Local Planning Committee
Agenda

Date:	Wednesday, July 17, 2019
Time:	3:30 pm - 4:30 pm
Location:	Electronic meeting, Public venue Islands Trust 200-1627 Fort Street Victoria, BC V8R 1H8

Pages

1. CALL TO ORDER 3:30 PM - 3:30 PM

2. APPROVAL OF AGENDA

3. BUSINESS

3.1 Saltwater Intrusion Risk Mapping Project - RFD 2 - 4

4. NEXT MEETING

August 22, 2019, 10:00 - 2:00 GoToMeeting/Conference call

5. ADJOURNMENT 4:30 PM - 4:30 PM

REQUEST FOR DECISION

To:	Local Planning Committee	**For the Meeting of:**	July 17, 2019
From:	**William Shulba, P.Geo** **Senior Freshwater Specialist**	**Date Prepared:**	July 3, 2019
SUBJECT:	**Saltwater Intrusion Risk Mapping Project**		

RECOMMENDATIONS:

1. That the Local Planning Committee add "Saltwater Intrusion Risk Mapping" to the work program as a top priority.

2. That the Local Planning Committee authorize an allocation of $10,000 from the Local Planning Committee projects budget to the "Saltwater Intrusion Risk Mapping" project.

DIRECTOR COMMENTS:
This project will address concerns raised with the implementation of the Salt Water Intrusion Risk mapping that was previously undertaken by the Ministry of Forest, Lands, Natural Resource Operations and Rural Development. The work will assist local trust committees in developing land use regulations that are adaptive to climate change and reduces risk of salt water intrusion into groundwater aquifers.

1 PURPOSE:

The purpose of this Request for Decision (RFD) is to request authorization for funding of a Saltwater Intrusion Risk Mapping collaborative project between Islands Trust and the Ministry of Environment & Climate Change Strategy (ENV) and the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD).

The main goals of the project will be to complete saltwater intrusion risk mapping for all coastal areas of B.C. including Southern and Northern Gulf Islands, Discovery Islands, Sunshine Coast, Howe Sound, Mainland Coast, Vancouver Island and West Coast of Vancouver Island, Central Coast, North Coast, and Haida Gwaii. The $10,000 funding would off-set some of the cost of undertaking this mapping project in the Islands Trust Area, and re-doing the mapping already completed by FLNRORD for the Southern islands.

This results of this project will be useful in any area where groundwater is currently in use. It can be used by local trust committees for land-use decision making, and by Provincial groundwater authorizations staff's decision making.

2 BACKGROUND:

Salt water intrusion (SWI) occurs when saline water intrudes into a freshwater aquifer. The intrinsic vulnerability to saltwater intrusion is higher for peninsulas and smaller islands, areas with subdued topography and limited sources of recharge, in proximity to the shoreline. Groundwater demand from

individual higher capacity wells or a high density of lower productivity wells increases saltwater intrusion risk.

Climate change impacts including sea level rise, storm surges and wave over-topping of coastal aquifers are also expected to increase saltwater intrusion risk to freshwater supplies in coastal aquifers. Approximately four out of five B.C. residents live in coastal areas and the six of the eight regional districts with the greatest population densities in B.C. occur in coastal areas in the lower mainland, eastern Vancouver Island and the southern Gulf Islands. There are over 18,000 registered wells within 1 km of the B.C. coastline, or roughly 16% of wells in the province.

Under the *Water Sustainability Act* S. 58, it is not permitted to operate a well in a manner that causes intrusion of saline groundwater or sea water into a freshwater aquifer or to stream hydraulically connected to a freshwater aquifer.

A methodology for assessment of the risk of salt water intrusion in BC's coastal bedrock aquifers has been developed by Klassen (2016) under the supervision of Dr. Diana Allen. This methodology has been applied to the southern Gulf Islands (Saturna to Gabriola Islands) and is currently published as a data layer within the BC Data Catalogue (https://catalogue.data.gov.bc.ca/).

Islands Trust staff and affected local trust committees indicated issues with the mapping and the implementation of it in the Southern Gulf Islands. In follow-up meetings with FLNRORD, Islands Trust and FLNRORD Staff agreed that the methodology of the Saltwater Intrusion Risk model needed to be revisited due to the need to expand the mapping beyond the Southern Gulf Islands, and due to concerns about the well density method and how unique land features like peninsulas were addressed.

The project will be managed by FLNRORD and sent for Request for Proposal in July, 2019. The work is to be completed by a consultant by February 2020.

3 IMPLICATIONS OF RECOMMENDATION

ORGANIZATIONAL: There are no organizational implications.

FINANCIAL: This project would use $10,000 of the $25,000 funding allocated for Local Planning Committee projects, leaving $15,000 for other projects this Fiscal Year.

POLICY: There are no policy implications.

IMPLEMENTATION/COMMUNICATIONS: Staff would work with Island Trust finance on appropriate means to transfer funds for this project.

FIRST NATIONS: There are no First Nations implications.

OTHER: There are no other implications.

4 RELEVANT POLICY(S):

- 6.5.3 Procurement Policy

5 ATTACHMENT(S):

- No attachments

RESPONSE OPTIONS

Recommendations:

1. That the Local Planning Committee add "Saltwater Intrusion Risk Mapping" to the work program as a top priority.

2. That the Local Planning Committee authorize an allocation of $10,000 from the Local Planning Committee projects budget to the "Saltwater Intrusion Risk Mapping" project.

Alternative:

1. That the Local Planning Committee not authorise funding for this project and request Islands Trust to withdraw from collaboration with the Provincial Saltwater Intrusion Risk Mapping Project.

Prepared By: **William Shulba, P.Geo, Senior Freshwater Specialist**

Reviewed By/Date: **David Marlor, Director Local Planning Services / July 3, 2019**