



**Minutes of the  
Salt Spring Island Watershed Protection Alliance (SSIWPA)  
TECHNICAL WORKING GROUP (TWG) MEETING**

**Date of Meeting:** Friday June 26, 9:00 am – 11:00 am  
**Location:** via Zoom web conferencing

**Members Present:** Dale Green, Capital Regional District Senior Environmental Officer  
John Millson, Chair  
William Shulba, Islands Trust Senior Freshwater Specialist  
Ian Peace, Member at-large  
Tanya Schulz, Member at-large  
Ian deBie, Member at-large  
Jos Lussenburg, Member at-large

**Regrets:** Robin Annschild, Member at-large  
Sylvia Barroso, FLNRORD Hydrogeologist, SSIWPA Ex Officio Member

**Staff Present:** Shannon Cowan, Coordinator, Recorder (via web conferencing)  
Kristine Mayes for Jason Youmans, Islands Trust Planner 1

**Others Present:** Hugh Greenwood, Guest (GeoScientist)

These minutes follow the order of the agenda although the sequence may have varied.

1. The meeting was called to order by the Chair at 9:06 am.
2. The agenda was approved as presented.
3. **By general consent**, the draft minutes of the meeting of the Salt Spring Island Watershed Protection Alliance Technical Working Group held April 14, 2020 were adopted as circulated.
4. **BUSINESS ITEMS**
  - 4.1 **Welcome**
  - 4.2 **Groundwater Education Material Task Planning and Assignment**



It was proposed that TWG develop a short 2 page one leaf document as a navigation tool for information in two other detailed documents (“Groundwater Protection Regulations” on SSIWPA site and “Water Wells that Last for Generations” - Alberta). Sipping rather than large drawdowns and other main key points for wellowners. One page.

**Action: Jos will find an example from Alberta Environment of such a 2-pager as a guide for development.**

**By general consent** the Technical Working Group agreed that Ian Peace will develop a draft and circulate to Chair and TWG (including Dr. Greenwood and Sylvia Barroso) for comment by the next TWG meeting date (tbc, mid to late July).

#### **4.3 Southern Gulf Islands Groundwater Recharge and Availability Mapping**

It was suggested that the final authorship for this may be Islands Trust to afford the capacity to encompass the Gabriola hydrogeological recharge modelling and all of the pre-existing work.

Key observations from the Technical Working Group:

- A glossary might be an elegant addition
- This provides a framework that can be built upon with further budget and time
- A more closed loop system to include the infiltration factor (ie. MIKE-SHE modelling on every island including stream outflow and lake bathymetry) is too expensive.
- Estimating groundwater use for domestic users is very difficult. From deemed right (2,000 L/d) to drought usage (250 L/d) per gw well.
- Weathering profiles (overlay on gw recharge)(Dr. Allen’s grad students)
- Recommend: That the authors indicate uncertainty for maps
- Groundtruthing could assist verifying robustness of maps in this report
  - o Pick sub-areas with as little as possible domestic consumption to get a handle on subsurface flow to marine.
  - o 2-3 studies on sub-aquifers would be enough.
  - o Freshwater catalogue work and lake level monitoring might provide data to groundtruthing.



- A number of people who understand the system recommend that we go with the maximum rather than the extremes. Error bounds can be vastly misinterpreted by public domain.
- Staff needs to define the framework instead of sharing the full report.
- “A first iteration of a conceptual framework for management of groundwater on the Gulf Islands.”
- Educate that this is not a one-off but a first phase of more thorough work. There is no silver bullet.

**By general consent**, the TWG agreed to provide a memo back to SSIWPA Steering Committee outlining the TWG review of the Southern Gulf Islands Groundwater Recharge and Availability Mapping.

**ACTION: Chair Millson and Member Shulba will develop the memo outlining the TWG review of the Southern Gulf Islands Groundwater Recharge and Availability Mapping for the next SSIWPA Steering Committee meeting.**

#### **4.4 Proof of Water At the Time of Subdivision**

The issue of pump test length for a proposed change to regulation in the LUB:

- Is it a good idea to provide LTC regulations
- Should we be noting the guidelines from the Province in our Land Use Bylaw for proof of water at time of subdivision?
- Should a 2-Lot subdivision require less pumping time?
  - 72 hours pump test cost is likely prohibitive for a 2-Lot subdivision
  - Costs could be lowered if the local well-driller professional works with a hydrogeologist off-site (ie. send data)
  - A step-wise process could be part of the LUB regulation for 2-Lot subdivision
- Should aquifer qualities be included?
- Should seasonality restrictions be included in the LUB?
- Professionals have provided pushback to the Islands Trust regulations. The provincial regulations are not in question, but the local regulations are currently not sufficient.

The following points were noted in the discussion:

- peak maximum demand for domestics should be required



- well efficiency and boundary conditions are more important than seasonality
- some might be comfortable with a 12 hour test on a 2-lot subdivision

Wording that could be included in LUB:

“Pump test length must conform to the requirements in the Ministry of Forests, Lands, Natural Resource Operations and Rural Development” (refer to Thompson-Nicola example).

Clarification was provided on types of water supply evidence that is required.

- Rezoning – Increase of density (Unfettered discretion by LTC based on Staff’s recommendation or not). The Ministry of Transportation and Infrastructure requirements for “aquifer-scale” sustainability is more applicable.
- Subdivision – A deemed right to subdivide and proof of sustainable water supply lies more within jurisdiction of Islands Trust local planning guidelines. MOTI not involved as much.
- Agreed that following longer provincial pump test requirements is absolutely important.
- Not looking at occupancy vs. the agreed occupancy of Single Family Dwelling or dwelling size.

Intended outcome:

“The Technical Working Group recommends that amendments to the SS LUB regulations for proof of water at the time of subdivision could consider the following:”

**By general consent**, the SSIWPA-TWG agreed to have a special 2-hour meeting in July to discern the recommended technical requirements for amendments to the SS LUB regulations for proof of water at the time of subdivision.

**ACTION:** TWG members will review the powerpoint materials provided by Islands Trust planning staff, along with section 5.5 of the [Salt Spring Island Land Use Bylaw No. 355](#) in preparation for the next meeting on the topic of proof of water at the time of subdivision.

**ACTION:** Coordinator will circulate the powerpoint description of the three types of subdivision with parameters for proof of water, as well as boundary adjustment example presented in this meeting by Planner Mayes to TWG members for their consideration.

#### 4.5 Weston Lake Water Availability Study



4.5.1 Member Green spoke to the status of the project. An honorarium has been provided to the Freshwater Catalogue project by the Salt Spring Island Water Preservation Society for data sharing. Assistance with data compilation was requested:

- Islands Trust (Member Shulba) has standardized continuous lake level from September 2019 – current
- Capture zone, bathymetry, LIDAR, creeks inflow and Weston creek outflow were mentioned.
- Baseflow contribution from groundwater:
- Due to fault zone directly under it – estimation might be fairly straightforward
- Dr. Allen’s student to look at Electrical Conductivity (total dissolved solids) in freshwater catalogue data across the island.
  - o Probably not a lot of leakage out of the watershed – outflow more a pipe out to ocean than a serious leakage.

**ACTION: Member Green will send an email to TWG to request an inventory of existing data for the project request for proposals that he is developing.**

**ACTION: Coordinator will facilitate the data-sharing agreement with the lake level monitoring station property owner at Weston Lake so the lake level dataset collected at that station may be shared by Islands Trust and FLNRORD with CRD for use for the purpose of a Weston Lake Watershed Water Availability and Climate Change Assessment study by an independent professional.**

4.5.1.1 TWG Chair Millson provided a presentation about the status of the Weston Lake Freshwater Catalogue sampling and data collection sponsored by Water Preservation Society (with funding support from Salt Spring Island Foundation) with the use of a slideshow:

- Pressure-corrected level logger will be installed at the outfall on Weston Creek (July 7, 2020).
- The correlation between inflow and outflow conductivity and flow will be investigated to see whether there are groundwater signatures influencing flow through the seasons.
- It is estimated this will be important to a water budget for the watershed.



**4.6 Freshwater Catalogue project update – Chair Millson (SSIWPS)**

One of Dr. Allen’s students is teamed up with the Freshwater Catalogue project by SSIWPA for investigating electrical conductivity from creeks across the island that are already being sampled. It is in the public domain and will be reported in August.

**5. OTHER BUSINESS**

5.1 Report out

**ACTION: The Chair will report the status of Technical Working Group items from this meeting at the SSIWPA Quarterly meeting in October, 2020.**

5.2 Comments or questions from observers:

None

**6. NEXT MEETING**

The next meeting of the Technical Working Group will be scheduled as a special meeting in July 2020.

The next quarterly meeting of the Technical Working Group will be scheduled in late September, 2020.

7. The meeting was adjourned at 11:11 am.

**CERTIFIED CORRECT:**

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John Millson, Chair



Shannon Cowan, Recorder