



DATE OF MEETING: April 28, 2020

TO: Salt Spring Island Local Trust Committee

FROM: Jason Youmans, Island Planner
Salt Spring Island Team

CC: William Shulba, P. Geo, Senior Freshwater Specialist, Islands Trust
Salt Spring Island Watershed Protection Alliance

SUBJECT: Water Sustainability Project – Update and Next Steps

RECOMMENDATIONS

Master Project

1. That the Salt Spring Island Local Trust Committee amend and endorse Water Sustainability Master Project Charter Version 9 in accordance with Appendix 1 of the staff report dated April 28, 2020.

Sub-Projects

2. That the Salt Spring Island Local Trust Committee rename its “Groundwater Preservation Project” to “Groundwater Sustainability Strategy.”
3. That the Salt Spring Island Local Trust Committee direct staff to continue groundwater well and lake monitoring for the 2020/21 fiscal year per Groundwater Sustainability Strategy Project Charter Version 9 attached as Appendix 2 to the staff report dated April 28, 2020.
4. That the Salt Spring Island Local Trust Committee (LTC) direct staff to provide the LTC with a project charter for a long-term groundwater well and lake monitoring plan
5. That the Salt Spring Island Local Trust Committee direct staff to develop a project charter to amend the Salt Spring Island Land Use Bylaw to include a terms of reference for groundwater well pumping tests to be provided at time of subdivision in accordance with Water Sustainability Act and applicable provincial guidance documents.

REPORT SUMMARY

The purpose of this report is to provide the Salt Spring Island Local Trust Committee (LTC) with a comprehensive update about ongoing projects under its Water Sustainability Project, and recommend incremental next steps for LTC consideration. These next steps include:

- Updating project charters
- Ongoing well and lake monitoring

- Limited regulatory and policy changes

This report also provides information about a suite of major Water Sustainability sub-projects that the LTC could consider. Information about these larger projects is provided for LTC discussion and to set the stage for LTC direction later this, or in future, fiscal years.

Next steps in the Water Sustainability project will depend on the LTC's allocation of staff time and project funds to the subject of water sustainability relative to other LTC priorities.

BACKGROUND

Water Sustainability Project

The LTC has maintained Water Sustainability – formerly known as Watershed Management – as a priority project since 2013. The master project charter for the Water Sustainability Project has not been updated since 2016. Staff recommend that the LTC update it in accordance with the blackline version provided in Appendix 1 to reflect the evolution of the project since that time.¹

The master project charter for the Water Sustainability Project divides the project into two streams: (1) Land Use Planning for Watershed Management, and (2) Coordination of the Salt Spring Island Watershed Protection Alliance (SSIWPA). See Appendix 3 for a flow chart that shows the current components of the greater Water Sustainability Project and how proposed new projects may fit into it.

1) Land Use Planning for Watershed Management

The purpose of the “Land Use Planning for Watershed Management stream of the Water Sustainability Project” is to consider the regulatory and policy framework that applies to freshwater management on Salt Spring Island, and consider appropriate Official Community Plan and Land Use Bylaw amendments to address emergent issues.

Projects under the Land Use Planning for Watershed Management project stream are under the exclusive domain of the Salt Spring Island Local Trust Committee. They are managed by either Islands Trust planning staff, or the Senior Freshwater Specialist. Projects within this stream may be initiated on the recommendation of the Salt Spring Island Watershed Protection Alliance (SSIWPA) and may be coordinated, in part, by the SSIWPA coordinator. Generally, these projects are funded through the LTC's project budget. In recent years, the Islands Trust Senior Freshwater Specialist has led projects within this stream. These recent projects have consisted of accumulating and analyzing the data necessary to inform future regulatory and policy amendments.

¹ This project charter format predates the current Islands Trust Project Charter template. However, staff wished to use the old version to clearly show the changes being proposed in this update. Staff will convert the charter to a current format once proposed or additional changes are endorsed.

Currently, the only active project within in this stream is the Groundwater Well and Lake Monitoring Pilot Project.

Through this pilot project, carried out with financial contributions from the Real Estate Foundation of British Columbia, the Capital Regional District, Ministry of Forests, Lands, Natural Resources, and the LTC, Islands Trust staff and the SSIWPA coordinator have put 13 domestic groundwater wells and 4 lakes under observation with automated monitoring equipment. These monitors are measuring water level fluctuations and temperature changes. Select monitoring locations also measure salinity. All groundwater wells were volunteered by Salt Spring Island community members or organizations. Overall, the volunteers are positive on the experience of the pilot and many have suggested that they would like to continue in a long term monitoring project.

This pilot project closed out at the end of March 2020. The Senior Freshwater Specialist will report to the LTC the conclusions of this pilot project at a future LTC meeting. The LTC must determine what role it will play in maintaining an ongoing well and lake monitoring regime. See “Issues and Opportunities” below.

The most recent completed project undertaken within the Land Use Planning for Watershed Management Project stream was the [Salt Spring Island Groundwater Recharge Potential Mapping Report](#) which was received by the LTC in October 2019.

2) *Coordination of the Salt Spring Island Watershed Protection Alliance (SSIWPA)*

The LTC has been coordinating SSIWPA since 2013 using delegated authority from the Islands Trust Council (*Islands Trust Act*, Section 8(2)b), via Trust Council [Bylaw No. 154](#). SSIWPA provides a forum within which to engage multi-jurisdictional planning for the sustainability and protection of freshwater resources on Salt Spring Island. The purpose of SSIWPA is to:

- Provide a framework for freshwater resources in the Salt Spring Island Local Trust Area to be managed in a manner that integrates and considers both human and ecosystem needs through integrated planning, policy development and recommendations for implementation by member agencies and organizations;
- Advise on policies of regional, local and provincial government organizations that are related to freshwater resources; and
- Coordinate the implementation of those policies.

The SSIWPA [Terms of Reference \(ToR\)](#) provides guidance for how the member agencies collaborate and provide a framework for the scope of work undertaken.

At its regular meeting of February 18, 2020 the LTC approved a special property tax requisition for the 2020/21 fiscal year of \$75,500 to fund coordination of watershed protection on Salt Spring Island. This special property tax requisition was subsequently approved by Islands Trust Council in its 2020/21 budget March 11.

SSIWPA's 2020/21 work plan is available [here](#). Recently, the SSIWPA coordinator has been assisting a working group in the development of rainwater harvesting guidance for Salt Spring Island. Visit the [SSIWPA website](#) for more information.

Previous projects of SSIWPA included:

- Development of the [St. Mary Lake Integrated Watershed Management Plan](#)
- Work toward development of an Integrated Watershed Management Plan for Salt Spring Island
- Strategic planning to develop a Water Sustainability Framework for Salt Spring Island

SSIWPA holds regular meetings and continues to engage and communicate with the community on matters of water sustainability through its coordination of the annual rainwater harvesting tour and other initiatives.

Issues and Opportunities

Water Sustainability Project – Next Steps

With the close of the Groundwater Well and Lake Monitoring Pilot Project, the LTC will have no active projects under its Land Use Planning for Watershed Management project stream. This will leave ongoing SSIWPA coordination as its only Water Sustainability Project.

Thus, the LTC should determine what, if any, new projects it wishes to initiate under its Water Sustainability Project.

Staff have developed the following list of potential projects for the LTC's consideration. First are two projects that can be undertaken immediately. Second are several projects that the LTC may wish to consider for the future.

Near-Term Projects

1) *Groundwater Well and Lake Monitoring*

The groundwater monitoring stations installed in 13 volunteered groundwater wells and 4 lakes through the LTC's Salt Spring Island Groundwater Well Monitoring Pilot Project were purchased through LTC project funds, Islands Trust Science and Technical budget funds, and contributions from the Capital Regional District and The Ministry of Forests, Lands and Natural Resource Operations. Data downloads and management was completed by Islands Trust Senior Freshwater Specialist and reporting of the outcomes will be presented at a future LTC meeting.

Given agency investments in the pilot project to date, and given the recommended need for information about the Island's ground-and-surface water resources by government agencies, consulting professionals, and researchers, staff recommend that groundwater and lake monitoring be developed as a long term project. Data from longer term monitoring will help inform future policy and regulatory changes.

In the short term, covering fiscal 2020/21, Islands Trust Senior Freshwater Specialist can provide data collection from the loggers and ancillary technical and data management support for the coming year (see project charter in Appendix 2). It is anticipated that the SSIWPA coordinator can provide ancillary coordinating support as was the

case during the pilot project. However, a longer term plan that requires less staff time in the field is required and should be resourced accordingly.

Staff suggest the following options, or some combination of the three, are available for a long term monitoring project:

i) Islands Trust Managed/Islands Trust Implemented

- Senior Freshwater Specialist collects data from the various loggers on behalf of the LTC
- Collected data could be stored, managed and analyzed by Islands Trust staff
- The SSIPWA Coordinator can also carry out some project coordination work

ii) Islands Trust Managed/Contractor Implemented

- Islands Trust contracts a contractor to collect data from the various loggers on behalf of the LTC
- Collected data could be stored, managed and analyzed by Islands Trust staff
- The SSIPWA Coordinator can also carry out some project coordination work

iii) Islands Trust Managed/Citizen Scientist Implemented

- Local community groups engaged in water monitoring activities could be commissioned to collect data from the various loggers on behalf of the LTC. This would require training those groups to provincial standards.
- Collected data could be stored, managed and analyzed by Islands Trust staff.
- The SSIPWA Coordinator can also carry out some project coordination work.

A challenge with all three of the models noted above is that the LTC project funding model is not presently set up for multi-year projects. Instead, LTC projects are funded on an annual basis, usually with defined beginnings and ends. Additionally, the limited funds available for LTC projects across all Local Trust Areas may be such that the LTC does not wish to allocate its resources to ongoing monitoring. That being said, staff do not anticipate significant costs associated with ongoing monitoring, particularly for options i) and iii) above. Nonetheless, costs may arise that will need to be attended to. Particularly, the end of the project lifespan may require hiring qualified professionals to remove the existing loggers.

Staff will investigate whether long term monitoring could be funded, in part or in whole, through the special property tax requisition for freshwater coordination.

The SSIWPA coordinator has recently updated all of the land owner agreements for the current Volunteer Observation Well groundwater monitoring stations. These agreements should be updated annually.

Staff recommend that ongoing monitoring for the 2020/21 fiscal year be done primarily by the Senior Freshwater Specialist according to this workload, but that the LTC also direct staff to provide a preliminary report about a long-term monitoring plan.

2) *Proof of Water (Targeted Bylaw Amendment)*

The Salt Spring Island Watershed Protection Alliance (SSIWPA) has identified “Proof of Water” as a priority project to which the LTC should turn its attention. In short, this project would constitute an investigation of what the Local Trust Committee should demand of applicants in terms of potable water information when development is proposed. Such a project would explore both quantity requirements and supporting documentation.

A sub-set of the larger issues on which this project would touch is an identified need to amend the Salt Spring Island Land Use Bylaw to provide greater clarity on the nature or groundwater information to be provided by applicants at time of subdivision.

Currently, regarding provision of groundwater at time of subdivision, the Land Use Bylaw states:

5.5.5 Where water is to be supplied by groundwater, the applicant for *subdivision* must provide written certification under seal of an *engineer* with experience in groundwater hydrology that there is sufficient available groundwater to provide the required amount of *potable* water on a continuous basis, and that the extraction from the groundwater table of that amount of water is not reasonably expected to adversely affect the quantity or quality of water obtainable from any existing well or surface water that is used as a source of *potable* water.

5.5.7 For the purposes of the certification referred to in Subsection 5.5.5, the *engineer* must supply supporting documentation of a pump test conducted by the *engineer* which must indicate that the test was of sufficient duration to establish the long term reliability of the water supply in accordance with generally acceptable hydrological engineering practices.

Since joining Islands Trust in 2017, the Senior Freshwater Specialist has assessed well tests that Islands Trust receives from applicants as part of the subdivision referral process from the Ministry of Transportation and Infrastructure (MOTI). The Senior Freshwater Specialist has concluded that recent “pumping tests” submitted at time of subdivision are insufficient to draw the conclusions required by Land Use Bylaw Sections 5.5.5. and 5.5.7 and may not meet the Ministry of Environment and Climate Change Strategy published guidelines for technical assessment of groundwater use in British Columbia. As such, the Senior Freshwater Specialist recommends that the Land Use Bylaw should be amended to include a terms of reference that details the specific groundwater information applicants and their hired professionals should provide in order to ensure consistency with the Ministry of Environment and Climate Change Strategy guidelines for such.

Undertaking such a bylaw amendment will not require significant staff resources. Staff anticipate that project costs would be limited to those required to do targeted consultation and host a public hearing, which is typically in the order of \$1,500 to \$2,000.

The impact on subdivision applicants of such a bylaw amendment is that the cost of securing a pumping test at time of subdivision will rise. Currently, staff are receiving subdivision applications utilizing “well yield tests” that have been carried out for as little as four hours. Senior Freshwater Specialist advises that these should not be considered “pumping tests” sufficient to address policies in the LUB and OCP around sufficient and sustainable groundwater withdrawal for the life of the development, potential impacts to neighbouring wells, and the environment. The Provincial guidelines suggest that in fractured bedrock aquifers “pumping tests” should be conducted for a duration of 72-hours. A risk assessment could inform this requirement and perhaps in areas with lowered risk pumping tests could be carried out for between 24 and 48 hours. Pumping tests require “direct” supervision from a qualified professional as defined in the Water Sustainability Act, which may include remote management of registered pump installers or well drillers to carry out the pumping test. Different types of subdivisions could warrant a different groundwater information standard.

The primary purpose of this proposed bylaw amendment would be to bring greater clarity to staff expectations about groundwater information to be provided by applicants, and in doing so avoid disagreements about whether the information provided is satisfactory.

While staff consider that a full review of land use bylaw requirements and official community plan policies concerning provision of potable water at time of development is warranted (see “Proof of Water – Full Project” below), the LTC may wish to start with the small step of updating the land use bylaw to include a terms of reference for groundwater information at time of subdivision.

Longer Term Projects

3) *Proof of Water (Full Project)*

Since the North Salt Spring Waterworks District introduced a moratorium on new connections to its system in 2015, the LTC has received a number of multi-family rezoning applications proposed to be serviced by groundwater. In each of these, staff and the LTC have struggled with questions about the volume of water that should be required to adequately service these developments, and what degree of knowledge about underlying groundwater resources is required to confidently advance proposals that arise. This suggests that there may be a need to amend the Salt Spring Island Land Use Bylaw or Salt Spring Island Official Community Plan to provide greater regulatory or policy clarity about water volumes and supporting documentation required for development.

Investigation of this could involve contracting a firm with expertise in groundwater science to review best practices and consult with affected parties to determine their respective jurisdictions and interests. However, staff recognize that such bylaw amendments would not be a matter of technical knowledge alone, but rather also one of community values and agency jurisdiction. The deliverable of such a project would be recommended Land Use Bylaw and Official Community Plan amendments to better equip staff and the LTC to preserve water resources and ensure the long term viability of groundwater-based water systems for development, including multi-family.

Supporting this project is the fact that the Salt Spring Island Watershed Protection Alliance (SSIWPA) has identified “Proof of Water” as a priority project and recommends that LTC be the lead agency on its implementation. SSIWPA and its coordinator could play a role coordinating this project. If the LTC determines that it would like more detailed information on the scope of such a project it can direct staff to provide a preliminary project charter and corresponding staff report for such.

4) *Regional Groundwater Availability and Climate Change Assessment*

The primary recommendation to emerge from the 2019 [Groundwater Recharge Potential Mapping Report](#) was that Salt Spring Island would benefit from a detailed regional groundwater budget study. The recharge report states:

1. *A detailed water budget study is recommended to properly manage the water resource on Salt Spring, combined with the improved knowledge gained from the completed aquifer recharge study. The scale at which water budgets should be completed must be selected based on the large variability in groundwater recharge across the Island. For instance, estimating a water budget at the groundwater sub-region scale might be adequate for the island.*

Regional groundwater availability and climate change assessment is an investigation of water inputs and outputs at the watershed scale in a changing climate. These assessments are desktop studies that use existing data and information; including but not limited to; groundwater recharge, environmental flow needs, domestic water use, meteorology, hydrology, geoscience, land use, development potential, and the influence of a changing climate.

Regional groundwater availability assessments are a useful tool to identify regions for water conservation and aquifer protection in addition to identifying potential regions for community groundwater supply wells and desirable locations for increased residential density projects.

A water budget study would be undertaken by a qualified consulting firm. See table below for anticipated project costs.

5) *Drinking Water and Watershed Protection (DWWP) Plan*

The Regional District of Nanaimo has recently completed a [10 year review and update](#) to its 2009-2019 [Drinking Water and Watershed Protection Plan](#). The Cowichan Valley Regional District is in the process of developing a Drinking Water and Watershed Protection Plan of its own.

A Drinking Water and Watershed Protection Plan (DWWP) articulates the goals and objectives relating to water for community needs and for ecosystem requirements, from a lens that recognizes water does not conform to political boundaries, and watershed management needs to include different governments and agencies working together, often with external partners. A Drinking Water and Watershed Protection Plan would recommend key initiatives and actions to pursue those ends, potentially within the key thematic areas of:

- Water Awareness and Stewardship
- Water Information and Science
- Water-Centric Planning and Policy Support

The Salt Spring Island Local Trust Committee has approximately \$79,000 in unspent special property tax requisition funds that were raised under Bylaw No. 154 to support the coordination of water policy on Salt Spring Island. These funds could be deployed in the service of developing a DWWP for Salt Spring. The benefit of a DWWP is that it provides clear direction to all agencies and interested parties about the Island's priorities for fresh water, and where each agency/community group should focus its efforts to achieve the objectives of the plan. Currently, focus areas for freshwater management are determined at the SSIWPA Steering Committee on a year-by-year basis through work planning workshops. A DWWP would provide certainty regarding the short and long term initiatives around freshwater.

Development of a Drinking Water and Watershed Protection Plan will require support from all agencies with jurisdiction over the Island's freshwater resources.

As a preliminary step toward potential development of a Drinking Water and Watershed Protection Plan staff recommend that the LTC direct staff to bring this matter up for discussion at the Salt Spring Island Watershed Protection Alliance Steering Committee and to identify potential available grant money to top up estimated required expenditures.

Project Summary

Potential next steps in the LTC’s Water Sustainability project are summarized in the table below.

WATER SUSTAINABILITY - POTENTIAL PROJECTS				
Land Use Planning for Watershed Management				
Proposed Project	Budget Estimate (\$)	Budget Source	Timeline	Staff Resources
Water Budget	\$15,000 - \$20,000	LTC Project Budget	1 year	Low to Medium
Proof of Water (Full Project)	\$6,500 - \$10,000	LTC Project Budget	1 to 2 years	Medium to High
Proof of Water (Subdivision Terms of Reference)	\$1,000 to \$2,000	LTC Project Budget	6 months	Low to Medium
Coordination of the Salt Spring Island Watershed Protection Alliance (SSIWPA)				
Proposed Project	Budget Estimate (\$)	Budget Source	Timeline	Staff Resources
Drinking Water and Watershed Protection Plan (DWWP)	\$100,000 (based on experience of RDN and CVRD)	Previously unspent Special Property Tax Requisition + feasible grants	1.5 – 2 years	Medium to High
Community Well Monitoring Network	\$0 to \$5,000 annually	LTC Project Budget or Special Property Tax Requisition	1 year - perpetuity	Low to Medium

Special Property Tax Requisition – Unspent Funds

At close of fiscal 2019/20, the Salt Spring Island Local Trust Committee has approximately \$79,000 in unspent special property tax requisition funds that were raised under Bylaw No. 154 to support the coordination of water policy on Salt Spring Island

Of the potential projects identified in this staff report, only the development of a Drinking Water and Watershed Protection Plan falls clearly within the coordinating purposes for which the tax requisition was originally sought. Nonetheless, there may opportunities to use the SSIWPA table and its coordinator’s time in the execution of other projects.

The LTC should consider whether any proposed spending of the to-now unspent special property tax requisition funds are consistent with the [analysis](#) provided by Islands Trust Directors of Local Planning Services and Administration in February 2020.

ANALYSIS

Policy/Regulatory

Both the Islands Trust Policy Statement and the Salt Spring Island Official Community Plan contain policies to guide LTC decisions about freshwater management.

Islands Trust Policy Statement

See Appendix 3

Salt Spring Island Official Community Plan

See Appendix 3

Bylaw No. 154

[Bylaw No. 154](#), passed by Trust Council in 2013, delegates certain authorities from Trust Council to the Salt Spring Island Local Trust Committee in order to assist in the development of, and coordinate the implementation of, policies around freshwater.

Rationale for Recommendation

Master Project

- 1. That the Salt Spring Island Local Trust Committee amend and endorse Water Sustainability Master Project Charter Version 9 in accordance with Appendix 1 of the staff report dated March 24, 2020.**

The Master Project Charter for the LTC’s Water Sustainability Project has not been updated since 2016. It should be updated to reflect the evolution of the project to date.

Sub-Projects

2. **That the Salt Spring Island Local Trust Committee rename its “Groundwater Preservation Project” to “Groundwater Sustainability Strategy.”**

This recommended language aligns with groundwater project work currently underway in both the Southern and Northern areas of the Islands Trust.

3. **That the Salt Spring Island Local Trust Committee direct staff to continue groundwater well and lake monitoring for the 2020/21 fiscal year per Groundwater Sustainability Strategy Project Charter Version 9 attached as Appendix 2 to the staff report dated April 28, 2020.**

If the LTC is to continue to monitor groundwater well and lake levels for the coming fiscal year using the monitoring stations purchased for the Groundwater Well and Lake Monitoring Pilot Project, doing so should be guided by a project charter that explains the scope of the project and assigned roles and responsibilities.

4. **That the Salt Spring Island Local Trust Committee direct staff to provide the LTC with a project charter for a long-term groundwater well and lake monitoring plan**

As noted above, the senior freshwater specialist can provide ongoing data gathering from the existing monitoring stations using staff time. However, a plan should be in place to ensure the long term viability of a monitoring project if such is to continue on the LTC’s behalf.

5. **That the Salt Spring Island Local Trust Committee direct staff to develop a project charter to amend the Salt Spring Island Land Use Bylaw to include a terms of reference for pumping tests to be provided at time of subdivision in accordance with the Water Sustainability Act and applicable provincial guidance documents.**

Islands Trust Senior Freshwater Specialist has identified this as a priority regulatory change to protect the Island’s groundwater resources, and to ensure Islands Trust requirements align with Government of British Columbia guidance documents for pumping tests.

ALTERNATIVES

1. **Direct staff to consult the Salt Spring Island Watershed Protection Alliance Steering Committee on next steps in the LTC’s Water Sustainability Project.**

The LTC may determine that it has insufficient information to prioritize next steps in its Water Sustainability Project. As such, it may wish to draw on the advice of the SSIWPA Steering Committee to suggest which project(s) to take on next.

A potential resolution to action this is as follows:

That the Salt Spring Island Local Trust Committee requests that the Salt Spring Island Watershed Protection Alliance Steering Committee review the staff report dated April 20, 2020 and advise the Local Trust Committee on recommended next steps under its Water Sustainability Project.

The implication of this resolution is that staff will ensure that the LTC’s request is on the next SSIWPA Steering Committee agenda and return to the LTC at a future meeting with the results of the Steering Committee’s discussion. The SSIWPA Steering Committee next meets in June.

2. Draft Project Charters

If the LTC would like further information on any of the major sub-projects identified in this staff report (Proof of Water, Water Budget, Drinking Water and Watershed Protection Plan) it can direct that staff provide a draft project charter and corresponding staff report about any of the proposed projects for the LTC’s consideration.

To solicit this additional information the LTC could consider the following resolution:

That the Salt Spring Island Local Trust Committee direct staff to provide a draft project charter and staff report about

The implication of this resolution is that staff will return to the LTC with the requested information. Developing this information will take planner time which will be diverted from other projects or development applications.

3. Identify Alternative Projects

The LTC may have water sustainability project ideas that are not reflected in this staff report. These could include Land Use Bylaw of Official Community Plan amendments. If this is the case, the LTC can describe the nature of the proposed project and request that staff provide a draft project charter or further information about the scope and resource requirements of such a project.

NEXT STEPS

Staff will undertake any directions from the LTC in respect of the LTC’s Water Sustainability Project.

Submitted By:	Jason Youmans, Island Planner	April 21, 2020
Concurrence:	Stefan Cermak, Regional Planning Manager	April 21, 2020

ATTACHMENTS

1. Master Project Charter – Water Sustainability Project – Version 9
2. Project Charter – Groundwater Preservation Project – Version 9
3. Water Sustainability Project Flow Chart (2019/20)
4. Freshwater Policies – Islands Trust Policy Statement and Salt Spring Island OCP



Islands Trust

Salt Spring Island Local Trust Committee

Project Charter: ~~Watershed Management~~ Sustainability

Creation Date: April 25, 2013

Last Updated: ~~November 19, 2016~~Version: ~~8-9~~

~~April 20, 2020~~

Purpose

This project aims to address water quality and quantity issues on Salt Spring Island. The purpose of this Project Charter is to guide the overall program for **freshwater sustainability** ~~watershed management~~ on Salt Spring Island. Individual project charters will be developed to support components of this work.

1. Coordination of the Salt Spring Island Watershed Protection Authority ~~Authority~~ **Alliance**:
 - The Salt Spring Island Local Trust Committee (SSI LTC) coordinates and participates in the Salt Spring Island Watershed Protection Authority ~~Authority~~ **Alliance**, which entails collaborating with a number of different agencies that have a responsibility for, **or an interest in**, ~~for watershed~~ freshwater management and ~~potable~~ **drinking** water supply.
 - Funding for this coordination is through a Special Property Tax Requisition from the Salt Spring Island Local Trust Area.
2. Land Use Planning for Watershed Management:
 - Consider the Local Trust Area's regulatory and policy framework applicable to watershed management in drinking watersheds **and the fresh water supply on Salt Spring Island generally**, and consider appropriate Salt Spring Island Official Community Plan and Land Use Bylaw amendments.
 - **Gather data and conduct analyses to inform policy and regulatory changes.**
 - Funding for the land use planning is through the Trust Council budget for Salt Spring Island Local Trust Committee Projects.

Background

In 2012, the Salt Spring Island Local Trust Committee (LTC) identified watershed management as one of its top priorities. This project is supported by the Islands Trust Council 2014-2018 Strategic Plan Strategy 4.1 "Coordinate with other agencies to protect water quality and quantity."

The Salt Spring Island Local Trust Committee has received additional powers from Trust Council (under [Bylaw No. 154](#)), to enable it to take a leadership role in coordinating the multiple agencies involved in watershed management. Bylaw 154 delegates the SSILTC the powers (from *Islands Trust Act* section 8.2(b)) to:

- *coordinate and assist in the determination* of regional, improvement district and government of British Columbia policies;
- *coordinate the implementation and carrying out* of regional, improvement district and government of British Columbia policies.

Under this authority, the LTC coordinated the establishment of the Salt Spring Island Watershed Protection Authority (SSIWPA) in 2012. **In 2018 the organization's name was changed to the Salt Spring Island Watershed Protection Alliance.** The [Salt Spring Island Watershed Protection Authority Alliance](#) is composed of a steering

committee, a technical working group, and a conservation and efficiency working group. It ~~can use~~ relies on advice from public advisory committees from time to time to address issue specific objectives. The work of SSIWPA is guided by its [Terms of Reference](#), which includes the following ~~mission~~ purpose statement: “~~To cooperate on the development and implementation of policies and initiatives for improved raw water quality, and coordinated management of quantity of Salt Spring island water sources.~~”

- Provide a framework for freshwater resources in the Salt Spring Island Local Trust Area to be managed in a manner that integrates and considers both human and ecosystem needs through integrated planning, policy development and recommendations for implementation by member agencies and organizations;
- Advise on policies of regional, local and provincial government organizations that are related to freshwater resources;
- Coordinate the implementation of those policies.

SSIWPA was originally created in response to severe water quality problems in St. Mary Lake. It undertook technical analysis and community engagement, and adopted the [St. Mary Lake Integrated Watershed Management Plan](#) in 2015.

~~In 2016, SSIWPA has initiated an “integrated watershed management program,” in recognition Salt Spring Island’s need for sustainable water use. The program aimed to quantify the volume of freshwater available for human use and to identify ways to maximize the efficiency, with the overall purpose “to ensure a sustainable supply of fresh water, and to protect against over demand and degradation of the resource and the natural systems that depend on it.” (SSIWPA website: <http://ssiwatersheds.ca/water-supply-conservation/>). This may include recommendations to amend Salt Spring Island’s Official Community Plan and Land Use Bylaw, and perhaps to limit further densification in areas where water quantity sensitivities exist.~~

~~Following a strategic planning process in 2017, SSIWPA’s focus changed to developing a framework for freshwater management on the island.~~

SSIWPA brings together the individual authorities of representative agencies that have responsibility for water management, environment, land use planning, public health, and the delivery of potable drinking water. ~~SSIWPA, however, does not have any formal authority, but SSIWPA does not have any formal authority itself.~~ As a participant in SSIWPA, the Salt Spring Island Local Trust Committee can offer its authority to use planning to regulate land use on Salt Spring Island.

Project Objectives

- Coordinate and resource the work of the Salt Spring Island Watershed Protection Authority Alliance.
- ~~Formalize the Salt Spring Island Watershed Protection Authority Alliance to ensure agency commitment.~~
- ~~Implement the results of the “integrated watershed management program” on an incremental basis, as appropriate.~~
- ~~Coordinate the implementation of individual watershed management plans for Salt Spring Island’s surface water supplies.~~
- Coordinate the protection and sustainable use of Salt Spring Island’s ~~groundwater~~ freshwater supplies.
- Develop amendments to the Salt Spring Island Official Community Plan and Land Use Bylaw for the protection and sustainable use of Salt Spring Island’s ~~groundwater~~ freshwater supplies.

Project Deliverables

Coordination of the Salt Spring Island Watershed Protection Alliance

- Ongoing coordination of the Salt Spring Island Watershed Protection Authority Alliance, managed through a third party contact.
- Annual Salt Spring Island Special Property Tax Requisition requests to Trust Council.
- Creation of coordination agreements/memorandums of understanding with other member agencies of the Salt Spring Island Watershed Protection Authority Alliance.
- Develop a Drinking Water and Watershed Protection Plan (DWWP) for Salt Spring Island
- Coordinate the gathering of data, to inform future regulatory or policy changes to land use to protect freshwater resources.
- Coordinate the implementation of the St. Mary Lake Integrated Watershed Management Plan
- Coordinate implementation of other Salt Spring Island watershed management plans, as appropriate.
- Communications and public engagement concerning the Island's fresh water supplies

Land Use Planning for Watershed Management

- Gather data to inform future regulatory or policy changes to land use to protect freshwater resources.
- Identification of land use planning and other tools to protect and manage watershed health, including groundwater and surface water.
- Update Official Community Plan, Land Use Bylaw, and any other relevant policies or regulations to implement the results of the integrated watershed management program for the protection and sustainable use of Salt Spring Island's groundwater freshwater supplies.
- Coordinate the implementation of the St. Mary Lake Integrated Watershed Management Plan and the updated Cusheon Lake Watershed Management Plan, including amendments to the Official Community Plan and Land Use Bylaw as appropriate.
- Coordinate implementation of other Salt Spring Island watershed management plans, as appropriate.
- Assist with the development of a Salt Spring Island Water Conservation and Water Demand Management Plan for the North Salt Spring Waterworks District.

Project Scope

In Scope	Out of Current Project Scope
<ul style="list-style-type: none"> • <i>Coordinate and assist</i> in the determination of the policies of a regional district, improvement district or the government of British Columbia; and to <i>coordinate</i> (not assist) in the implementation, and carrying out of the policies of a regional district, improvement district or the government of British Columbia (Bylaw 154). • Coordinate the Salt Spring Island Watershed Protection Authority Alliance (SSIWPA). • Contract manage coordination of SSIWPA and other third party contracts required to carry out the work. • Oversee the Terms of Reference for SSIWPA, the and Technical Advisory Committee (TWG), the Conservation and Efficiency Working Group (CEWG). • Facilitate a Special Property Tax Requisition for the Salt Spring Island Local Trust Area to fund coordination on an annual basis. • Facilitate multi-stakeholder watershed management Drinking Water and Watershed Protection planning process. • Consider land use planning tools to improve groundwater and surface watershed management. • Collection, or coordination of the collection, and subsequent analysis, of data • Facilitate cooperation agreements and letters of agreement with other member agencies. • Coordinate collaborative broader policy development to be implemented by SSIWPA and its member agencies. 	<ul style="list-style-type: none"> • Carrying out capital works or the implementation of other agencies' policies • Assisting in the implementation and carrying out of the policies of a regional improvement district or the government of British Columbia • consideration of the SSI LTC's Rural Watershed Program

Stakeholders

Technical Working Group

The Salt Spring Island Watershed Protection Authority Alliance created a Technical Advisory Committee in October 2013 to objectively assess research to date, identify gaps in the information, and research solutions. The committee was reformed as a Technical Working Group in September 28, 2015 and holds regular business meetings several times a year.

~~Conservation and Efficiency Working Group~~

~~In October 2014, the Salt Spring Island Watershed Protection Authority began drafting Terms of Reference for a Water Quantity Committee. The purpose of the Water Quantity Committee is to assess quantity of potable water supply from Salt Spring Island surface and ground watersheds as well as design and evaluate improvements as directed by SSIWPA.~~

Public Advisory Committees

The Salt Spring Island Watershed Protection Authority establishes Public Advisory Committees (PAC) on an as needed basis. The Salt Spring Island Watershed Protection Authority created a Public Advisory Committee in October 2014 to advise SSIWPA on the St. Mary Lake Integrated Watershed Management Plan. The committee was disbanded upon delivery of the IWMP. Other PACs will be convened at appropriate times.

Salt Spring Island Community

Community participation in reviewing and prioritizing watershed management goals and objectives is central to the success of this project.

First Nations

The Salt Spring Island Watershed Protection Authority has recognized that First Nations are more than stakeholders in this work and that this is a project which may generate interest by First Nations. **Work in this regard to be carried out in consultation with Islands Trust Senior Intergovernmental Policy Advisor.** SSIWPA has previously invited membership on the SSIWPA by First Nations.

Project Budget

- Activities related to land use planning are resourced through the Trust Council annual project budget. For certainty, activities that are customarily associated with land use planning processes include community consultation sessions where regulatory and land use planning tools are being considered.
- The SSI LTC has spent \$5,000 in the 2019/20 fiscal year to obtain the [Salt Spring Island Groundwater Recharge Potential Mapping Report](#). It has requested \$20,000 for the 2017/18 fiscal year. **The LTC has not yet submitted a budget request for the 2020/21 fiscal year for work under its Water Sustainability Project.**
- SSIWPA coordination is funded through the annual Salt Spring Island property tax requisition, administered by Islands Trust. **The LTC has requested a special property tax requisition of \$75,500 for the 2020/21 fiscal year.**
- ~~Please the attached SSIWPA Draft Budget for 2017-18.~~

Project Team Resources

Name	Role	Responsibility
Stefan Cermak, RPM	Project Supervisor	Ensures project aligns with strategic goals, provide adequate project resources.
SSI Local Trust Committee	Project Sponsor	Provides support through maintaining the project as a work program priority.
Island Planner	Project Co-Manager	All project management of the project, lead/ direct all project work.
Senior Freshwater Specialist	Project Co-Manager	Direct all scientific work in pursuit of project objectives
Consultant	Coordinator	Overall coordination of SSIWPA, including supporting budget planning, work plan, community consultation, facilitation, meeting arrangements and other requirements such as agendas, minutes and webposting etc.
Mark Van Bakel	GIS Support	In house, Islands Trust and CRD- as needed
Contractor	Minute Taking	Secretarial Service to SWIPPA including agenda circulation and minute taking.
Planning Team Assistant	Admin support	Minimal in house supplemental support
SSIWPA	Steering Committee	Provide in-kind resources and funding towards achieving project objectives.

Endorsements:

Role	Name	Endorsement Date
Project Supervisor	Regional Planning Manager	November 21, 2016 April 21, 2020
Project Manager	Island Planner	November 19, 2016 April 21, 2020
Project Sponsor	SSI Local Trust Committee	

Water Sustainability: Groundwater Sustainability Strategy - Charter v9

Salt Spring Island Local Trust Committee

Date: April 20, 2020

Purpose: The purpose of this project is to continue to develop long-term coordinated groundwater monitoring of volunteer observation wells and lake monitoring stations on Salt Spring Island. Stable long-term monitoring partnerships yields information and data that enhance freshwater management decisions. Lake and groundwater levels provide a scientific view of the unique elements of watershed and aquifer health in a changing climate on Salt Spring Island. Long-term lake and groundwater monitoring data is the primary need for regional water budgets used to inform land use policy, water allocation planning, and climate adaptation.

Background: Since 2013, the Salt Spring Local Trust Committee (LTC) has advanced watershed protection as a top priority, including coordinating the Salt Spring Island Watershed Protection Alliance (SSIWPA). Since 2017 the LTC has been the lead agency in a SSIWPA-coordinated pilot project supported by a Real Estate Foundation of British Columbia Freshwater Sustainability grant and contributions from SSIWPA member agencies to establish 14 groundwater observation wells and 5 lake monitoring stations on Salt Spring Island. This pilot project ends March 2020.

The pilot continues to successfully collect monitoring data and is managing over 2 million data events. Efficiencies were developed through the pilot project including data management, collection methodology, and sample frequency. Monitoring partnerships were established through the generosity of Salt Spring Island community volunteers.

To continue to action the LTC water sustainability top priority; monitoring and data management by Islands Trust staff should continue for the 2020/21 fiscal year. Over the course of the year staff will develop a durable plan for long term monitoring.

Objectives

- Collect data from groundwater and lake monitoring stations established during Real Estate Foundation of BC Pilot Project. Data collection to occur every 6 months.
- Manage data collected from groundwater and lake monitoring stations.
- Annual report to LTC

In Scope

- Coordination among Islands Trust staff, FLNRO staff and SSIWPA coordinator.
- Map project results; cross reference well data to GWELLS database and enter new records.
- Investigation of long-term monitoring strategy
- Development of methodology for the Volunteer Observation Wells Logger (VOWL) Tool for management of observations data.
- Communicate with Volunteer Observation Well (VOW) owners
- Decommissioning of VOW at request of owners

Out of Scope

- Increasing the number of groundwater and lake monitoring stations established during Real Estate Foundation of BC Pilot Project in 2020.
- Quantification of groundwater balance, use or demand studies
- Consumption metering
- Policy creation

Workplan Overview

Deliverable/Milestone	Date
Data Collection	September 2020
Data Collection	March 2020
Annual Report to LTC	March 2020
Long-term Monitoring Plan	March 2021
Land Owner Relations	Ongoing

Project Team

<i>Jason Youmans</i> , Island Planner	Project Manager
<i>William Shulba</i> , IT Freshwater Specialist	Technical Coordinator
<i>Shannon Cowan</i> , SSIWPA Coordinator	Project Coordinator
<i>Mark van Bakel</i> , IT GIS Coordinator	Information and Mapping Services

Budget

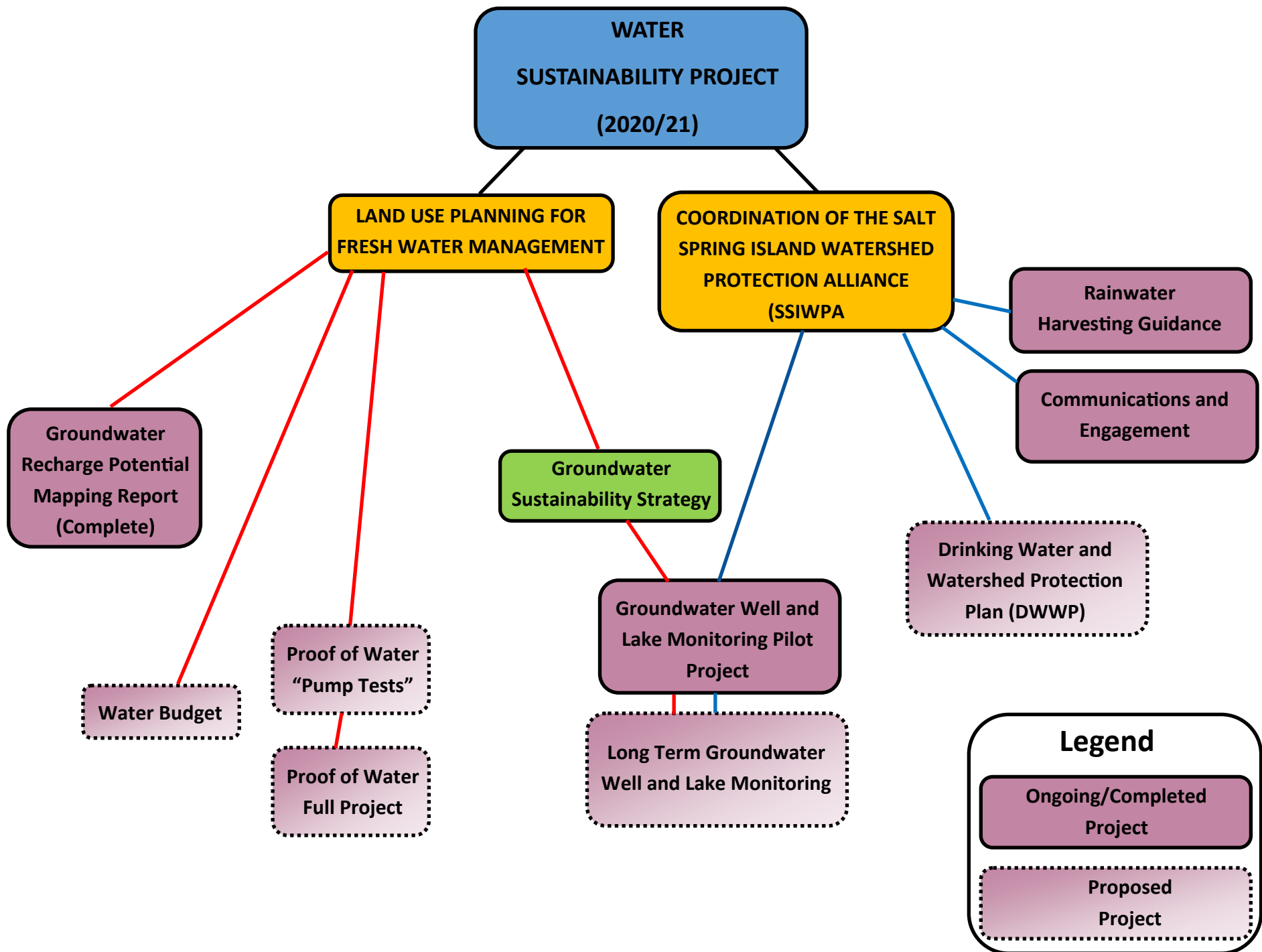
Budget Sources: SSI LTC Water Sustainability - 4014		
Fiscal	Item	Cost
2020/21	Well and Lake Monitoring	\$0
Budget Note —Staff are confident that Islands Trust Senior Freshwater Specialist can undertake all data collection and data management work for fiscal 2020/21. However, the LTC should		

anticipate that changes to the freshwater specialist's job duties or other unexpected issues with monitoring may require LTC project funds to address.

RPM Approval: <i>Stefan Cermak</i> Date: April 20, 2020	LTC Endorsement: Resolution #: Date: xxx

	Total	\$0

PROJECT CHARTER WORK PLAN OVERVIEW				
Deliverable/Milestone	Lead	Staff Time	Cost	Target Date
Establish agreements with well owners and dock owners for monitoring	Stefan Cermak, Islands Trust - 4 hours William Shulba, Islands Trust - 4 hours Shannon Cowan, SSIWPA - 16 hours	8 hrs	N/A	April 2020
Monitoring network download events (change from quarterly to biannually)	William Shulba, Islands Trust	35 hrs	N/A	September 2020 and March 2021
Data management, analysis, and reporting	William Shulba, Islands Trust	70 hrs	N/A	April 2020 — March 2021
Identification of local agency to house and manage monitoring program over time.	Jason Youmans, Islands Trust	35 hrs	N/A	April 2020 — March 2021
		Total = 148 hours		



ISLANDS TRUST POLICY STATEMENT - EXCERPTS

4.4 Freshwater Resources

Commitment of Trust Council

4.4.1 It is Trust Council's policy that islands in the Trust Area should be self-sufficient in regard to their supply of freshwater.

Directive Policies

4.4.2 Local trust committees and island municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure:

- neither the density nor intensity of land use is increased in areas which are known to have a problem with the quality or quantity of the supply of freshwater,
- water quality is maintained, and
- existing, anticipated and seasonal demands for water are considered and allowed for.

4.4.3 Local trust committees and island municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure water use is not to the detriment of in-stream uses¹⁸.

Recommendations

4.4.4 Trust Council encourages island property owners, residents and visitors to adopt conservation practices in their use of freshwater.

4.4.5 Trust Council encourages the Provincial government to implement property tax incentives for the retention of groundwater and watershed recharge areas and freshwater wetlands.

4.4.6 Trust Council encourages the Provincial government to adopt legislation that protects the sustainability and quality of the groundwater of the Trust Area.

4.4.7 Trust Council encourages government agencies, corporations, property owners and residents to use innovative technologies that promote efficient use of freshwater

A.5 THE ISLAND ENVIRONMENT

A.5.1 OBJECTIVES

A.5.1.1 To recognize the intrinsic value of our ecosystems and that the health of our ecosystems is inextricably linked to human health.

A.5.1.2 To maintain and improve the quality of the island's natural environment. To give particular attention to the quality of **fresh** water to sustain healthy fish and wildlife habitat and for human supplies.

A.4.2 Sustainability

A.4.2.1 To recognize the importance of sustainability in all community decisions. To avoid land use decisions that threaten the integrity or sustainability of natural ecosystems.

A.4.2.2 To maintain and restore the community's natural capital represented by such items as our agricultural and forest land base, our **potable** water supplies, and primary value of our natural and unspoiled rural character.

A.4.3 Limits to Growth

A.4.3.1 To continue to focus attention on the finite nature of all of our island's resources, especially those that are drawn from our natural environment.

A.4.3.2 To provide direction for the conservation and stewardship of natural resources, especially our surface and groundwater supply.

A.4.3.3 To reflect the finite nature of islands by identifying limits to residential, commercial and institutional growth tailored to the community's land base and ecological carrying capacity. Special attention should be paid to ensuring that the human use of **potable** water can be sustained without negative impact on other values and uses for natural water bodies.

C.3 POTABLE WATER QUANTITY AND SUPPLY OBJECTIVES AND POLICIES

Background Note: The objectives and policies in this Section pertain to water quantity only. Objectives and Policies about water quality are in Part A.

C.3.1.1 GENERAL OBJECTIVE

- C.3.1.1.1 To apply the precautionary principle in ensuring that the density and intensity of land use is not increased in areas which are known to have concerns with the supply of **potable** water.
- C.3.1.1.2 To acknowledge that the surface water supply sources on the island are finite and remain under Provincial control and that more effective use, management and sharing of the resource should be encouraged to support present commitments and future desired land use decisions.

C.3.1.2 GENERAL POLICIES

- C.3.1.2.1 The Local Trust Committee will continue to support and participate in the Salt Spring Island Water Council.

C.3.2 Community Water Systems

Background Note: Map 6 shows the boundaries of the island's community water systems and their water sources.

C.3.2.1 OBJECTIVES

- C.3.2.1.1 To ensure that the potential water demand of development within community water systems does not exceed the licensed capacity, or the amount of water that can be safely withdrawn from each system's water source.
- C.3.2.1.2 To reduce, delay or avoid the impacts of withdrawing additional water from surface water bodies.
- C.3.2.1.3 To ensure that zoning changes in the North Salt Spring Waterworks District do not result in such a level of development that water cannot be supplied to needed public facilities or would not be available for firefighting purposes. In particular, to ensure that water remains available for hospital and school expansion, and affordable housing.
- C.3.2.1.4 To encourage a variety of conservation methods in all community water systems
- C.3.2.1.5 To ensure that zoning changes within the boundaries of water systems do not result in such a level of demand on island water sources that agricultural activities cannot obtain water.

C.3.2.2 POLICIES

C.3.2.2.1 When the Local Trust Committee receives rezoning applications for land inside the boundaries of a community water system, it will refer the application to the operators of the affected system. They will be asked if water could be supplied to the proposed new development, considering the needs of their existing customers and the provision of water for firefighting, and any properties already zoned for further development. When it considers zoning changes within a community water system, the Local Trust Committee will also consider the amount and percentage of any remaining supply capacity that would be used by the proposed new use. The Committee will not make zoning changes within a community water system if the change would mean water could not be supplied (under the existing license) to existing customers. It should not normally make zoning changes if the change would mean water could not also be supplied to vacant or under-developed properties already zoned for further development. Should such zoning changes be proposed, the applicant could be encouraged to suggest other water supplies so that the application could be considered. Examples are rainwater catchment, groundwater use or a water conservation program.

The Local Trust Committee could make an exception to the above policy within the North Salt Spring Waterworks District to allow community facilities or affordable housing projects to proceed. However such changes should only be made if the Committee is satisfied that the District is likely to receive a sufficiently larger water license.

C.3.2.2.2 In addition to policy C.3.2.2.1, the Local Trust Committee should not make zoning changes within the North Salt Spring Waterworks District that could mean that water will not be available (under the District's existing license) for the following projects (in order of priority):

- a. essential services such as hospitals and schools needed within the district to serve the island's projected population.
- b. special needs and affordable housing needed by the community.

The Local Trust Committee could make an exception to this policy so that one of the above projects could proceed before another of higher priority. However, it must be satisfied that the District will receive a sufficiently larger water license in time to serve the higher priority project when it is needed.

C.3.2.2.3 Within the Fulford Waterworks District, the Committee should not make zoning changes that would mean that water would not be available for affordable housing for seniors, in addition to the district's existing customers and development already allowed by zoning.

C.3.2.2.4 The Local Trust Committee will support applications by community water systems to increase their water withdrawal levels to serve the development anticipated by this Plan, provided water conservation programs are in place, the environmental impacts are addressed and the new licence would enhance the ability of lakeside farms to obtain irrigation supplies.

C.3.2.2.5 The Local Trust Committee will continue to cooperate with community water system operators to ensure water supply issues are considered before zoning changes are made. The Committee should also continue to assist in the development of better estimates of projected water demands and supply potential. The Committee could consider zoning changes that would limit land uses with a high water demand. The Committee particularly recognizes that this Plan could critically affect the North Salt Spring Waterworks District's ability to meet future needs and will cooperate with the District to address this issue.

C.3.2.2.6 The Local Trust Committee will continue to encourage water conservation through guidelines for xeriscape landscaping of commercial, industrial and multi-family developments in island villages.

C.3.2.2.7 The Local Trust Committee will continue to obtain advice about local water supply topics from advisory bodies and water districts.

C.3.2.2.8 The Local Trust Committee will consult, assist and cooperate with water districts in supply and demand management by providing data and supporting efforts to coordinate activities.