

# Salt Spring Island

## Watershed Protection Alliance

### **ISLANDS TRUST 2019-20 SPECIAL PROPERTY TAX REQUISITION:**

The Salt Spring Island Local Trust Committee (SSI LTC) is requesting Islands Trust Council collect a \$98,500 Special Property Tax Requisition from the Salt Spring Island Local Trust Area for the 2019-2020 fiscal year. This tax will enable the SSI LTC to continue coordination<sup>1</sup> of the Salt Spring Island Watershed Protection Alliance (SSIWPA). The Salt Spring Island Local Trust Committee has received special property tax requisitions to support the coordination of watershed management since 2014; this funding has provided essential support for coordinating collaborative freshwater monitoring and protection projects by SSIWPA member agencies, and the development of a Water Sustainability Framework, which is the main purpose of SSIWPA.

### **SALT SPRING ISLAND WATERSHED PROTECTION ALLIANCE:**

Formerly called the Salt Spring Island Watershed Protection Authority, the Alliance is comprised of member agencies from local, regional and provincial governments. The Salt Spring Island Watershed Protection Alliance (SSIWPA) is a leader in collaborative watershed governance in the province of British Columbia. SSIWPA serves as a forum for the sharing of information and alignment of approaches between agencies responsible for related, but distinct areas of watershed management. SSIWPA engages multiple stakeholders to support evidence-based decision-making by each agency, working towards freshwater sustainability while taking into account local values and ecosystem health.<sup>2</sup>

### **COLLABORATION:**

SSIWPA is a vehicle for collaboration; it provides coordination for integrated watershed and water resource planning, research, and policy development to be implemented by member agencies. SSIWPA provides a structured and transparent public means for member agencies to:

- talk to one another, which increases knowledge, understanding and capacity;
- share information and collectively determine strategic, coordinated actions that fill data gaps and improve resource management effectiveness and efficiency;
- develop a holistic perspective to manage the shared water resource, on an island-scale;
- avoid duplication of effort, or working in silos;
- pool resources for projects;
- leverage pooled resources in order to compete for external funding for needed investigations and water research (For example: Real Estate Foundation Freshwater Sustainability grant funding).

SSIWPA is a coordinated group of member agencies who participate electively. Representatives of those agencies are enabled, through the work of SSIWPA, to practice "collaborative watershed governance" at their individual agency-level. Decisions are not made at SSIWPA that would be binding on its member

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<sup>1</sup> Through [Bylaw 154](#) (2013) Islands Trust Council has delegated the SSI LTC additional authorities which enable coordination of SSIWPA.

<sup>2</sup> Current SSIWPA member agencies include: Salt Spring Island Local Trust Committee; Capital Regional District; Ministry of Forests, Lands, Natural Resources and Rural Development; Highland and Fernwood Water Service Commission; Beddis Water Service Commission. Certain agencies not listed here continue to participate on a project basis only.

agencies; recommendations are collaboratively generated and put forward to member agency governing bodies, such as the Local Trust Committee, the Regional District Board of Directors and provincial departments who, in turn, endorse, fund, develop and/or carry out projects and actions as a result of recommendations generated through the vehicle of SSIWPA. This collaborative watershed governance method is leading edge in Canada where water resources may be put at risk by water planning that is not well coordinated between all the different users, purveyors, and law makers<sup>3</sup>.

SSIWPA's collaborative governance is an ongoing process of committed engagement based on respect, trust and ongoing diplomacy with multiple stakeholders (including indigenous governments) as equal participants and contributors.

### **SALT SPRING ISLAND WATER SUSTAINABILITY FRAMEWORK**

SSIWPA member agencies undertook a strategic planning process in 2018 to generate this Framework. It is a living document that serves as a guide for the development of workplans that outline priority projects by member agencies and the coordination functions provided through the vehicle that is SSIWPA. The purpose of following and using this Framework is 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.

The Framework is intended to be a multi-year program. It replaces [Salt Spring Island Integrated Water Management Program](#) charter, which was established in 2016 and guided the [SSIWPA 2017 Workplan](#).

SSIWPA member agencies provide support and expertise in data collection, Geographical Information Systems (GIS) management, funding, including in-kind contributions, data analysis, reporting, and contractor supervisory roles.

Current projects coordinated through SSIWPA are discussed below – more information is available at <https://www.ssiwpa.org/>.

### **COMPLETED PROECTS**

#### **Salt Spring Island Aquifer Mapping and Monthly Groundwater Budget Analysis**

SSIWPA member agencies collaborated on the *Salt Spring Island Aquifer Mapping and Monthly Groundwater Budget Analysis* which was a two year project (2016-2018) funded by the Ministry of Forests, Lands, Natural Resources and Rural Development (FLNR) and the Ministry of Environment (ENV); the work was undertaken by a contractor (Golder and Associates). This project revised the mapping and classification of aquifers on Salt Spring Island and developed groundwater budgets at the aquifer-scale. Deliverables of this project include technical memorandums, revised aquifer worksheets, aquifer maps, and hydrogeological modeling. SSIWPA supported this work with coordination, data provision and collaboration on the interpretation of results. Some of the primary recommendations for action in this report are already underway in the SSIWPA-coordinated *Salt Spring Island Groundwater Wells Inventory* and *Salt Spring Island Groundwater Wells Monitoring Pilot* projects that SSIWPA is also coordinating. (The report will be published early in 2019 in the provincial Water Science Series online.)

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<sup>3</sup> <https://beta.theglobeandmail.com/news/national/canada-fresh-water-review-1/article35262579/>.

### **Agricultural Land Use Inventory and Agricultural Water Demand Model**

The 2017 [Salt Spring Island Agricultural Land Use Inventory](#) (ALUI) project and the related [Agricultural Water Demand Model](#) (AWDM) project were undertaken by the Ministry of Agriculture, with coordination by SSIWPA and partial financial support by other SSIWPA member agencies. The ALUI deliverable is being used to inform agricultural area planning; it provides a baseline by which to measure success. The Agricultural Water Demand Model (AWDM) is an estimate of current and future water requirements for Salt Spring Island agriculture based on current land use and historical climate data, as well as potential changes in land use and projected climate change models. This work fits within SSIWPA's Salt Spring Island Water Sustainability Framework and it was one source of data used in the *Aquifer Mapping and Monthly Groundwater Budget Analysis* and the [Groundwater Wells Monitoring Pilot](#) projects.

### **Royal Roads University Rainwater Study**

In February 2017, Islands Trust partnered with students from Royal Roads University to investigate the potential for rainwater harvesting to offset or contribute to potable and/or non-potable consumption needs in specific Salt Spring Island scenarios. The project was coordinated by SSIWPA and involved direction and assessment of methods and results by the Conservation and Efficiency Working Group of SSIWPA. Students surveyed Salt Spring residents and businesses to compile and to provide a non-quantitative evaluation of current and untapped potential for rainwater harvesting at various individual and business scales on Salt Spring Island. The study report "[Rainwater Harvesting: An Investigation of the Current Use on Salt Spring Island](#)" (August, 2017) is available for use by SSIWPA member agencies, working groups and the public to guide further water management recommendations<sup>4</sup>.

### **St. Mary Lake Integrated Watershed Management Plan 2015**

SSIWPA was created initially as a community and agency response to mitigate impacts of toxic algal blooms in the St. Mary Lake ecosystem. In 2014, SSIWPA coordinated a successful grant application to the Real Estate Foundation of British Columbia through which lead agency Islands Trust received funding to contract a *Structured Decision Making* process. This multi-stakeholder process resulted in an action plan to address the St. Mary Lake water quality situation. This methodology enabled multiple participants of all backgrounds (elected officials, government staff, local experts, community members affected by the quality in the lake) to create common understanding of the problems and to cooperate in the iterative and discriminant evaluation of potential solutions. It was found that the level of phosphorus in this particular lake follows a common pattern of seasonal release and sequestration that is common for lakes that are stratified in the summer, and become mixed in winter. In order to abide by drinking water lake regulations and legislation, there was no feasible method or solution for removal of excess nutrients without upsetting the natural balance of the lake system or falling outside of the economic reality of the community. Through SSIWPA-coordinated research: a combination of empirical evidence and literature review, it was also determined that septic systems in soils of this particular watershed do not effectively contribute to the phosphorus load on the lake. Finally, it was determined that there would be no benefit to incur the very significant cost that would be necessary to construct a central sewage system to serve properties around the lake.

As a result of the *Structured Decision Making* process, SSIWPA released [the St. Mary Lake Integrated Watershed Management Plan in 2015](#) and by 2018, its member agencies had implemented the actions in this plan (some of which are continuous or recurring). The Salt Spring Island Local Trust Committee

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<sup>4</sup> Anderson et al. Royal Roads Environmental Science B.Sc. Major Project "Rainwater Harvesting: An Investigation of the Current Use on Salt Spring Island" completed for SSI Local Trust Committee under oversight by SSIWPA Conservation and Efficiency Working Group. August 31, 2017.

has considered legislative changes that might be needed to enable the components of the plan and was advised that no amendments are needed at this time.

## ONGOING PROJECTS

### Well Inventory and Monitoring:

The [Salt Spring Island Groundwater Wells Inventory Project](#) is a Salt Spring Island Local Trust Committee (SSI LTC) led initiative that began in early summer 2017<sup>5</sup>. This project involves the collection and analysis of individual domestic well hydrogeological data and community water system well data. Deliverables for this project include:

- Catalogue of 30 years of groundwater data found in individual hydrology and hydrogeology reports filed at Islands Trust (complete 2017)
- Georeferenced map of well data and information (complete 2017)
- Registration of wells in provincial database (in progress 2019) (FLNRO and MoE)

The results of this project served to identify potential domestic, non-domestic, and/or abandoned groundwater wells as candidates for the *Salt Spring Island Groundwater Wells Monitoring Project*. This project is 75% to 80% complete.

### Salt Spring Island Groundwater Wells Monitoring Pilot project

The *Salt Spring Island Groundwater Wells Monitoring Pilot* project is a collaboration between FLNR and the SSI LTC. Ten wells selected collaboratively according to agreed criteria are currently being monitored for seasonal changes in groundwater conditions. This project addresses the need for neighbourhood scale information and will improve knowledge of groundwater conditions in targeted aquifers, supplementing the existing groundwater monitoring resources provided by the provincial [Groundwater Observation Well Network](#). The program may lead to the development of a long term community groundwater monitoring program on Salt Spring Island, and may serve as a model for similar community groundwater monitoring programs throughout the Islands Trust Area.

To further support this project, in September 2017, SSIWPA submitted a request for funding from the Real Estate Foundation of BC's Freshwater Sustainability Fund. The funding request includes matching financial contributions from SSIWPA member agencies. If successful, the funds will assist in the design, management, and delivery of the proposed project under the general umbrella of the [Salt Spring Island Integrated Water Management Program](#).

## GOVERNANCE

SSIWPA is committed to continuous improvement and self-evaluation. SSIWPA amended its Terms of Reference in early 2018 to clarify guidelines for coordination, to incorporate lessons learned, to ensure that SSIWPA-generated solutions or recommendations are translatable to effective actions by SSIWPA member agencies, and to regenerate mutual understanding and support for its decision-making structure by all members of the current collective. SSIWPA also amended the Terms of Reference of its Technical Working Group at that time to ensure effective function of this advisory body, while also meeting the needs of its member agencies for qualified professional advice.

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<sup>5</sup> The SSI LTC Well Inventory and Monitoring Program is guided by a [project charter](#).

For More Information:

<http://www.ssiwpa.org>

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