when an invasive species dramatically impacts the survival of native plants and animals, as we've seen on Sidney Island, a decision must be made to either allow the ecosystem to degrade as native species disappear, or address the invasive species in a humane way.

- Animal welfare and visitor safety are priorities for Parks Canada. Any eradication measures would be designed to ensure the humane treatment of wildlife, and also to minimize risk and inconvenience to local community members and visitors.

Q. Shouldn't animals be protected in a national park reserve?

A. Eradication of an invasive species is always a difficult decision. But when an introduced species dramatically impacts the survival of native plants and animals, a decision must be made to either address the invasive species or allow the overall ecosystem to degrade. It is part of Parks Canada's policy to remove invasive species when it is feasible to do so, rather than reducing the population size of an invasive species indefinitely.

Eradication is now being considered after many years of ongoing fallow deer management. Tremendous investment by Sidney Island community members over the last 30 years, together with traditional harvesting by local Coast Salish First Nations, has reduced the population of fallow deer population and led to some native plant recovery on the island in certain areas.

However, Parks Canada's monitoring program has found that there has yet to be significant increases in plant diversity or abundance. The current population of invasive fallow deer is still at least 4 times greater than a healthy ecosystem can support. Until the invasive fallow deer population is removed, effective restoration of Sidney Island's forests will not be possible.

Q. Will visitors and community members be safe?

A. Public safety is the top priority for Parks Canada. Eradication measures will be designed to minimize risk to community members and visitors. Eradication efforts would take place during the fall and winter season, when visitation on the island is low and the park side of Sidney Island is already closed annually for First Nations deer hunting.

Q. How will the deer be killed? Would the eradication process be humane?

A. Animal welfare is important for Parks Canada. Any deer reduction activities will be conducted humanely in accordance with recognized national and international standards, and in consultation with the Society for Prevention of Cruelty to Animals.

Project partners have not yet finalised an eradication plan and are working with an organisation specializing in invasive species eradications, Coastal Conservation, to develop a safe, humane and effective way to remove invasive fallow deer from Sidney Island. Appropriate techniques for eradication which best suit the environment and island community will be developed as part of this process, based on input from project partners. It will likely involve a team highly qualified, certified, and experienced deer eradication specialists with a proven track record of operating safely and respecting community values.

Project partners are considering eradication techniques that have proven to be effective in over 250 other ungulate eradication operations worldwide, including: canine herding using trained dogs that lead hunters to the animals, bait stations, aerial hunting, and the use of lights to facilitate night hunting. Currently, no decisions have been made. Each method must be unanimously approved by project partners prior to implementation.

Q. Are you proposing to permanently remove all deer from Sidney Island?

A. The intent of this project is to remove invasive fallow deer from Sidney Island and actively restore native plants to support a healthy, resilient forest ecosystem. While black-tailed deer may be impacted by eradication techniques depending on which techniques are chosen by project partners, the long-term vision for Sidney Island is to have a balanced ecosystem including native black-tailed deer.

Commented [EG2]: perpetuates the myth of balance and for wildlife populations in particular, we need to start communicating that fluctuation as the natural state (and more generally for ecological processes).

Q. Won't the black-tailed deer cause the same problems?

A. Even at high numbers, black-tailed deer have less of an impact on forest ecosystems than invasive fallow deer. Invasive fallow deer are able to reach higher densities than the solitary black-tailed deer. Since invasive fallow deer eat both grasses and shrubs, they remove much more of a forest's understorey than black-tailed deer.

Commented [EG3]: Lots wrong with this. It could be made more ecologically accurate, but just easier to remove. The main reason fallow deer remove more understory is their higher densities.
BTD have highly varied diets (I know one (Charlie) that ate cooked chicken and another (Kelly) who liked marshmallows).

Eradication would serve as a crucial step forward in a long-term forest restoration project. Parks Canada is also working with project partners to collaboratively develop strategies to support the growth of native plants, control invasive plants, and consider the potential impacts of black-tailed deer if their numbers begin to rise.

Q. How long would eradication take?

A. Significant effort goes into planning an eradication operation to ensure safety and success. If project partners decide to move ahead with eradication~~Parks Canada receives support from project partners~~, it would likely take approximately one year to develop and finalize an operational plan for eradication. Active eradication would likely occur between the months of September and March in the winter of 2022-2023. In the year following eradication, multiple surveys would be conducted to confirm the removal of all fallow deer.

Commented [EG4]: The decision rests with the partners right now.

Prior to the eradication operation, we would be testing proposed methods, undertaking accurate deer counts, monitoring ecosystem conditions, and working with Sidney island community members to plan a safe, efficient, and effective operation. This work would likely take place between late September and late March 2021-22.

Q. Why not just organize hunts and culls to control invasive fallow deer population numbers?

Commented [EG5]: This word has been problematic in Ontario and Nova Scotia and replaced with "population reduction" or "herd reduction"

A. Eradication is now being considered after many years of ongoing fallow deer management. Tremendous investment by Sidney Island community members over the last 30 years, together with traditional harvesting by local Coast Salish First Nations, has reduced the population of fallow deer ~~population~~ and led to some native plant recovery on the island in certain areas. However, Parks Canada's monitoring program has found that there has yet to be significant increases in plant diversity or

abundance. The current population of invasive fallow deer is still at least 4 times greater than a healthy ecosystem can support. Until the invasive fallow deer population is removed, effective restoration of Sidney Island's forests will not be possible.

In the end, prolonged hunting actually results in more animal deaths than an eradication operation, since deer continue to breed while targeted hunts take place year after year. This fact is already apparent on Sidney Island where an eradication effort would likely involve the destruction of fewer than 500 deer, while ongoing hunting and culls have killed approximately 14,000 deer to date. Eradication would have the greatest long-term benefit for forest regeneration and minimize overall animal deaths.

Commented [EG6]: I've always found this one of the more compelling arguments for eradication. Any reason it is buried and not part of the main comms? Is there any uncertainty around those numbers? (I have seen different values over the 4 years, so that's a bit concerning).

Q. Were non-lethal control options considered alongside eradication?

A. Non-lethal control options were considered as part of a feasibility assessment for eradicating Sidney Island's fallow deer, including the relocation of animals and the use of sterilisation and contraceptives to limit reproduction. However, these were ruled out for a variety of reasons. Fallow deer are an invasive species so relocating these animals to alternate sites within the region would not be appropriate. Sterilisation and the use of contraceptives require animal capture and in some cases, repeated administration. With a population of this size, this would not be a realistic or humane option.

Q. How would Parks Canada handle deer carcasses?

A. No decisions have been made yet, but it is important to project partners that deer meat is recovered as much as is reasonably possible. Deer meat recovered on Parks Canada lands that meets Canadian Food Inspection Agency safety standards would go to local First Nations communities.

Commented [EG7]: Consider clarifying or removing? This is only true if Parks Canada staff or contractors acquire the deer and then the meat is given to communities whereas I understood the aim would be for Indigenous hunters to acquire the deer.
If Indigenous hunters are involved, then may not want to have this step interfering.

~~**INVESTMENT:**~~

- ~~The cost of eradicating invasive fallow deer from Sidney Island is not yet known since the techniques for eradication are still under consideration. The safe removal of fallow deer in a short time period would require the use of experienced and certified eradication specialists. This would involve a significant investment in the short term, but eliminate the costs of managing the fallow deer indefinitely. It would also support the recovery of at-risk ecosystems, enabling rare flowering plants, songbirds and many other species to thrive once again on the landscape.~~

Commented [EG8]: Worth acknowledging that it is very expensive...and not as expensive as managing indefinitely?

- ~~Parks Canada protects places of national significance, including the at-risk Coastal Douglas fir forests in Gulf Islands National Park Reserve for present and future generations to enjoy~~

Commented [EG9]: Not sure what this adds given the question below

Q. How much would eradication cost?

A. The cost of eradicating invasive fallow deer from Sidney Island is not yet known since the techniques for eradication are still under consideration. The safe removal of fallow deer in a short time period would require the use of experienced and certified eradication specialists. This would involve a significant investment in the short term, but eliminate the costs of managing the fallow deer indefinitely. It would also support the recovery of at-risk ecosystems, enabling rare flowering plants, songbirds and many other species to thrive on the landscape.

Commented [EG10]: Oh – here it is.

Q. Why aren't Sidney Island community members being asked to cover part of the costs?

A. We are grateful for theSidney Islanders have contributed substantially in time and funds for over 30 years to manage fallow deer ~~many hours of volunteer time community members have invested in collaborating on the project so far, as well as that past 30 years of volunteer time and financial investment made by Sidney Island community members to manage fallow deer numbers and protect the island's forests. Without that work, the island's forests would be in much worse health and the ecosystem recovery after eradication would be less promising.~~ Parks Canada protects places of national

Commented [EG11]: I would lead with this...Sidney Islanders have led the way. We are just stepping up/in now.

significance, including the at-risk Coastal Douglas-fir forests in Gulf Islands National Park Reserve. One of the most effective ways Parks Canada can improve the health of the park reserve is by addressing low biodiversity on Sidney Island due to intense over-grazing by invasive fallow deer, confirmed by ongoing monitoring and academic research. Eradication would only be feasible is if was conducted island-wide. Parks Canada recognizes that the small community on Sidney Island cannot finance the project. ~~We are grateful for the many hours of volunteer time community members have invested in collaborating on the project so far, as well as that past 30 years of volunteer time and financial investment made by Sidney Island community members to manage fallow deer numbers and protect the island's forests. Without that work, the island's forests would be in much worse health and the ecosystem recovery after eradication would be less promising.~~

Q. How can the Government of Canada justify investing in this project during a pandemic that has already been so costly to Canadians?

A. The Sidney Island Ecosystem Restoration Project steering committee formed in 2018, before the onset of the COVID-19 pandemic. Project partners have continued to find safe ways to work together through challenging circumstances because of a shared belief that this work is important. Parks Canada protects places of national significance, including the at-risk Coastal Douglas fir forests in Gulf Islands National Park Reserve for present and future generations to enjoy. In keeping with this forward-facing commitment, conservation activities have continued in national parks during the pandemic, when it has been safe to do so, including collaborative planning to bring balance back to Sidney Island's forests.

PUBLIC ENGAGEMENT:

- Public input is a valuable part of project planning. Parks Canada has been working closely with a number of project partners to ensure the project is collaborative in nature and reflects the values of all involved, including Sidney Island community members, local First Nations, the Islands Trust Conservancy, and Province of BC. We have also engaged non-profits such as the Society for the Prevention of Animal Cruelty for ongoing guidance.

- It is also important to share this work and gather perspectives from Canadians who have not yet been engaged in the project. A public input period will be opening on April 21th 2021 and running until May 21th 2021, as part of a Detailed Impact Assessment Process.

Q. How can members of the public offer feedback on this project?

A. Public input is a valuable part of project planning. Parks Canada has been working closely with a number of project partners to ensure the project is collaborative in nature and reflects the values of all involved, including Sidney Island community members, local First Nations, the Islands Trust Conservancy, and Province of BC. We have also engaged non-profits such as the Society for the Prevention of Animal Cruelty for ongoing guidance.

It is also important to share this work and gather perspectives from Canadians who have not yet been involved. As part of the Parks Canada Detailed Impact Assessment process, there will be a 30-day feedback period for members of the general public to review and offer input on the proposed project methodology opening on April 21th 2021 and running until May 21th 2021. Members of the public can find information and project updates on Parks Canada's project website.

They are also invited to contact Parks Canada project representatives directly by emailing: pc.gulfinfo.pc@canada.ca

From: Tooby, Ben (PC)
Sent: Monday, April 12, 2021 7:22 AM
To: Bishop, Margot (PC)
Cc: Gregg Howald
Subject: FW: indemnity issue

Follow Up Flag: FollowUp
Flag Status: Completed

Morning Margot,
I hope you had a great weekend.
Please see email chain below regarding indemnity on Sidney Island.
Would you be able to join our next steering committee meeting (date TBD) and share where we are at regarding indemnity? Or perhaps reach out to Erin directly?
Thank you,
Ben

From: gregg@coastalconservation.ca <gregg@coastalconservation.ca>
Sent: Saturday, April 10, 2021 5:02 PM
To: Erin Shaw <erin@erinshawfamilylaw.ca>
Cc: Tooby, Ben (PC) <ben.tooby@canada.ca>; Geraldine Van Gyn <gvangyn@uvic.ca>
Subject: Re: indemnity issue

I understand. Let's see what other contract language states from Haida gwaii and California and maybe New Zealand.

I'll dredge stuff up

Sent from my iPhone

> On Apr 10, 2021, at 15:05, Erin Shaw <erin@erinshawfamilylaw.ca> wrote:
>
> Hi Ben and Gregg,
>
> I am following up on the indemnity issue and would like to figure out if there is any more we can say about this in the draft plan. The reason we are constantly raising this is because it is something we know many owners are going be looking for concrete information on. We, and others presenting the plan, will be asked for more details and it will be very awkward for us to say that we don't have any information on what that might look like and that lack of information could be sufficient for some owners to vote against the plan.
>
> Would it be possible to include examples of insurance and indemnity arrangements on other similar projects? For example, what is the typical insurance coverage carried by Coastal Conservation when it does these projects? What about Parks? What was done on Haida Gwaii? This type of information would be helpful for owners who have a particular concern about this issue. s.19(1)
>
> Any other ideas on how to communicate more about this issue would be appreciated.

Erin

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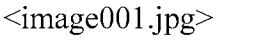

Consideration of Alternatives: Sidney Island Ecological Restoration Project
Stephanie Coulson (PCA) | April 19th, 2021

Objective of project:
To facilitate the long-term recovery of the forest ecosystem on Sidney Island by eradicating fallow deer and preventing their re-invasion.

Why eradication?
The forest ecosystem on Sidney Island is currently significantly impacted by browse pressure from invasive fallow deer, which is both more intense (due to higher population density) and more extensive (due to a broader dietary range) than the browse pressure from native black-tailed deer. In order to facilitate long-term forest recovery, browse pressure from invasive fallow deer must be addressed such that the rate of browse is lower than the rate of regeneration of forest and understory vegetation. Both eradication and ongoing control were identified as means to achieve the objective. The follow demonstrates why eradication was selected as the preferred option:

Alternative means to achieve objective:

1. Eradicate fallow deer (completely remove the browse pressure)

    a. **Impact on forest restoration:**
        i. Immediate relief from browse pressure;
        ii. Shortest possible recovery of understory/native vegetation (Arcese, 2019; Arcese et al, 2014)
        iii. Recovery more even across landscape
        iv. Recovery of preferred browse species (Arcese, 2019; Arcese et al., 2014)
        v. No need for fenced exclosures once fallow deer are removed, which saves money/time during future restoration (e.g., vegetation re-establishment)
    b. **Impact on invasive species:**
        i. Free from browse pressure from fallow deer, invasive vegetation may rebound quickly and significantly unless controlled by alternative means.
        ii. Ongoing investment in invasive vegetation management may be required for some species.
    c. **Resource investment (deer control):**
        i. High initial resource investment to remove deer; minimal resource investment after deer are removed (focused on monitoring)
        ii. Opportunity to remove the threat of fallow deer expanding beyond Sidney Island, and saving the potential future resource investment on other islands managing an invasive deer population.
    d. **Impact on black-tailed deer:**
        i. Fallow deer will no longer outcompete native BTD, which makes for a healthier and more robust BTD population on Sidney Island moving forward (BC Parks, 1994)

2. Control fallow deer (maintain a rate of browse pressure lower than the regeneration rate of native vegetation)

    a. **Impact on forest restoration:**

i. Moderate reduction in browse pressure;
ii. Slower recovery of understory/native vegetation (depending on how reduced the deer population is) (Arcese, 2019; Arcese et al., 2014)
iii. Recovery may be uneven across sites (depending on movement patterns/preferred havens);
iv. Possibly no or minimal recovery of preferred browse species (Arcese, 2019; Arcese et al., 2014)
v. Likely still need fenced exclosures for current and future restoration (e.g., vegetation re-establishment) if fallow deer are still present

b. Impact on invasive species:

i. Ongoing presence of fallow deer will contribute to control of invasive species; however, fallow deer may prefer to browse native vegetation if present, which means that native vegetation will recovery at a slower rate whilst invasive species simultaneously experience less browse pressure.
ii. May require less investment in ongoing invasive vegetation control, unless fallow deer only selective browse native plants, in which case, ongoing investment in invasive vegetation control will still be required at similar levels as in the case of eradication.

c. Resource investment (deer control):

i. Lower initial resource investment to reduce deer population; ongoing investment in resources to ensure that deer population is consistently knocked down year after year, to maintain a level of browse pressure that is lower than the rate of regeneration.
ii. Ongoing resources invested in monitoring existing population and impacts to ecosystem, to identify when the fallow deer population has increased beyond the acceptable threshold and to ensure that reduction tactics remove sufficient numbers of deer.

d. Impact on black-tailed deer:

i. Fallow deer outcompete BTD, which has in the past resulting a BTD population that is generally smaller and less healthy than the fallow deer population (BC Parks, 1994)

Conclusion:

Eradication provides the greatest recovery opportunities for the forest ecosystem with fewer resources invested in the long-term.

Tooby, Ben (PC)

From: Tooby, Ben (PC)
Sent: Monday, April 26, 2021 11:22 AM
To: Banovich, Melissa (PC)
Subject: Coastal Conservation contract
Attachments: 2020.07.27 CC amendment 6 budget.xlsx; Sig. C. Amend 06-17-5313.pdf; SoW_17-5313 Nov 23 2018.docx

Melissa,
Thank you for your patience while I sift through our files.
I have attached;

- Spreadsheet that was attached to the last contract amendment. Gregg is the "project director" under column H & I. Coulumn B "notes" indicates tasks.
- Existing contract that currently goes until June 30, 2021
- SoW, I am searching to see if this is the most current

I am still unsure If we need to ask the steering committee for support or simply update them that Gregg will be taking on additional responsibilites? Also, how do we respond to Gregg re: more mandate.
Thank you,
Ben

Coulson, Stephanie (PC)

From: Coulson, Stephanie (PC)
Sent: April 27, 2021 3:25 PM
To: Bishop, Margot (PC); Tooby, Ben (PC)
Subject: RE: Indemnity Text - Quick Review

The pre-eradication trials will be conducted by contractors—potentially (though not guaranteed) to be the same contractors as those doing the full eradication. But I'm ok proceeding with the text you sent for now and we can adjust again for the final copy if needed. Judith is eager to get this thing out the door. ☺

From: Bishop, Margot (PC) <margot.bishop@canada.ca>
Sent: April 27, 2021 12:47 PM
To: Tooby, Ben (PC) <ben.tooby@canada.ca>
Cc: Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>
Subject: RE: Indemnity Text - Quick Review

Hey,

Thanks both. I've just included both of your feedback in this email so I can respond to both (in red). Just to be clear – the access agreement approval is just for the eradication phase by contractors on Sallas/ITC property. We may need to chat further if there is other coverage required. Hopefully it is sufficient to move it forward now and we can get into the details when the agreement is being developed.

M

I imagine we would also have something in place before trials? I added a small bit to make that explicit (see bolded below). Are the pre eradication trials being completed by the contractors? If not, I don't if we can say that. What we've been approved for is an access agreement where we grant indemnity and insurance to land owners but then we transfer the liability to the hunters under their insurance.

The contractors are generally referred to as "contractors" in the document, but I prefer the specificity of contracted eradication specialists and would recommend keeping that language and incorporating it elsewhere in the document. Sounds good.

Is there a need to specify who, how, and when it will be determined that the agreement is "to the satisfaction of all parties"? Maybe we don't know those details yet and it will come out during feedback. That is meant to suggest that once everyone agrees to the terms and then signs off on the agreement. The access agreement will likely look like a short contract, depending on what needs to be covered so it should be simple in that our lawyers /Realty draft it, their lawyers review it provide comment, and then we all sign.

Thanks Margot,

- The question will most likely arise; What if a F.N. or volunteer causes damage or is injured. The access agreement is only going to be to cover the eradication by contractors taking place on Sallas/ITC lands. If we need to cover FN or volunteer at different phases of eradication, there will need to be something else in place or another approval sought.
- If possible change the wording to just contractors. This will cover damage and or injuries that could happen from camp cooks, contractors that are monitoring cameras, support staff that are moving nets, volunteers..... The key to this is that we are not taking on the liability, we are transferring the liability to those with insurance. This is limited in scope to access to Sallas lands.

Thank you,

Ben

From: Bishop, Margot (PC) <margot.bishop@canada.ca>
Sent: Tuesday, April 27, 2021 11:34 AM
To: Tooby, Ben (PC) <ben.tooby@canada.ca>; Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>
Cc: Banovich, Melissa (PC) <melissa.banovich@canada.ca>
Subject: Indemnity Text - Quick Review

Hey Ben and Stephanie,

Can you give the indemnity text below a quick once over before I send to Judith, Kate and Erin? I'm particularly interested in ensuring the language aligns with other areas in the document (i.e. are we calling contracted hunters "contracted eradication specialists"?)

Feel free to edit. If the edits extend beyond the legal advice we've been given, I'll edit it back accordingly.

Best,
Margot

For the success of SIERP, indemnity and insurance for landowners is essential to account for any personal or property damages that may occur during the eradication. The insurance and indemnity for landowners will need to be addressed in a separate, supporting, legal access agreement.

Parks Canada will work with Islands Trust Conservancy and the Sallas Forest Strata Council to develop a formal agreement that formalizes consent of landowners for access to the land to carry out the project goals and eradication efforts by contracted eradication specialists. Contracted eradication specialists will require comprehensive liability insurance. The agreement will grant indemnity and coverage for damages or losses for Islands Trust Conservancy and Sallas Forest Strata Council lands resulting in the project implementation. 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 will be negotiated and in place to ensure appropriate protection to the satisfaction of all parties.

Margot Bishop

A/Manager, Resource Conservation / A/Gestionnaire, Fonction de conservation des resources
Gulf Islands National Park Reserve / Réserve de par national des iles-Gulf

Parks Canada / Parcs Canada
2220 Harbour Road / 2220, rue Harbour
Sidney, BC V8L 2P6
250-217-8008
margot.bishop@canada.ca

Parcs Canada - 450 000 km2 de souvenirs / Parks Canada - 450 000 km2 of memories

For the success of SIERP, indemnity and insurance for landowners is essential to account for any personal or property damages that may occur during ***eradication efforts, including SIERP-approved eradication trials****. The insurance and indemnity for landowners will need to be addressed in a separate, supporting, legal access agreement.*

Parks Canada will work with Islands Trust Conservancy and the Sallas Forest Strata Council to develop a formal agreement that formalizes consent of landowners for access to the land to carry out the project goals and eradication efforts by contracted eradication specialists. Contracted eradication specialists will require comprehensive liability insurance. The agreement will grant indemnity and coverage for damages or losses for Islands Trust Conservancy and Sallas Forest Strata Council lands resulting in the project implementation. 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 will be negotiated and in place to ensure appropriate protection to the satisfaction of all parties.

Potential Risk Before Sallas Community Vote:

SALLAS-RELATED:

Risk: High turnover on Sidney Island means that many current community members are not well informed about fallow deer issues or need for eradication
Mitigation:

- Sallas is hosting a community engagement session this May for new owners to help bring them up to speed.
- Parks Canada has hosted an online spring Speaker Series with a range of experts on issues related to restoration, eco-cultural landscapes, and invasive species eradication

Risk: Upcoming Strata Council election for Sallas in late May could mean new representatives are in place who are less informed about the project and potentially not in favour of it
Mitigation:

- Parks Canada and Sallas Steering Committee Members will brief new council on the project as soon as possible following the election

Risk: As public awareness of project increases, potential outrage over deer eradication may lessen Sallas support
Mitigation:

- Partners proactively pitch media so that positive aspects of project are clearly presented and accurate information is available

Risk: Project opponents on Sidney Island could approach media before proactive pitch is made, sharing detailed eradication plan and a sense of outrage
Mitigation:

- Make proactive media pitch as soon as possible, ideally week of May 10th before detailed plan is shared with community members

Risk: Sallas community is tiring of community divisions over the project and may simply want project to end
Mitigation:

- Move expediently toward a July Sallas vote so the community is no longer living with uncertainty over the project

BLACK-TAILED DEER:

Risk: Support from public, Sallas, and First Nations could be impacted negatively by need to remove native black-tailed deer on island during fallow deer eradication
Mitigation:

- Eradication plan was collaboratively developed with First Nations representatives and Sallas community members who can confirm that this is a necessary approach
- Continue to explore ethical black-tailed deer repopulation strategies with SPCA

FIRST NATIONS:
Risk: First Nations partners have expressed frustration at the slow pace of the project
Mitigation:

- Move expediently toward a July vote on Sidney Island so eradication trials can proceed in winter 2021/22
- Engage in briefings/outreach with First Nations communities as supported by First Nations steering committee members so that local First Nation's decision-making role in the project is recognized and supported

Risk: If Sallas does not support the project, First Nations partners may be greatly frustrated by private landowner's ability to stand in the way of restoration. Parks Canada could also face criticism about investment to date in project.
Mitigation:

- Parks Canada Q and A prepared to describe value of work so far.
- Work closely with First Nations to explore other restoration opportunities in Gulf Islands NPR if Sallas community vote is not supportive of project, potentially building on hunting mentorship program

Note: Both BC - SPCA and CPAWS BC Chapter have received regular briefings on the project and will be updated before a media pitch is made. Sara Dubois of SPCA took part in recent speaker series.

Tooby, Ben (PC)

From: Judson, Laura (PC)
Sent: Wednesday, May 19, 2021 11:01 AM
To: Coulson, Stephanie (PC); Tooby, Ben (PC); Gregg Howald; Banovich, Melissa (PC)
Subject: FW: Media Interaction - CTV and Peninsula News

FYI

From: Judson, Laura (PC)
Sent: Wednesday, May 19, 2021 10:57 AM
To:
Cc: Geraldine Van Gyn <gvangyn@uvic.ca>;
Subject: RE: Media Interaction - CTV and Peninsula News

Hi

Thank you for raising this. I think when the next project milestone arrives that the group opts to share with media, we could have a more detailed conversation about what each of the project partners plans to speak to. While Parks Canada shared what its key messages would be and how it would respond to various questions, we didn't really know what points others would be making.

I think that Eric has effectively expressed the rationale for the project, and I think his words have shifted coverage away from sensationalism and outrage. But I agree that it wouldn't be accurate to say that all the meat would go to WSANEC First Nations. We also want to be clear that no decisions have been made yet around possible eradication tactics.

I will follow up with CBC this morning. Corrections are not always made (especially when an article is based on a radio interview that can't be edited) but I can ask. We did provide clarification to (Peninsula News – Black Press papers) which is why the article says:

"Banovich said the actual tactics of rounding up the animals remain under development ". We also sent a note clarifying that meat on Parks Canada lands would be available to First Nations but we cannot speak to plans for the distribution of meat outside our jurisdiction.

I know that the Sidney Island was not keen to be in the limelight and I hope this media attention is not creating undue stress. I think the coverage could have been much more critical based on past experiences I've had communicating the removal/death of an animal in a national park reserve, but I imagine that either way, this is an uncomfortable experience.

Thank you for helping guide us through this. And thank you Triana for your very thoughtful contributions to each interview.
Laura

From:
Sent: Wednesday, May 19, 2021 9:18 AM **s.19(1)**
To: Judson, Laura (PC) <laura.judson@canada.ca>
Cc: Geraldine Van Gyn <gvangyn@uvic.ca>;
Subject: Re: Media Interaction - CTV and Penninsula News

Hi & Laura,

As I have been reading or listening through some of the content I have to admit I'm surprised at all the information on the detailed plan that Eric is sharing. It's especially interesting since I don't think it's all accurate or at least based on my understanding of the eradication approach details within the plan. With all that detail

being shared about the "choppers and the dogs" and the Tsahout getting all the meat, individuals just have to ask for it I think this is all making me fairly uncomfortable. As I thought we had initially been keeping the media outreach and content quite high level. Now that this level is being discussed across many media platforms and our ownership has the detailed plans now also what is the next step? Will there be corrections submitted to these media outlets?

Thanks,

s.19(1)

Tooby, Ben (PC)

From: Coulson, Stephanie (PC)
Sent: Wednesday, May 19, 2021 2:43 PM
To: Judson, Laura (PC); Tooby, Ben (PC); Gregg Howald
Cc: BEATRICE FRANK (frankbea@hotmail.com)
Subject: RE: Response to SIERP Plan

Thanks all. I do not recommend a direct response to Robin's letter via email, and I don't think that's what's being requested. We need to ensure we're directing the attention to the final proposal, where this and other feedback will be detailed and addressed. His letter aligns with this, as he's requested this information be included in the final proposal. If we respond directly, it'll be an email debate and no one will win—we already know this, especially with Robin.

The plan for managing feedback:

1. All feedback received is recorded in a database. This is the raw qualitative data.
2. This data gets thematically coded, and the key themes are highlighted (as you mentioned, Gregg, "ethics of eradication" is one such theme.)
3. In the final DIA report and final version of the proposal, the engagement process is detailed, the feedback is summarised by theme, and the appropriate sections are referenced. Additionally, anything added to the final proposal based on feedback received is clearly identified, so that folks understand how we're 'responding' to their concerns (and that their feedback didn't just disappear down a black hole). E.g.:
    a. Feedback was solicited from members of the public and partnering communities from DATE to DATE.
    b. We received X number of emails, Y number of phone calls, and Z number of comments on social media and/or regional media posts.
    c. Feedback is summarised below and grouped by theme:
        i. Ethics of eradication, e.g.: "Quote here about ethics."
            1. Ethical considerations for this project are detailed on pages X-X. Based on the feedback received, the final proposal includes an expanded section on the ethical deliberation process and the role of the SPCA and in-house federal and provincial animal care experts in providing guidance.
        ii. Topic two, supported by quotes.
            1. Here's where it's discussed and how your feedback was addressed.
    d. Some feedback was outside the scope of this project's consideration, e.g.: "blah blah blah"
    e. Other points as needed.

I imagine Robin's points will be raised at the upcoming community session with Sallas, so he's given us time to prepare responses!

Best,
Stephanie

From: Judson, Laura (PC) <laura.judson@canada.ca>
Sent: May 19, 2021 2:21 PM
To: Tooby, Ben (PC) <ben.tooby@canada.ca>; Gregg Howald <gregg@coastalconservation.ca>
Cc: Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>
Subject: RE: Response to SIERP Plan

Here it is Stephanie! Thanks for your work on this!

Laura

From: Tooby, Ben (PC) <ben.tooby@canada.ca>
Sent: Wednesday, May 19, 2021 1:32 PM
To: Judson, Laura (PC) <laura.judson@canada.ca>; Gregg Howald <gregg@coastalconservation.ca>
Subject: Fwd: Response to SIERP Plan

FYI #2

Sent from my iPhone

Begin forwarded message:

> **From:** Robin Bassett <rtbassett@shaw.ca>
> **Date:** May 19, 2021 at 1:30:32 PM PDT
> **To:** sierponsidney@gmail.com
> **Cc:** "Tooby, Ben (PC)" <ben.tooby@canada.ca>, Ross McCutcheon <ross@rcmadvisers.com>, Jack Albrecht <johnealbrecht@yahoo.com>, Paul Lalonde <paul.a.lalonde@gmail.com>
> **Subject: Response to SIERP Plan**
>
> Please find attached my response to the SIERP Plan.
>
> I would like this posted on the portal in its entirety. The Response Form provided is too complicated for an IT challenged person.
>
> Thank you for your help.
>
> Robin 112

Tooby, Ben (PC)

From: Tooby, Ben (PC)
Sent: Wednesday, May 19, 2021 1:32 PM
To: Gregg Howald; Judson, Laura (PC)
Subject: Fwd: Times Colonist Article/May 16, 2021: To restore Sidney Island's ecology, a push to kill hundreds of fallow deer
Attachments: Letter to Times Columnist and SIERP Feedback.pdf

FYI

Sent from my iPhone

Begin forwarded message:

> **From:** J Albrecht <johnealbrecht@yahoo.com>
> **Date:** May 19, 2021 at 1:09:19 PM PDT
> **To:** sierponsidney@gmail.com
> **Cc:** Ana Ruth Albrecht <anaruthalbercht@gmail.com>, Robin Bassett <rtbassett@shaw.ca>, Ross and Theo McCutcheon <ross@rcmadvisers.com>, "Tooby, Ben (PC)" <ben.tooby@canada.ca>
> **Subject: Times Colonist Article/May 16, 2021: To restore Sidney Island's ecology, a push to kill hundreds of fallow deer**
>
> We have submitted a rebuttal to this article for consideration of publication by the Times Colonist.
>
> In addition we are requesting that it be posted on the SIERP feedback site for all owners to read. In the name of transparency, openness and respect we anticipate that you will grant our request. PDF attached.
>
> Sincerely, Ruth and Jack Albrecht, Lot 71.

From: Bishop, Margot (PC)
Sent: Wednesday, May 26, 2021 3:16 PM
To: Tooby, Ben (PC)
Cc: Banovich, Melissa (PC); Clarkson, Molly (PC)
Subject: RE:
Attachments: RE: Deer Eradication - Sidney Island & License of Occupation Q. ; FW: Sidney Island; FOR MELISSA APPRV: Conceptual Approval, Access Agreement SIERP; ED Signed Approval Summary - Agreement to Access Stakeholder Lands to Implement Fur to Forest Project GINPR CBC.pdf

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Hi Ben!

Good timing to check-in on indemnity – it has been on my mind that this needs to be handed over. I've responded to your questions below in red. I think what next steps are:

-

- Begin developing the access agreement with Sallas. This will require confirming with Travis who would be holding the pen on this. It may be Realty, it may be the project. Worry not – the example we're building off of for an access agreement is fairly straightforward.

Molly – please read the emails attached to this email to see some of the background on the indemnity disc. We should discuss this tomorrow.

I have attached the ED approval to enter into an access agreement which was necessary before we could put anything firm in writing.

Thanks,
Margot

Question;

-
-

-

Context;

-

-

Margot Bishop

s.23

margot.bishop@canada.ca
Telephone | Téléphone: (250) 217-8008

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From: Tooby, Ben (PC)
Sent: Wednesday, May 26, 2021 9:34 AM
To: Bishop, Margot (PC)
Cc: Banovich, Melissa (PC) ; Clarkson, Molly (PC)
Subject:

Margot,
We all miss you and hope that you are doing well.
I am reaching out to pester you regarding
Sallas has started public engagement.

Question from Sallas lot owners;

-

-

s.23

Question;

-
-
-

Context;

-
-

Thank you for all of your work regarding this issue. Please forward us any relavent documents

Thank you very much,

Ben Tooby
Hunt Coordinator / Safety Officer
Coordonnateur de la Sécurité des Visiteurs et de la chasse traditionnelle
Gulf Islands National Park Reserve | Réserve de parc national des Îles-Gulf

2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220 chemin Harbour, Sidney, C-B V8L 2P6
Ben.Tooby@Canada.ca
Mobile (250) 507-6653 | téléphone portable (250) 507-6653

Mcpherson, Michèle (PC)

From: Banovich, Melissa (PC)
Sent: May 28, 2021 11:34 AM
To: Helen Davies (PC) (helen.davies@canada.ca)
Cc: Geneviève Goggin-Michaud (genevieve.goggin@canada.ca); Tooby, Ben (PC); Judson, Laura (PC); Clarkson, Molly (PC)
Subject: FYI: Fur to Forest - Sidney Island Community Engagement Session & current issues of concern

Good morning,

New information has been shared this week that may gain negative media interest and/or negative representation of Parks Canada as Sidney Island residents (Sallas) move towards a community vote scheduled for July, 15, 2021 to support or not- the Sidney Island Ecological Restoration Proposal.

The residents have a community engagement session scheduled on June 6, 2021. GINPR is invited and currently expected to speak on -

- What is PCA asking Sallas to vote on?
- PCA commitments and challenges
- Indemnity to owners (**key issue**)

A team meeting to prepare Q and A's will take place the week before. Resident questions are coming in real time through a Sallas Google link and shared weekly with the F2F project manager.

As well, there is an independent online petition "Eradication of fallow deer on BC Sidney Island cannot be the only solution!" hosted by a current resident.
https://www.change.org/p/peter-julian-parl-gc-ca-eradication-of-fallow-deer-on-bc-sidney-island-cannot-be-the-only-solution

The park reserve will continue to monitor community feedback and prepare for the enagaement sesssion on June 6.

Best, Melissa

Melissa Banovich
Acting Superintendent | Directrice interim
Gulf Islands National Park Reserve of Canada | Réserve de parc national des Îles-Gulf
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney (BC) V8L 2P6 | 2220 chemin Harbour, Sidney (C.B.) V8L 2P6
melissa.banovich@canada.ca
Cellular Telephone | Téléphone cellulaire : 778-867-4776
Government of Canada | Gouvernement du Canada

From: Bishop, Margot (PC)
Sent: Friday, May 28, 2021 9:53 AM
To: Clarkson, Molly (PC)
Subject: More Indemnity Conversations for your record
Attachments: RE: Indemnity Text - Quick Review; RE: Indemnity text for review; RE: indemnity issue; Deer Eradication - Sidney Island & License of Occupation Q. ; RE: Sidney Island; RE: Deer eradication - Sidney Island

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Hi,

I hope these communications are helpful and not overloading!

Here is the response I've provided to Ben (included in the email "Indemnity Text – Quick review")

Safe Travels!
Margot

B: I imagine we would also have something in place before trials? I added a small bit to make that explicit (see bolded below). M: Are the pre eradication trials being completed by the contractors? If not, I don't if we can say that. What we've been approved for is an access agreement where we grant indemnity and insurance to land owners but then we transfer the liability to the hunters under their insurance.

Margot Bishop

Program Advisor, Nature Legacy
Office of the Executive Director, British Columbia & Yukon

Conseillère de programme, Patrimoine naturel
Bureau de la directrice exécutive, Colombie-Britannique et du Yukon

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Parks Canada I Parcs Canada
Government of Canada I Gouvernement du Canada

Parks Canada - 450 000 km^2 of memories I Parcs Canada - 450 000 km2 de souvenirs

Tooby, Ben (PC)

From: gregg@coastalconservation.ca
Sent: Saturday, May 29, 2021 1:05 PM
To: Geraldine Van Gyn **s.19(1)**
Cc: Tooby, Ben (PC);
Subject: Re: questions asked by owners and need your input

There are many about recovery in literature but here are some relevant ones:

https://www.nature.com/articles/s41598-021-84342-2

https://www.nature.com/articles/s41598-021-84342-2

https://www.google.ca/amp/s/news.mongabay.com/2018/07/plant-communities-roar-back-after-rat-removal-from-pacific-islands/amp/

https://onlinelibrary.wiley.com/doi/abs/10.1111/rec.12144

https://library.sprep.org/content/ten-years-after-feral-goat-eradication-active-restoration-plant-communities-guadalupe?__cf_chl_jschl_tk__=20a2d6082c3acf045f6816ba8966c8bdbe778da8-1622318675-0-Abvd2R7KFsEhgqb4eEVlham18coNvmyLaWC4zSsxwRoPvVH_MULHXiwbC-TQYxq6lWE1Y4FFy9v4wCfgVms4JGd1iIjbXw7OI_a-RrwSHHo4alV-_xn3c8xFhgCK5f5b2Y2tF14yQ7H6pphcwdbvFiCbblu9_63SW7V_8d0vNHm8-Uav4xdgMCoOoTO2NH6MeoITrQP3YjT18I4zgmQdK9FLSWf40n55SfRthW-cIBoSPZ1cq4mYCjrM7tHkRxZUfhSFzwG33XSDyih3I1VGfjaRaKC3mzRzddYpzoFoQM32Q7qlGbqcpjgcME-yhudtUpqBQ5-wTAvpwnGiu0EAE7RyHB7UlPjfyHZo-yptf3t6_yy1VX18EiIlfu7cCSYtC-afjjwQ8qo1F2FOizZCAt6zsXOMVOwI1nK_0Rb4b7-V-t1tK1rV8_86OvED7Kw6VjR2BnAImWqFAtN2cidgfxLEJ9wd5e_gFigFcVJ-uj0VWQsOWE52pUUUR7bRZXBDz0mbYsRlr8M1Q4OxqSVgFkc

https://esajournals.onlinelibrary.wiley.com/doi/pdf/10.1890/10-0118.1

Sent from my iPhone

> On May 29, 2021, at 12:54, gregg@coastalconservation.ca wrote:
>
> Some Sources:
>
> United Nations
>
> https://www.cbd.int/island/invasive.shtml
>
> Island Conservation (I started this ngo with colleagues in 1996).
>
> https://www.islandconservation.org/the-importance-of-islands/

An article have co authored - department in 2017:

https://www.cambridge.org/core/journals/environmental-conservation/article/invasive-vertebrate-eradications-on-islands-as-a-tool-for-implementing-global-sustainable-development-goals/83A3B7A41A14D69E01335E054D3690C3

Global Island Partnership;

http://www.glispa.org/about

SMILO:

http://www.smilo-program.org/en/

International Union on Conservation of Nature:

https://www.iucn.org/content/turning-tide-eradication-invasive-species-proceedings-international-conference-eradication-island-invasives

https://www.iucn.org/content/island-invasives-eradication-and-management-proceedings-international-conference-island-invasives

https://portals.iucn.org/library/sites/library/files/documents/SSC-OP-062-En.pdf

Tons of papers in here.

Animal Welfare:

https://conbio.onlinelibrary.wiley.com/doi/10.1111/cobi.12896

How much more do you need?

Sent from my iPhone

> On May 29, 2021, at 12:34, Geraldine Van Gyn <gvangyn@uvic.ca> wrote:
>
> Hi Gregg and Ben:

Erin, and I met this morning and reviewed outstanding questions on the google document. There are several which none of us can answer with any accuracy or authority so we are requesting that we get some help.

We have identified to whom each question should go so you will be getting another email with attached questions We hope to have the answers to these questions as soon as you are able to do so, as our community members are getting restless!

Please call me with any questions about the questions

A. The following statement was posted by an owner….." BC hunting regulations allow us with fallow deer, to resort to live capture, hunt at any time of the year and bag deer of any age or sex in unlimited numbers. We cannot do that with blacktail deer. We are restricted to hunting between September and December, must purchase a $20 tag for each animal we take and are limited to two deer per hunter per season, although a third animal is possible under certain conditions". Is this statement correct?

B. If the above statement is correct how are we to manage the Blacktail deer in the future. **s.19(1)**

C. How many deer have been taken by the First Nations during their hunting season in the NPR over the last 5 years?

D. The actual funding and scope are not laid out. There are promisses of significant work, but no budget or timeline presented. (*we think that the PCA process for projects such as this be explained* --i.e. planning phase then operations phase etc.)

I believe that these are the 4 questions to which we need help to answer. Gregg. I can finish up the conflict of interest/transparency document. and will send to you for final edits.

I have one other favour to ask of you. Can you supply me the links to/references/copies of the science behind eradication of

invasive species and ecological recovery or credible research that speaks to this issue?

with thanks

Geri VG

Gregg

Coulson, Stephanie (PC)

From: Judson, Laura (PC)
Sent: May 31, 2021 10:40 AM
To: Tooby, Ben (PC)
Cc: Coulson, Stephanie (PC); Banovich, Melissa (PC); Clarkson, Molly (PC)
Subject: RE: Coastal Conservation Conflict of Interest question

Thanks Ben! Sounds good!

Laura Judson

Acting Business Analyst, Coastal BC Field Unit
Parks Canada / Government of Canada
2220 Harbour Road Sidney, BC V8L 2P6
236-464-2053
laura.judson@canada.ca

Analyste d'affaires (par interim), Unité de gestion, Côte de la C.-B.
Parcs Canada / Gouvernement de Canada
2220 rue Harbour, Sidney C.-B, V8L 2P6
236-464-2053
Laura.judson@canada.ca

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Sent: Monday, May 31, 2021 10:40 AM
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Cc: Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>; Banovich, Melissa (PC) <melissa.banovich@canada.ca>; Clarkson, Molly (PC) <molly.clarkson@canada.ca>
Subject: RE: Coastal Conservation Conflict of Interest question

Thanks Laura,
Re: Coastal Conservation response to conflict of interest
FYI;

- I probably should not have shared the letter from Gregg and Geri. They were working on their response to the question if a member of the community asks them directly.
- I will pass on your suggestion below regarding their response.

Please let me know if you have any questions,
Thank you,
Ben

From: Judson, Laura (PC) <laura.judson@canada.ca>
Sent: Monday, May 31, 2021 9:17 AM
To: Tooby, Ben (PC) <ben.tooby@canada.ca>; Banovich, Melissa (PC) <melissa.banovich@canada.ca>; Clarkson, Molly (PC) <molly.clarkson@canada.ca>
Cc: Coulson, Stephanie (PC) <stephanie.coulson@canada.ca>
Subject: RE: Coastal Conservation Conflict of Interest question

Hi Everyone,
I see we now have two versions of a response to this question. I won't dive into the second version titled "NOTES TO ADDRESS CONFLICT" , but I will note that I think we should remove this sentence from it as it could be misconstrued to suggest bias/favoritism towards a bidder:

"From these collaborations, PCA has developed a strong working relationship with CC"

I also wanted to reiterate that for the Q and A response that I drafted – I don't have any training in contracting so please take that info as a draft lacking expertise.

Thank you!

I hope everyone has a great week ahead!

Laura

Laura Judson

Acting Business Analyst, Coastal BC Field Unit
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Afternoon,
Re; Sallas landowner question regarding Coastal Conservation Conflict of Interest

- Laura, Draft Q&A looks great, no edits from me
- FYI; I have attached a response that Gregg worked on with Geri. This would be how Sallas reps / Gregg would respond to the question if it was asked directly to them.

Request;

- Review Gregg's / Sallas's response to conflict of interest and transparency concerns question, we can discuss during our next direct report.

Question;

- Melissa, is it best if yourself or I respond if this question comes up during the owner engagement session on Sunday?

Thank you very much,
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Subject: Draft response to conflict of interest concern

Hi Everyone,

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Ben, please ensure this is accurate and make any changes you see fit. It would also be helpful if Gregg saw this so he can catch any inaccuracies and is comfortable with how he is being characterized.
I hope this is helpful,
Laura

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Subject: Coastal Conservation Conflict of Interest question

Morning,
I hope you both are well.
Thank you for your time tomorrow to discuss Coastal Conservation contract regarding conflict of interest.

Question from Sallas lot owner; s.19(1)
"2. The Role of Coastal Conservation
The document does not refer to the Role of Coastal Conservation. For those Sidney Islanders who are not aware, Coastal Conservation is an international organization that specializes in eradication of animals. It has been providing advise to Parks Canada on this project since at least 2012 when it advised Parks that eradication is" achievable" on the Island. In fact, the chair of SIERP is an employee of that Company. This company will be given the contract (after a tender process) to eradicate because there is no other organization with the capability of doing so. There is a very significant financial benefit coming to that organization if this project proceeds.
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Context;

- We hired C.C. based on experience and they have been providing technical expertise. Gregg H (
  ), Chris G (10 years' experience).
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- One of the reasons the steering committee and working groups were put into place was to minimize bias or conflict of interest. All 7 partners are equal and C.C. is not considered a partner or stakeholder, they have only been providing guidance and technical expertise. Seven partners developed the proposal with CC providing guidance.
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- PCA expertise, public via DIA feedback, New Zealand department of conservation eradication and advisory group, Island conservation eradication advisory team will all review and ensure detailed operational plan has integrity and contains highest safety standards.

Attached;

- Spreadsheet identifies CC project director duties and time allocation
- Current contract
- SoW that was attached to contract

What we proposed to amend and add to the existing contract;

- Lead the establishment of processes to align the 7 MoU participants for stepwise release of the plan.
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- +15 days at 1K/day, this will allow ~5days per month during this critical phase leading up to Sallas vote

Majority of above all fall within attached pre-existing documents but increased meeting frequency consumed allotted time. FYI; Contracting has not gotten back to us yet with the amendment ready to sign.

Please let me know if you would appreciate any additional info.
Thank you,
Ben

Draft Q and A on Conflict of Interest Concern

Question:

"2. The Role of Coastal Conservation
The document does not refer to the Role of Coastal Conservation. For those Sidney Islanders who are not aware, Coastal Conservation is an international organization that specializes in eradication of animals. It has been providing advise to Parks Canada on this project since at least 2012 when it advised Parks that eradication is" achievable" on the Island. In fact, the chair of SIERP is an employee of that Company. This company will be given the contract (after a tender process) to eradicate because there is no other organization with the capability of doing so. There is a very significant financial benefit coming to that organization if this project proceeds.
I would therefore raise credibility concerns regarding their advice, and more specifically regarding their safety assessments.

Draft Response:

After a public procurement process, Coastal Conservation was awarded a contract in 2018 to offer technical expertise and support to Parks Canada and project partners during planning phase of Sidney Island Ecosystem Restoration Project. This organization was also the successful bidder in an earlier contract to develop a feasibility assessment for the concept of fallow deer eradication on Sidney Island.

The inclusion of eradication experts was considered necessary as Parks Canada and project partners do not have significant experience planning eradication operations. The urbanized environment on Sidney Island also creates additional operational complexities. The involvement of eradication experts such as Gregg Howald who meant that project partners could draw on lessons learned from other operations around the world, improving the likelihood of a safe, humane, and effective plan. Coastal Conservation have made valuable contributions to conversations about the principles of eradication, global best practices, and potential impacts on the landscape and residents.

If project partners continue to support the restoration project, a separate procurement process would take place to select a contractor to develop a detailed operational plan based on the techniques chosen collaboratively by project partners. This same competitive process would be needed to select contractors to conduct the eradication operation.

It is critical to the Government of Canada that contracts are awarded in a fair and transparent manner. That is why each of these steps involve a separate public process. It is also important that a bidder does not have an unfair advantage in a procurement process. However, experience acquired by a bidder who is providing or has provided the goods and services described in the bid solicitation will not, in itself, be considered by Canada as conferring an unfair advantage or creating a conflict of interest. Coastal Conservation have gained experience working with Parks Canada on eradication operations through fair competitive processes.

In response ot concerns about a Coastal Conservation representative chairing Steering Committee meetings, Parks Canada representatives initially served in this role, but it became evident that this approach was hindering collaboration between partners. For this reason, Parks Canada asked Gregg Howald to chair the meetings since Coastal Conservation is not a decision maker in the project. This created a more level-playing field between project partners and fostered more open communication and debate. When it was time to develop an eradication proposal, working groups were created and led by an external contractor with facilitation expertise (Judith Cullington). In these meetings Coastal Conservation provided technical expertise but did not guide the conversations. **s.19(1)**

These precautions have supported a project planning process that draws on the best available knowledge on eradication operations but does not allow external contractors undue influence on the project, or an unfair advantage in future contracts.

NOTES TO ADDRESS CONFLICT OF INTEREST AND TRANSPARENCY CONCERNS

MAY 26, 2021

A. Conflict of Interest: Rationale for Engagement of Coastal Conservation Personnel

1. There is limited expertise available among Parks Canada (PCA) workforce to develop an invasive vertebrate species eradication project.
2. There are a very limited number of companies/organizations in the world who have the expertise and experience to create and implement an effective and efficient invasive vertebrate eradication.
3. Coastal Conservation (CC) one of these specialized companies and one of two ~~companies/organization~~organizations that work exclusively on invasive vertebrate species eradication on islands. The other company is the nonprofit, international nongovernmental organization (NGO) Islands Conservation
4. PCA in partnership with the Council of the Haida Nation have engaged in a program of ecological restoration through invasive ~~vertebrate~~ deer and rat eradication from six islands, including a vision for an archipelago scale intervention for invasive rats, beaver and raccoons ~~on Haida Gwaii with CC, in partnership with the Council of the Haida Nation. As well, PCA has collaborated with CC to eradicate invasive rats on six Canadian islands.~~ From these collaborations, PCA has developed a strong working relationship with CC.
5. No persons in the ~~four~~five partner groups[1] who signed the MOU have the expertise to consult on the eradication of vertebrate species on islands and this expertise was an obvious necessity in the Sidney Island Ecological Restoration Project (SIERP).
6. To plan this project, Parks Canada hired two members of Coastal Conservation (Chris Gill/Gregg ~~Howland~~Howald). Their main role in the planning process was to ensure that the project was designed in compliance with globally accepted best practices and well established, accepted principles of eradication. As well, they were consulted on the transparency of processes and procedures for the Steering

Commented [SC1]: There are only four signatories of the MOU (PCA, the province, ITC, Sallas); WLC and Pauq provided letters of support for the project.

[1] PCA, Province of BC, Islands Trust, ~~WSanec First Nations,~~ Sidney Island Owners.

Committee and the Working Groups[2] to help to ensure that all partner communities were fully informed and to enable the control of the project to be in the hands of the two committees (see B. Transparency). These committees were constituted to represent the five MOU partners.

B. Efforts towards Transparency in Working with the Steering Committee and Working Groups

1. ~~Howland~~ Howald and Gill have worked with the Steering Committee members and the Working Groups members to guide us in our understanding of the principles and best practices of humane and effective island invasive vertebrate eradication approaches given our knowledge of the constraints on Sidney Island. ~~,~~ They helped us to understand ~~why eradication is the best option~~what the tradeoffs are with the eradication tactics ~~among alternatives~~, what the effects of eradication will likely be, and what we ~~can~~ might expect if we do not ~~eradicate~~remove invasive fallow deer using our own data collected over the last 40 years. The Steering Committee members took their responsibilities seriously and thoroughly examined the issues related to fallow deer eradication and the considerations in planning for such an event on Sidney Island. Best practices in consideration of animal welfare and~~,~~ impact on Sidney Island and residents. Without this expert guidance, we believe that the planning process would have taken much longer ~~than has~~ and, perhaps, would have resulted in a plan that may not have been efficient, have a lower probability of successfully removing the fallow deer and sustaining the program into the future.~~effective/efficient.~~

Commented [GH2]: This is an odd one. This is the nexus to the argument for a conflict of interest. Ie, of course we share why eradication is better and what will happen.

I think what you are trying to say, and I edited to reflect, is there are tradeoffs with the eradication or not eradication, and we are trying to help shape understanding of what those tradeoffs are.

Commented [GH3]: Geri, Erin, – Ken,

2. Prior to the formation of the Steering Committee and Working Groups, Howald and Gill facilitated ~~consultations~~ an island scoping trip to assess the relative technical complexity of fallow deer eradication from Sidney Island, and evaluate alternative tactics that could be considered. This scoping trip was completed alongside ~~with~~ PCA, Sallas representatives Ken and and~~other~~

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[2] Sidney Island representatives on the Steering Committee are [redacted] Erin Shaw, and Geri Van Gyn and in the working groups, [redacted] Julia Hedley, and

s.19(1)

experts in the field of ungulate management ~~-~~from the United States, New Zealand and Canada, all with highly specialized skills in ungulate management. ~~to informto~~ ~~a strategy of the 'on the ground work' of the future eradication process on Sidney Island~~how an eradication on Sidney Island i. ~~As well, they organized site visits of ungulate experts (White Buffalo Inc.)and potential contractors from New Zealand and Canada. along~~

~~2.~~ The Deer Working Group consisted of members of Sallas, ~~WSANEC~~Wasanec FN Leadership Council, Cowichan FN, Pauqachin FN, PCA, Province of BC. ~~E.~~each brought their expertise and knowledge of~~-~~ ungulate management and contributed to the development of the plan. ~~This other expert input also contributed to the development of the plan (at least 8-10 individuals regularly participating in the working group); site There was ongoing peer review from inside Parks Canada Agency with expertise in ungulate management and impact assessment. Numerous voices, more than 20+ people contributed to the outcome of the plan. WE SHOULD QUANTIFY WHAT NUMBER OF MEETINGS THERE WERE.~~

3. Parks Canada process….we need to get with Ben on this.

For the purposes of transparency, the plan in its current form (May 2021) is considered a DRAFT for community engagement. The details of the plan can and will change depending on the substantive, and constructive input by the community members during this engagement through June 30, 2021. The operational planning and implementation phases to follow the approval of the draft plans will not include any techniques/methods other than those included the current plan.

All owner comments given at the June 6th owner engagement session and through the Google feedback form (until June 15th) ~~(until June 30?)~~ following that session will be considered carefully to ensure that the project planning considers all scenarios, issues, concerns, and/or uncertainty identified. Note: some details cannot possibly be accounted for at this stage but will be accounted for in the Operational Planning phase (e.g. indemnity can be a value that PCA has shared, but the specific details of indemnity cannot possibly be determined until a final operational plan is developed, and an agreement to implement that plan is shared between Sallas and Parks Canada).

Commented [GVG4]: Done before

Commented [SC5]: ?

Formatted: List Paragraph, Space Before: 0 pt, After: 0 pt, Numbered + Level: 1 + Numbering Style: 1, 2, 3, … + Start at: 2 + Alignment: Left + Aligned at: 2,54 cm + Indent at: 3,17 cm

Commented [SC6]: As per my most recent knowledge of the Sallas timeline based on the last email I received from Geri. Final proposal is due June 25th.

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Commented [GVG7]: Not pertinent to this topic – TRANSPARENCY AND COMMUNITY ENGAGEMENT.

PROCESS IN ITS CURRENT FORM INCLUDES FULL COMMUNITY INPUT – CAN BE MODIFIED

6. Additional processes RELATED TO TRANSPARENCY can be put in place to prevent bias and conflict of interest including public processes that Parks Canada will abide by including Contracting regulations; public engagement processes including a Detailed Impact Assessment (DIA) public comment period that any member of the public or institution can review and comment; technical peer review processes to ensure that the project is planned with the utmost integrity to the principles of eradication, including review by the New Zealand Department of Conservation Island Eradication and Advisory Group (IEAG) and/or the NGO, Island Conservation Eradication Advisory Team (ICEAT) and/or input within Parks Canada Agency. Sallas owners will have the opportunity to review the document and may submit comments as individuals or as a community (e.g., Hunt Committee, Strata Council, lots on the east side, etc.).

Commented [GVG8]: Should we let the owners know that is available to them?

Commented [SC9]: https://iaac-aeic.gc.ca/050/evaluations/proj/81629 direct link to the project page on the CDN Impact Assessment Registry website. They can also request a copy of the draft DIA report once complete, estimated end of June, though it's likely this report will be made available to Sallas anyway as an appendix to the final version of the proposal.

7. Sallas has an opportunity to engage in the operational planning phase with a team of on island experts from Sallas to represent the voice of the community and ensure that the project is planned in accordance with Sallas values and in line with the principles of eradication.

Commented [GVG10]: Not pertinent I think but possibly if we reword.

Tooby, Ben (PC)

From: Coulson, Stephanie (PC)
Sent: Monday, May 31, 2021 8:42 AM
To: Tooby, Ben (PC); Judson, Laura (PC); Banovich, Melissa (PC); Clarkson, Molly (PC)
Subject: RE: Coastal Conservation Conflict of Interest question
Attachments: NOTES TO ADDRESS CONFLICT OF INTEREST AND TRANSPARENCY CONCERNS GVG 27-5-21_GH_SC edit.docx

Hi folks,

I've made some corrections to the attached document. This came from Geri I believe but there was some misinformation.

Thanks,
Stephanie

From: Tooby, Ben (PC) <ben.tooby@canada.ca>
Sent: May 30, 2021 4:12 PM
To: Judson, Laura (PC) <laura.judson@canada.ca>; Banovich, Melissa (PC) <melissa.banovich@canada.ca>; Clarkson, Molly (PC) <molly.clarkson@canada.ca>
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s.19(1)

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Please let me know if you would appreciate any additional info.
Thank you,
Ben

Clarkson, Molly (PC)

From: Clarkson, Molly (PC)
Sent: June 2, 2021 9:27 AM
To: Rossiter, Jim (PC); Moir, Travis (PC)
Cc: Banovich, Melissa (PC); Tooby, Ben (PC)
Subject: RE:

Thank you Jim – this timely response is much appreciated!

Molly Clarkson (She/Her)
Resource Conservation Manager | Gestionnaire de la Conservation des Ressources
Gulf Islands National Park Reserve | Réserve de parc national des Îles-Gulf
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6
Email: molly.clarkson@canada.ca
Telephone | Téléphone: 250-654-4000 / Cell 250-216-4121
www.parkscanada.gc.ca | www.parcscanada.gc.ca
Government of Canada | Gouvernement du Canada
Parks Canada – 450 000km² of memories / Parcs Canada - 450 000km² de souvenirs

I acknowledge that I live, work, and play in the territories of the Songhees and W̱SÁNEĆ and Hul'qumi'num speaking Nations. I recognize the history and current challenges of settler colonialism and am grateful for the opportunity to work in a meaningful way with First Nations to contribute to a decolonized future in the Pacific Northwest.

From: Rossiter, Jim (PC)
Sent: June 2, 2021 6:58 AM
To: Clarkson, Molly (PC) <molly.clarkson@canada.ca>; Moir, Travis (PC) <travis.moir@canada.ca>
Cc: Banovich, Melissa (PC) <melissa.banovich@canada.ca>; Tooby, Benjamin (PC) <benjamin.tooby@canada.ca>
Subject: RE:

J.G. (Jim) Rossiter, Q.C.
Counsel
Environment Legal Services
Department of Justice – Government of Canada
jim.rossiter@canada.ca
902 830 2927
1869 Upper Water St., Suite AH201
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J.G. (Jim) Rossiter, c.r.
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Ministere de la Justice – Gouvernement du Canada
jim.rossiter@canada.ca
902 830 2927
1869 rue Upper Water, Suite AH201
Halifax, NS B3J 1S9

s.23

From: Clarkson, Molly (PC) <molly.clarkson@canada.ca>
Sent: June 1, 2021 4:24 PM
To: Moir, Travis (PC) <travis.moir@canada.ca>; Rossiter, Jim (PC) <jim.rossiter@canada.ca>
Cc: Banovich, Melissa (PC) <melissa.banovich@canada.ca>; Tooby, Ben (PC) <ben.tooby@canada.ca>
Subject:
Importance: High

Hello Travis and Jim,

(I've already introduced myself to Travis, but for Jim's sake I'll do it again)

My name is Molly Clarkson, and I've been the res con manager with GINPR for approximately three weeks.

We are hoping to do a comprehensive review of all draft responses on Thursday afternoon, so your timely review would be sincerely appreciated.

Sincerely,
Molly Clarkson (She/Her)
Resource Conservation Manager | Gestionnaire de la Conservation des Ressources **s.23**
Gulf Islands National Park Reserve | Réserve de parc national des Îles-Gulf
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6 **s.19(1)**
Email: molly.clarkson@canada.ca
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www.parkscanada.gc.ca | www.parcscanada.gc.ca
Government of Canada | Gouvernement du Canada
Parks Canada – 450 000km^2 of memories / Parcs Canada - 450 000km^2 de souvenirs

I acknowledge that I live, work, and play in the territories of the Songhees and W̱SÁNEĆ and Hul'qumi'num speaking Nations. I recognize the history and current challenges of settler colonialism and am grateful for the opportunity to work in a meaningful way with First Nations to contribute to a decolonized future in the Pacific Northwest.

Pages 585 to / à 593
are withheld pursuant to section
sont retenues en vertu de l'article

23

of the Access to Information Act
de la Accès à l'information