

## Notice of Determination

This notice of determination is being issued by Parks Canada under the *Impact Assessment Act*. Parks Canada has decided that the project is not likely to cause significant adverse environmental effects.

The population of invasive European Fallow Deer on Sidney Island is negatively impacting the ecological integrity of the forest ecosystem. Decades of over-browsing by the deer has degraded the forest understory, resulted in decreased abundance and diversity of native plants and wildlife, and has made Sidney Island the least biologically diverse island in the Southern Gulf Islands region.

Parks Canada and project partners have collaboratively developed the proposed deer eradication project to facilitate sustained recovery of the Sidney Island forest ecosystem. Alternatives to the project, including alternative approaches to forest recovery and alternative methods for carrying out the deer eradication, were assessed but found to be unfeasible based on technical, economic, and operational considerations, as well as preferences of the project team.

This DIA examined the potential adverse impacts of the proposed deer eradication project on key VCs on the federal lands of Sidney Island (GINPR). The VCs determined to have potential interactions with the project are and the conclusions of each analysis are summarized below.

**Indigenous Harvest of Deer:** Over the short term, the project will disrupt the Indigenous harvest of native Black-tailed Deer, the preferred target species for Indigenous hunters on Sidney Island. This will be mitigated by opportunities for Indigenous harvest of deer prior to Phases 1 and 2 and the distribution of deer meat and hides from the project to local First Nation communities. Project partners have a shared interest in the re-establishment of native Black-tailed Deer to Sidney Island, providing it does not compromise vegetation recovery. In the years or decades following the project, the project is expected to benefit Black-tailed Deer, which will support Indigenous hunting on Sidney Island.

**Indigenous Culturally Important Plants:** The restoration of the forest understory is intended to create conditions that will support a greater abundance of culturally important plants, thereby supporting traditional practices for local First Nations communities. Although undesirable effects from invasive species are possible, mitigations are in place to reduce the risk and the balance of effects is expected to heavily favour improvements in ecological integrity for culturally important plants. Additional strategies such as exclosure planting of culturally important species also support the desired outcome for culturally important plants. As for understory vegetation in general, the risk of residual adverse effects is low in the context of expected long-term ecosystem recovery.

**Indigenous cultural artifacts and culturally significant sites:** The project has been designed to minimize the risk to subsurface cultural artifacts. The two instances of ground disturbance (digging a shallow trench and using tent pegs) will only occur in areas identified as low risk by Parks Canada Terrestrial Archaeologists and W̱SÁNEĆ cultural monitors. Mitigations are identified to avoid and minimize the risk of disturbance to known sites, appropriately manage accidental finds of cultural artifacts, and ensure spiritually important sites are respected. No residual adverse effects are predicted.

**Forest understory vegetation** is expected to increase in species richness and cover as a result of the removal of deer browse pressure. Some localized and short-term residual impacts from the project are possible, however the significance of residual adverse effects is negligible. The removal of deer browse pressure will allow understory species to flourish and successful shrub and tree regeneration. The

growth of invasive plant species, primarily in open fields and forest-field transition zone, is a possible undesirable outcome of deer browse removal. Proactive control of English Hawthorn and Scotch Broom are expected to mitigate the risk of their expansion following the project. Ongoing monitoring of native and non-native species responses in the understory, and adaptive management will also help to facilitate the recovery of the forest understory and forest ecosystem processes.

**Birds** may experience short-term disturbances during the project. Phase 1 is expected to cause short-term disturbances to resident birds. Minor disturbances to birds could also occur from ground operations. Mitigations are in place to reduce these impacts and the significance of residual adverse effects is expected to be negligible given existing levels of disturbance on the island and the short duration of the project. The project is also expected to have long-term benefits for songbirds. Given the small potential for residual impacts to the Threatened Western Screech Owl (*Megascops kennicottii*), Marbled Murrelet (*Brachyramphus marmoratus*), and Red Knot (*Calidris canutus roselaari*), a *Species at Risk Act* (SARA) permit has been acquired. A permit under the BC *Wildlife Act* will also be acquired for the possible minor, short-term disturbances to nesting eagles.

**Black-tailed Deer** will be eradicated from Sidney Island along with European Fallow Deer during the project. The project has been designed to limit or avoid suffering by individual deer through the implementation of humane methods. Given that the species is secure and even hyperabundant elsewhere in the Southern Gulf Islands region, the eradication of the small Sidney Island population is not considered significant. In the years or decades following the project it is anticipated that Black-tailed Deer will naturally re-establish on Sidney Island. Parks Canada is committed to facilitating a collaborative planning process for Black-tailed Deer reintroduction if natural re-establishment does not occur. To prevent a future re-established population from becoming hyperabundant on Sidney Island (as is the case elsewhere in the region), a management strategy has been developed.

**Foothill Sedge:** Short term impacts from ground operations will be reduced through mitigations, although there is a very small chance that individual plants could be damaged. A SARA permit has been acquired for Foothill Sedge. Long-term effects from increases in invasive plants following the deer eradication are being mitigated through the proactive management of English Hawthorn and adaptive management. The project team will also survey known Foothill Sedge locations after the project to document any short-term impacts. Following the project, Foothill Sedge populations are anticipated to be monitored every three years by the GINPR Ecological Integrity team.

**Terrestrial Mammals:** Impacts to terrestrial mammals have largely been avoided or reduced through project design and mitigation measures. Impacts are also not expected to be significant given pre-existing baseline levels of disturbance on Sidney Island and the short duration of impacts. No long-term effects are anticipated. In the years or decades post-project, terrestrial mammals are expected to benefit from the forest recovery.

**Visitor experience** will be temporarily disrupted by the project, although operations will be short term and will largely avoid the peak visitation period to the island. Additional mitigation measures to limit impacts to the island's aesthetics (e.g., collecting bullet casings and deer carcass recovery) ensure that there are no significant residual impacts. The project will provide a unique opportunity for visitors to learn about ecological integrity and restoration. In the years or decades following the project, visitors will experience a recovered native forest ecosystem with increased abundance and richness of native flora and fauna.

Project partners, WSÁNEĆ First Nations, Member Bands of Quw'utsun Nation, and First Nations with an interest in Sidney Island were consulted on the draft DIA. Given that the project was developed in collaboration with Indigenous Project Partners and Indigenous knowledge and perspectives were incorporated into the draft DIA, no additional feedback or comments on the draft DIA were received during Indigenous consultations.

The draft DIA was also made available to the Sallas Forest Strata Community, stakeholders, and the public for review and input. Public feedback was reviewed, considered, and incorporated into the DIA, as appropriate. Changes to the draft DIA resulting from public feedback were minor and included clarifications or additional rationale for project methods.

Taking into account the careful project design and the implementation of mitigation measures outlined in the DIA, **Parks Canada has determined that the project is not likely to cause significant adverse environmental effects on federal lands.**

While the project activities and mitigations generated by the DIA may be applied across the entire project area, the decision on the significance of adverse effects and approval of the DIA apply only to the portion of Sidney Island that is within Parks Canada's authority.

To request a copy of the final Detailed Impact Assessment report, contact:

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