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DATE OF MEETING: April 29, 2021  
TO: North Pender Island Local Trust Committee  
FROM: Narissa Chadwick, Island Planner  
Southern Team  
COPY: Robert Kojima, RPM  
William Shulba, Senior Freshwater Specialist  
SUBJECT: Groundwater Sustainability Project – Process Options

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## RECOMMENDATION

- 1. That the North Pender Island Local Trust Committee request staff to create a project charter for one of the options identified in the April 29, 2021 staff report.**

## REPORT SUMMARY

This report identifies a number of options related to the LTC's resolution to consider combining the Groundwater Sustainability and Coastal Douglas-fir ecosystem protection projects.

## BACKGROUND

At the February 25<sup>th</sup> meeting the LTC endorsed a project charter for the implementation phase (Phase 3) of the Groundwater Sustainability Project.

The project was initiated in 2019 as an initiative of five Southern Local Trust Committees. The phases of the project are as follows:

Phase 0: Data and Information

Phase 1: Groundwater Recharge Potential Mapping

Phase 2: Regional Groundwater Availability Assessment (Water Budgets)

### **Phase 3: Implementation and Planning**

At the March 25<sup>th</sup> LTC meeting the LTC also directed staff to expand the project charter to include consideration of Coastal Douglas-fir and associated ecosystem protection.

It was Moved and Seconded,  
that the North Pender Island Local Trust Committee direct staff to suggest an altered project charter for the Groundwater Sustainability project to include consideration of Coastal Douglas Firs' and associated ecosystems' (CDF) protection.

This report identifies that there are a number of options that could be considered with respect to addressing both groundwater sustainability and CDF protection.

## Project Options:

As indicated below there are two approaches to consider, each with two options identified. One approach is to address each topic separately. The other approach is to address ground water sustainability and CDF protection in an integrated way. These options are described below and compared in Table 1 on page 3.

## Separate Projects:

### 1. Groundwater Sustainability

If the LTC wishes to take a comprehensive approach to groundwater sustainability a tiered approach, similar to that approved by the Galiano LTC, is recommended.

A tiered approach to protecting groundwater recharge and regional groundwater sustainability focusses on four (4) classifications in two (2) subgroups: 1) groundwater protection areas 2) groundwater region sustainability (water budgets).

**Class 1-** Areas that are in critical need of attention where there is high confidence in existing data.

**Class 2** – Areas where there is a potential for critical attention but some data uncertainty.

**Class 3** – The level of attention needed is moderate based on existing use but could become critical if buildout or licensed potential (typically agriculture) is maximized.

**Class 4** – The level of attention needed is not critical. This includes protected areas and forest lots, or areas with limited development potential. In these areas there is high confidence in existing data.

This approach would involve focussing first on areas that are critical (Class 1) and then areas that could become critical if not addressed through bylaw amendments (Class 2). Methodology to address Class 2 will be developed. This approach is identified in the [April 12, 2021 Galiano staff report](#).

This project option, as indicated in the [Project Charter for Galiano](#) would take close to 2 years to complete. As Galiano has already begun, the North Pender project will benefit from the same methodology creating efficiencies which may reduce the project timeline.

### 2. Coastal Douglas Fir and Associated Ecosystems' Protection

The CDF mapping was a project of the Regional Planning Committee, and was overseen by the Trust Conservancy. According to the *Contiguous Forest Mapping in the Islands Trust Area* prepared by Cabin Resource Management, contiguous forest mapping “can be used to identify areas of connectivity between forest patches, prioritize their protection from development pressures, or identify areas of potential connectivity towards which restoration can be focused.” Some combination of these strategies should be utilized in each local trust area, but the balance and emphasis of management actions must rest on a detailed assessment of the needs and values of each local trust area and incorporate a variety of data, local and traditional knowledge.

Islands Trust Conservancy staff assisted with the review of the *Contiguous Forest Mapping in the Islands Trust Area* report and data and believe it to be appropriate in accuracy and content for island-wide community planning. Further review of the mapping, along with build-out analysis, by planning staff would identify implementation options for the North Pender Island Local Trust Committee to consider.

It is anticipated that a tiered approach with the integration of local and traditional knowledge, where and when available, may be an appropriate approach to take.

Note that the LTC would only be able to do one of these projects at a time as a top priority. At the moment the LTC has the LUB Review project underway and have made the soil bylaws a top priority.

**Integrated Approach:**

**3. A comprehensive examination of where CDF and Groundwater Mapping intersect**

Taking a comprehensive approach to using the CDF mapping and the groundwater mapping and the intersections of each to inform bylaw amendments begins with understanding each data set independently. Once each data set is examined independently it would be overlaid with the other to identify areas of overlap. Those areas of overlap can then be prioritized to be addressed through bylaw amendment options.

There are potentially two approaches to looking at the comprehensive intersection of the CDF and GWS mapping:

- I. **Staff Lead** – If Staff take lead, the research and analysis part of the process will be similar to the processes related to doing the projects independently. While efficiencies may be achieved by through combining the bylaw amendment processes for CDF protection and groundwater sustainability, additional time would be needed to better understand the areas of overlap and distinguish locations on the island where separate or integrated approaches should be taken.
- II. **Involving Outside Researchers** – The work that is currently occurring on Salt Spring Island related to CDF is combining Islands Trusts contiguous forest mapping with data layers generated from inside and outside the Trust. One of the layers that has been integrated into this analysis is Islands Trust’s groundwater recharge mapping for Salt Spring. This work is being undertaken by UBC’s conservation decision lab in kind. Before this information can be used to inform bylaw amendments staff will have to spend some time developing an implementation methodology. This would likely involve applying a tiered approach requiring staff to re-examine the data provided by the UBC’s conservation decision lab. The timing of this work on Salt Spring is uncertain as is the interest this group may have in applying their research methodology to other islands such as North Pender.

**4. Focus on CDF and the intersection of critical areas for groundwater**

An integrated approach does not need to be fully comprehensive to begin with. An approach that focusses on where critical groundwater recharge and groundwater sustainability areas intersect with the CDF mapping would result in more immediate integrated bylaw amendment options. It would be more efficient to start with the comprehensive CDF mapping and layer on critical/Class 1 groundwater area as there are fewer areas of data uncertainty related to the CFD mapping. In addition, this approach would contribute to the development of a methodology and starting point for further work related to areas that fall under the other groundwater recharge and groundwater sustainability classes. It could be updated as more data is gathered over time.

**Table 1: Comparison of Options**

|  | <b>1. Ground Water Sustainability Only</b> | <b>2. CDF Preservation Only</b> | <b>3. Ground Water and CDP Comprehensive Overlap</b> | <b>4. Focus on CDF Mapping with Critical Groundwater</b> |
|--|--|---------------------------------|--|--|
| <b>Project Timing</b>                      | ~1.5 years                                 | ~1.5 years                      | ~3+ years  | ~2 years   |
| <b>First Reading by end of LTC Term</b>    | Likely                                     | Likely                          | Uncertain  | Likely   |
| <b>Similar Processes or Pilot Projects</b> | Galiano GWS                                | NP as Pilot                     | Salt Spring Island                                   | NP as Pilot  |

Staff propose that all options include some public education in the first phase of the project and the development of educational materials as well as:

- Mapping review and development of implementation methodology
- Review existing regulations, e.g. subdivision servicing requirements related to potable water
- Identify of potential new policies and regulations, e.g. requirements for cisterns, zoning changes, development permit areas.

The second phase of the project would include:

- Community education on the final mapping and groundwater issues in the form of a community workshop presentation
- Early First Nations consultation
- Community consultation following the identification of regulatory options

Following the consultation phase the project would involve:

- LTC providing direction on potential bylaw amendments
- Staff preparing amendments
- LTC reviewing amendments
- Community commenting on amendments
- First Nations and agency referrals
- Legislative process: bylaw readings, public hearing, executive committee approval, Ministerial approval
- Finally, an implementation phase to update administrative bylaws, prepare educational material, etc.

## **RATIONALE FOR RECOMMENDATION**

**Recommendation:** That the North Pender Island Local Trust Committee request staff to create a project charter for one of the options identified in the April 29, 2012 staff report.

**Resolution:** *That the North Pender Island Local Trust Committee request staff to create a project charter for* (identify option chosen)

**Rationale:** There are a number of options for processes the LTC could engage in to address their interest in pursuing projects that consider groundwater sustainability as well as coastal douglas ecosystem protection. The LTC needs to decide which approach they would like to take.

## **ALTERNATIVES**

The LTC may consider the following alternatives to the staff recommendation:

### **1. Identify another option**

The LTC may identify a process option that is not identified in this report.

### **2. Request further information**

The LTC may request further information prior to choosing a project option.

### **3. Reconsider the project**

The LTC may reconsider proceeding with the project, either entirely or could defer initiation.

#### 4. Receive for information

The LTC may receive the report for information and defer consideration to a future meeting

#### NEXT STEPS

- Staff will develop a project charter based on the project option chosen.

|               |   |                |
|---------------|---|----------------|
| Submitted By: | Narissa Chadwick, Island Planner            | April 16, 2021 |
| Concurrence:  | Robert Kojima,<br>Regional Planning Manager | April 20, 2021 |

#### ATTACHMENTS

1. January 2021 Project Charter

# GROUNDWATER SUSTAINABILITY - IMPLEMENTATION – Project Charter v1

North Pender Island Local Trust Committee

Date: January 2021

**Purpose:** To implement results of Phases one and two of the Southern Gulf Islands Groundwater Sustainability Project through community engagement and education, policy, and changes to regulations.

**Background:** The Southern Gulf Islands Groundwater Sustainability project was initiated in early 2019 and consisted of data collection, mapping and analysis of groundwater regions in the southern gulf islands. The results of the first phases of the project will be incorporated into Islands Trust development review processes. The Local Trust Committee has identified further implementation of the results through public engagement and potential bylaw amendments as a Top Priority project.

## Objectives

- Identify implementation options
- Analyze and assess options
- To update bylaws to provide to greater protection of groundwater resources

## In Scope

- Analysis of options for bylaw amendments to implement groundwater protection measures based on earlier phases of the project
- Community engagement on phases I and II
- Community, First Nations, and agency consultation
- Recommendations on potential amendments
- Support for legislative process to amend bylaws

## Out of Scope

- Unrelated regulatory amendments
- Unrelated amendments to the OCP

## Workplan Overview

| Deliverable/Milestone  | Date               |
|--|--------------------|
| Preliminary report and review of Project Charter by LTC  | February 2021      |
| Staff report on implementation options, LTC direction  | May 2021           |
| Community Groundwater Workshop to present findings of Phases 1 and 2   | June 2021          |
| Early First Nations Consultation and Targeted Agency referrals   | May – Sept 2021    |
| LTC review of potential options  | September 2021     |
| Community consultation   | October – Dec 2021 |
| LTC direction to prepare draft bylaws  | January 2022       |
| LTC review of draft bylaws, First Nations referrals, agency referrals and First Reading  | Feb – April 2022   |
| Public Hearing   | May 2022           |
| Post-hearing legislative process   | May – Sept 2022    |
| Implementation: educational materials, DAI Bylaw amendments, BVN Bylaw amendments, procedure bylaw amendments, application processing procedures revised | June – Dec 2022    |

## Project Team

| Project Team   |   | Est. Hours/annum |
|--|---|------------------|
| Robert Kojima  | <i>Project sponsor</i>                                      | 50               |
| Narissa Chadwick                                       | <i>Project planner</i>                                      | 200              |
| William Shulba   | <i>Professional advisor</i>                                 | 200              |
| Maple Hung   | <i>Admin support</i>  | 30               |
| Jas Chonk  | <i>Legislative Clerk</i>                                    | 10               |
| Jackie O'Neill   | <i>IS support</i>   | 10               |
|  |   | 400              |
| <b>RPM Approval:</b><br>Name of RPM<br>Date: Feb 25/21 | <b>LTC Endorsement:</b><br>Resolution #:<br>Date: Feb 25/21 |                  |

## Budget

| Budget Sources: |                            |               |
|-----------------|----------------------------|---------------|
| Fiscal          | Item                       | Cost          |
| 21-22           | Community consultation     | \$1000        |
| 21-22           | Legal review contingency   | \$2000        |
| 21-22           | First Nations consultation | \$2000        |
| 22-23           | Public Hearing             | \$2000        |
| 22-23           | Contingency                | \$1000        |
|                 | <b>Total</b>               | <b>\$8000</b> |