



Making a difference...together

**SSI Liquid Waste Disposal Local Services**  
**Notice of Meeting on Tuesday, April 2, 2013 at 1:00 PM**  
Portlock Portable Meeting Room 145 Vesuvius Bay Road, Salt Spring Island, BC

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**AGENDA**

1. Approval of Agenda
2. Adoption of Minutes of October 4, 2012
  - 2.1 Inclusion of Meeting Notes from March 7, 2013 for information
3. Chair's Remarks
4. Presentations/Delegations
5. Reports-Verbal
  - 5.1 CRD Director McIntyre
  - 5.2 CRD EA Senior Manager Ruurs
  - 5.3 CRD GM Integrated Water Services
  - 5.4 CRD Manager of Engineering- Ralf Waters
  - 5.5
6. Continuing Projects
  - 6.1 Wetlands – Motion to proceed
    - 6.1.1 Comparison of Options
    - 6.1.2 RFP Parameters- Design Build
    - 6.1.3 Travel Expenses-Budget
    - 6.1.4 Property Zoning
  - 6.2 Road Condition
  - 6.3 Signage on Private Road
  - 6.4 Refund status- Tank Supplier \$5,000
7. New Business
8. Other Business
9. Adjournment



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**Minutes of the Regular Meeting of the Salt Spring Island Liquid Waste Services Commission**

**Held October 4, 2012 in the Portlock Park Meeting Room, Salt Spring Island, BC**

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**DRAFT**

**PRESENT: Commission Members:**

Peter Lake – Chair; Commissioner Maxine Leichter – Vice Chair; Wayne McIntyre, CRD Director; Commissioner Sharon Bywater; Commissioner John Sprague

**Excused:**

Commissioner Leslie Wallace

**Staff:**

Kees Ruurs, CRD EA Senior Manager

Ted Robbins, GM Integrated Water Services (via Web Conferencing at 3:09 pm)

Scott Mason, CRD Manager, Regional Infrastructure (via Web Conferencing at 3:25 pm)

Sarah Shugar, Recording Secretary

The Chair called the meeting to order at 3:02 pm.

**1. Approval of Agenda**

**MOVED** by J. Sprague, **SECONDED** by W. McIntyre,  
That the agenda be adopted as presented.

**CARRIED**

**2. Approval of Minutes**

**MOVED** by M. Leichter, **SECONDED** by W. McIntyre,  
That the minutes of June 18, 2012 Regular Minutes be approved as presented.

**CARRIED**

**3. Chair's Remarks**

There was no report at this time.

**4. Reports**

**4.1 CRD Director Report**

W. McIntyre verbally reported that he attended the Union of BC Municipalities Conference last week. He provided the following highlights:

- Minister Bennett advised that infrastructure challenges are across the nation

- The flooding in Sicamous has damaged the water supply and they have been on bottled water since May. The Minister said that he will help out with an emergency fund.
- In Burns Lake the mill company has decided to rebuild there and that means jobs for 800 people.
- The Minister of Health's report on water will be circulated.
- 3 elected officials are going to Victoria this week to hopefully receive an important announcement.

**4.2 Ted Robbins, GM Integrated Water Services**

T. Robbins verbally presented the following update:

Operating Issues:

- The hauling contract is proceeding well; they are hauling 2 trips per week this fall and were hauling 4-5 trips per week during the summer. The operator is working up to 4 hours per day.
- There has been an ongoing issue regarding reading the level of the tanks. There is a safety concern because they have to climb up to read the level. They would like to install a pressure gauge.
- The access road is in need of maintenance.
- The budget appears to be on track.

Capital Project:

- The Opus and Knight contract is on hold and will remain on hold until the feasibility studies are done.
- The whisper tanks are still available. They are glass and they would not lend well to modification. The recommendation is to have purpose designed tanks and to get the \$5,000 deposit back on the whisper tanks.
- R. Waters is working with the Ministry to confirm the requirements on the groundwater wells. There has been no further work done on the lagoon closures.

Next Steps:

- One implication of pausing the further design of the receiving and storage facilities is the operating risk, specifically the risk of equipment failure. The equipment is basic and the risk of equipment failure over the next 2 years low.
- The condition of the road will need to be addressed over the winter.
- The current loan authorization will expire and our authority to borrow ends in December 2013. The feasibility studies will provide some direction.
- In regards to the SSI Septic Bylaw, they are comfortable to carry on under the current arrangement. Once there is a better sense of direction from the feasibility studies, amending the bylaw in late 2013 early 2014 should be assessed.

It was generally agreed to get the \$5,000 deposit back from the Whisper storage tanks. It was also agreed to approve the installation of a pressure gauge on the existing tank to help reduce the safety concern.

**4.3 Manager Ruurs**

K. Ruurs verbally reported that R. Waters has been spending most of his time on the Beddis Project.

**5. Presentations**

There were no presentations at this time.

**6. Continuing Capital Projects**

**6.1 Burgoyne Capital Project**

P. Lake reviewed the Feasibility Studies for the Burgoyne Bay Septage Facility Upgrade Project report written by Ralf Waters.

**MOVED** by S. Bywater, **SECONDED** by J. Sprague,

That the SSI Liquid Waste Disposal Local Services Commission directs staff to proceed with the feasibility studies that will assist with the identification of technologies to be used on the upgrade of the Burgoyne Bay Septage Facility on Salt Spring Island, including the following:

1. To approve an expenditure, from the Burgoyne Septage Facility Upgrade Project or the SS Liquid Waste Operating Budget, of any portion of the cost, of the feasibility study to be completed by Trax Developments Ltd., not covered by a grant, up to a maximum of \$10,000 plus applicable taxes. If a grant of \$7,500 is received, those funds would go to the project to offset the expense.
2. To approve an expenditure , from the Burgoyne Septage Facility Upgrade Project or the SS Liquid Waste Operating Budget, of any portion of the cost, of the feasibility study/consulting services to be completed by Wetlands Pacific Corp., not covered by a grant, up to a maximum of \$10,000 plus applicable taxes. If a grant of \$7,500 is received, those funds would go to the project to offset the expense.

**CARRIED**

**7. Adjournment**

**MOVED** by W. McIntyre, **SECONDED** by S. Bywater,

That the meeting be adjourned at 4:15 pm.

**CARRIED**



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**Minutes of the Workshop of the Salt Spring Island Liquid Waste Disposal Local Service Commission**

**Held March 7, 2013 in the Portlock Park Meeting Room, Salt Spring Island, BC**

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**DRAFT**

**PRESENT:**

**Director:**

Wayne McIntyre

**Commission Members:**

Peter Lake – Chair; Maxine Leichter – Vice Chair; Sharon Bywater; Jim Sharp;

John Sprague

**Staff:**

Ted Robbins, CRD Acting GM Integrated Water Services (via web conferencing) (1:10 pm to 1:30 pm); Kees Ruurs, CRD EA Senior Manager; Ralf Waters, CRD EA Manager of Engineering; Sarah Shugar, Recording Secretary

The Chair called the meeting to order at 12:00 pm.

**1. Approval of Agenda**

The Chair advised that this would be an informal workshop meeting.

**2. Adoption of Minutes**

It was generally agreed to defer the minutes to the next meeting as this is an informal meeting.

**3. Chair's Remarks**

The Chair advised that the intent of the meeting is to provide an update and to determine the next steps.

**4. Presentations / Delegations**

There were no presentations at this time.

**5. Reports**

**5.1 CRD Director**

W. McIntyre reported on the following items:

- CRD is pleased to announce the appointment of Robert Lapham as the new Chief Administrative Officer of the CRD, effective February 7, 2013.
- Islands Trust is proceeding with the Secondary Suites Bylaw. This will be an item on the agenda of the March 20, 2013 CRD electoral area meeting.

- The governance study is proceeding. The next meeting is scheduled on March 8, 2013. The web site is [www.ssigovernancewordpress.com](http://www.ssigovernancewordpress.com)
- There has been discussion regarding how to promote local contractors on local projects. SSI CRD has changed the bonding requirement to a letter of credit.
- K. Ruurs, EA Senior Manager is scheduled to retire in July 2013. W. McIntyre be meeting with R. Lapham regarding the next EA Manager.

**5.2 CRD EA Manager**

K. Ruurs reported that the priority projects for CRD are the Beddis Water project and the Burgoyne Bay Treatment Facility project. Both of these projects are managed by the SSI CRD office.

**5.3 CRD Manager of Engineering**

**5.3.1 Ministry of Environment Meeting**

R. Waters provided an update the meeting with MOE regarding the lagoons. The lagoons have been abandoned since 1993 and CRD holds an active permit as a remediation site. CRD had submitted a plan to MOE that was approved in 2009 to include the lagoons as part of a compost system. At that time MOE had required groundwater monitoring. Presently, there has been no groundwater monitoring or closure of the lagoons. He advised MOE that the Commission is looking at four options for the treatment facility and that the plan for the groundwater monitoring will be created once the plan for the treatment facility is in place. MOE indicated that is acceptable.

It was noted that the original plan for the remediation project was estimated at \$75,000.

**5.3.2 Grant Report Status**

The grants that have been applied for to cover 75% of the cost of each feasibility study will be announced at the end of March 2013.

**6. Continuing Projects**

**6.1 Wetlands Proposal**

R. Waters reviewed the Design Basis for the Burgoyne Bay Septage Facility Upgrade prepared by Wetlands Pacific Corp. He provided a power point presentation. The proposal outlines a design that includes an automatic receiving station, an aerobic tank, reed beds and a series of ponds.

T. Robbins joined the meeting at 1:10 pm via web conferencing. It was generally agreed that the wetland proposal is the most positive in terms of operating and capital costs and that the risks need to be established.

T. Robbins advised that CRD does not have any initial objections and that they are looking at alternative treatment systems.  
T. Robbins left the meeting at 1:30 pm.

**6.2 Anaerobic Report**

R. Waters reviewed the Anaerobic Digester for the Burgoyne Bay Septage Facility Upgrade prepared by Trax. He advised that there is only one area on the property that has suitable soil for this option.  
P. Lake provided a comparison chart with preliminary numbers for information.

The Chair called for feedback around the table on the three options that are under consideration; to continue to ship off island, the wetlands proposal and the anaerobic proposal.

The following feedback was provided:

- The wetland proposal is positive for many reasons including low environmental impact, lower operating and capital costs.
- There is an unresolved question regarding the high rainfall factor.
- To not focus the public communications on the relatively lower cost of the wetland proposal because the costs will be variable.
- Could issue RFP for design and build together or have separate RFP's.

It was generally agreed to continue with the information articles in the Driftwood and to have a public information meeting in the future.

**6.3 Whisper Tank Refund**

There was no update provided at this time.

**7. New Business**

**7.1 Signage**

It was noted that there is a section of the access road that the public uses while hiking in the area.

It was generally agreed to direct staff to have signs installed.

**7.2 Road Repairs Report**

R. Waters advised that he has received an estimate of \$1,800.00 to repair the lower section of the road. It was noted to advise the contractor to work on non-hauling days and to advise the neighbours.

**7.3 S.P.L. Contract**

It was noted that the hauling contract with S.P.L. ends in February 2014. Staff will provide the outer island hauling statistics.

**7.4 Treatment of F.O.G.**

It was noted that there will be a future requirement to have haulers separate the loads.

**8. Other Business**

There were no other business items for consideration at this time.

**9. Adjournment**

The next meeting date is to be determined.

Items to be added to the next meeting agenda:

- the amended closure plan for the lagoons
- quotes on groundwater monitoring
- update on signage for the treatment facility access road

The meeting was adjourned at 2:30 pm.



## **MOTION**

Be it resolved that:

The SSI Liquid Waste Disposal Service Commission having investigated the available options for replacing the treatment facilities for treating waste water at the Burgoyne Valley property recommend that an RFP be issued calling for construction of a receiving and automatic recording system for incoming materials and that those material be treated by means of properly designed reed beds and constructed wetlands.

6.1.1

Burgoyne Comparison of Costs

	<b>COMPARISON OF OPTION FACTORS</b>			
	<b>Ship off Island</b>	<b>ODK Plan</b>	<b>Anaerobic Dig.</b>	<b>Wetland Plan</b>
<b>Capital cost</b>	\$300,000	\$4,000,000	\$1,400,000	\$1,400,000
<b>O&amp;M Costs p.a.</b>	minimal	\$500,000	\$300,000	See Table 1
<b>Solids Dispersal</b>	0	Ship off 450T	Ship off 2-300T	Trash annually
<b>Water Dispersal</b>	0	Tile field	Drip field	wetland
<b>Regulation</b>	n/a	VIHA	VIHA	VIHA / M of E
<b>Environment</b>	?	?	?	ok
<b>Parcel Tax p.a.</b>	\$52.29	\$78.48	\$52.29	\$52.29
<b>Tipping Fee</b>	\$0.38	\$0.589	\$0.38	\$0.38
<b>Assumptions</b>	Revenues based on 2012 figures			
	Anaerobic capital taken per consultant plus receiving station			
	with all options bound to be much higher			
	Finance interest at 5%			
<b>TABLE 1</b>	<b>WETLAND EST O&amp;M vs REVENUE</b>			
	<b>Revenue</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
	Sewage sludge	\$127,000	\$127,000	\$127,000
	Septage	\$237,000	\$237,000	\$237,000
	Requisition	<u>\$274,019</u>	<u>\$274,019</u>	<u>\$274,019</u>
	Total Revenue	\$638,019	\$638,019	\$638,019
	<b>Expense</b>			
	Consultant	(\$30,000)	(\$30,000)	\$0
	CRD Administration	(\$10,000)	(\$11,000)	(\$11,500)
	Electricity	(\$10,000)	(\$11,000)	(\$11,000)
	Finance	(\$203,712)	(\$203,712)	(\$203,712)
	Haulage off island - Trash	(\$10,000)	(\$11,000)	(\$12,000)
	Haulage off island -Septage	(\$125,000)	(\$137,500)	\$0
	Operator	(\$80,000)	(\$85,000)	(\$88,000)
	Reed harvest expense	(\$10,000)	(\$10,000)	(\$10,000)
	Scada monitoring	(\$21,000)	(\$21,000)	(\$21,000)
	Vehicles/gas/ maintainance	(\$8,000)	(\$8,500)	(\$8,500)
		(\$507,712)	(\$528,712)	(\$365,712)
	<b>Annual Cash Flow</b>	<b>\$130,307</b>	<b>\$109,307</b>	<b>\$272,307</b>

## APPENDIX A Pros & Cons of Options for Waste Water Treatment

### Continue shipping off Island:

Shipping off island has shown to be cost effective over 2012, having eliminated an approximate \$30,000 deficit and leaving a small surplus at year end. An investment for a new card lock, screening, recording, and storage set up will have to be built whatever system is adopted. This could probably be done with available funds without any tax or tipping fee increase.

The down side is that SPL on Vancouver Island is only place to deliver septage. The operation could be subject to a break down in shipping causing a logistical problem if storage were full as well. The prospect of vulnerability to price increases in receiving fees by SPL, ferries and freight costs must be considered. The current bylaw would have to be amended to allow continuation of this option.

### Opus Dayton Knight Proposed Design

The design supplied by ODK follows the same type of process as the Ganges sewer Plant with dewatering of sludge added. As such the process is proven, and the local staff is familiar with the operation.

Downside: This planning process was halted when it became apparent the authorized funding was insufficient to complete the project. According to the Stantec business report the cost to build would be \$3.35 million. With the funds already borrowed a further referendum for at least \$2.5 million would be required, and past experience indicates this maybe a conservative estimate. Finance cost on a further \$2.5 million would ensure a substantial increase in parcel tax and tipping fees. Whether the Taxpayers would authorize such funding is moot. If the referendum failed the option of shipping of island would continue with its attendant risks.

### Anaerobic Digestion

This technique is becoming more common, for example, the municipality of Chilliwack is using this technique and building another reactor and Victoria may be considering it. It has the potential for power recovery from methane produced as well as the production of magnesium ammonium phosphate for fertilizer. The process can greatly reduce sludge by up to 80% converting it to methane, carbon dioxide, water and energy.

The process mentioned above requires a large capital outlay and sophisticated control to be successful. The consultant has recommended a simplified process known as plugged flow commonly used by large dairy and swine farms to process the manure. A number of stages are required from increasing solids from about 3.5% to 8- 12% , this requires long term holding times in five tanks requiring heating, a dewatering process, and aeration of the effluent from dewatering to a final underground drip feed disposal. Gas collection and storage for burning in a boiler to provide heat for reactors would also be required. The consultant has recommended pilot plant studies to arrive at the most efficient design.

The main advantage would be a reduction in the amount of solids to be removed from the site with a reduction of shipping costs. The addition of FOG (fats, oils, grease) from grease traps could be accommodated.

The down side is the probable unknown high capital cost, the O&M costs for a fairly complex system control, the possible hazards of gas storage in bladders that might induce vandalism, and the safety and operator requirements in running gas fired pressure vessels for heating.

### Constructed Wet Lands

The advantages would appear to be a lower capital and operating costs than the other options. The probability of completing the job within the available funds would result in a positive cash flow. Not having to go to another referendum for additional funds is to be strongly desired. If a referendum were required the amount would be relatively low. Power requirements and mechanical upkeep would be minimal and would require no chemical costs. No off island shipping of solids (except trash) would be required for a number of years resulting in substantial savings. This would allow time for complete analysis of the resulting compost and a decision as to its final disposition which could be to spread it as nutrient on forest land. Wetland water would be returned to the land in a state resembling any natural water body.

The down side is that we would be pioneering. In spite of there being many examples bigger successful wetlands in the USA and Europe in climatic conditions similar or harder than ours and smaller local examples that are working we would be breaking new ground for this area. That is always considered a risk. (Note: This community pioneered the use of an MBR unit at the sewer plant many years ago!) We would also have to ship off island for a period of time the gradually break in the reed beds and incur the cost of consulting to oversee that it would be successful. Some method of disposing of FOG would have to be worked out during the time we would ship septage off island. It is undesirable to add this to reed beds.

The ultimate downside would be that the reed beds did not work, in which case we would have to install dewatering equipment before delivery of effluent to the reed beds. The beds themselves would still work as a filter bed for polishing and delivery to the constructed wetlands. The existing Fournier press and ancillary equipment could probably be restored for this function at some cost lower than any option other than shipping of island.