

August 20, 2026

Proposal to the Salt Spring Island - Local Community Commission and CRD Staff.

Presented by David Courtney, Burgoyne Bay Farm, Salt Spring Island, BC

Subject: Method to Mitigate Liquid Waste Trucking Costs to Vancouver Island, BC

Background: In August 2023 - Dr. Troy Vassos, Technical Director of Integrated Sustainability presented his Report to the LCC and recommended 4 methods by which we could potentially Dewater our Septage and WWTP Sludge at the Burgoyne Bay Facility.

Subsequently there was Geo Tube Type Trial and I suggested researching the method of using Reed Beds, as a carry over from the work conducted by Chair Peter Lake and the Liquid Waste Committee, circa 2015. The final Draft of the High Level Report in the Fall of 2025 prepared by CRD Staff questioned the projected costs at \$3.7 Mil and the dispersal of secondary treated filtrate water, after being dewatered was deemed unsuitable at what has now become in essence the Burgoyne Bay Liquid Waste Transfer Station.

In conversation with Dr. Vassos over the last year, one of his suggestions was to research the Omega Solution, their trucks bodies are manufactured just outside Quebec City. So I have spent the last 10 months on and off doing the research on this particular option. It's used in Eastern Ontario, Quebec and Eastern USA Seaboard. There's over 400 Septage Haulers using the Omega Method of Filtering Septage Waste Water. The Vice President of Operations was at a Convention this past Spring in Nanaimo and I had a chance to sit down and have a discussion on how their method could help mitigate our precious tax dollars in the Community.

The Omega Filtration Method:

The Omega Liquid Waste Solutions truck from Quebec uses an on-board filtration system to separate greywater from sludge during a septic pump-out, filtering the liquid on-site and returning it to the septic tank while hauling away only the solid waste.

How It Works

- **Pumps Waste:** Collects liquid and solid waste from septic tanks or grease traps like a standard pumper.
- **Filters Water:** Passes the liquid through a self-cleaning stainless-steel membrane that purifies the greywater up to 99%.
- **Returns Liquid:** Pumps the clean, filtered water right back into the septic tank, preserving the bacterial flora.
- **Hauls Only Sludge:** Stores only the dense solid sludge in a separate compartment, drastically reducing the weight and volume carried.

Key Benefits

- **Fewer Disposal Trips:** Trucks fill up much slower, meaning operators spend more time working and less time driving to disposal sites.
- **Lower Operating Costs:** Transporting less liquid weight saves fuel and time.
- **Eco-Friendly:** Recycles water directly on-site without the need for added chemicals.

Cost Savings:

Substantial, the Omega Method returns 70% of the grey water back to the septic tank. Leaving 30% in the Sludge Tank on the truck for disposal at the 2 x 20,000 IGal Tanks at the Burgoyne Bay Transfer Facility. The interesting part, the content of the Waste Water Solids is 3%, which is basically what is being trucked down from the WWTP to the Burgoyne Facility. In other words when mixing the two sources, you come up with 3% Solids if there was a time in the future when chose to Dewater and have the Septic Cake trucked to the New Future Biochar Facility in Victoria. Which just received a \$7 Million Grant from the BCSF (Build Canada Stronger Fund).

Example:

Most Septic Tanks on Salt Spring Island average in range from 600 Gal for older tanks to 1000 Gal for the Newer Tanks. If a Residence has a 1000 Gal Tank, 700 Gal of filtered water will be pumped back into the Septic Tank and 300 Gal will remain in the Sludge Tank on the Omega Truck.

If the Service Fee from the Provider is \$435 and the Tipping Fee at Burgoyne Bay is .59/IGAL = \$177 as opposed to \$590 for a full tank pump out, it's a savings of \$413 for the Resident.

Cost Savings On A Grand Scale:

The following Numbers were graciously provided by the CRD - General Manager.

In 2026 the Cost Projection for Liquid Waste Trucking is \$800,250 for 1,455,000 IGAL at a contracted price of .55/IGAL.

36% is Sludge from the WWTP = 523,800 IGAL

64% is Septage from Residences = 931,200 IGAL

If we take the 70% reduction in liquids from Septage Pump Outs, the numbers look like this:

931,200 IGAL x 70% = 651,840 IGAL less Septage trucked to the Burgoyne Bay Transfer Site.

651,840 IGAL x .55 = **\$358,512** In Savings/Yr.

This reduces our overall Off Island Trucking costs significantly.

Infrastructure Costs:

None required perse', the only cost is purchasing of the Omega Truck. Whether by our current Operators/Haulers, Others or with the assistance of the CRD. Perhaps an RFP (Request For Proposal) from the LCC/CRD and a formal tendering process.

The Tandem Axle Omega Trucks are the answer for most Communities but most don't have narrow twisty roads, with awkward access to residential properties like our's. So I based my assumptions on the smaller single axle truck Omega Truck.

Providers currently Tip 931,300 IMPG of Septage form Septic Tanks which is Trucked Off Island in 2026.

Using the Omega Single Axle Truck System we reduce the Septage by 70% returning to the Transfer Station - $931,200 \times 30\% = 279,360$ IGAL is what we would now truck off Island.

If we had a 1500/1000 Split on the Omega truck, we could do a min of 5 pump outs before doing a drop (using the Newer 1000 Gal Septic Tanks as the Average). 5 loads a day locally would probably be the maximum.

$279,360 / 1500$ (Avg of 300 Imp Gal / Pump Out) = 186 trips to the Transfer Station. $186 / 5$ Workdays = 37 Weeks worth of work.

It would be nice to have the efficiency of Tandem Axle Truck and Load Carrying Capability but I'm not sure it works for us. TBD with the local operators.

Cost of a New Single Axle Omega Truck:

TBD Further

EQUIPMENT PRICE :

Omega RS system - \$212,000

Freightliner M2 106, 6 wheels chassis - \$166,000

Approximate Total \$378,000 – Options Extra, FOB Quebec City, Taxes Extra.

Options :

- - Vacuum hose reel (installed)
- - 2 x Aluminum tool box 24" x 24" x 24"
- - Backup camera
- - 3 Heated valves / 2 x 4" (load) and 1 x 6" (discharge)
- - 10 GPM / 2000 psi jetter w/200' hose reel

Installed in an aluminum heated cabinet

Impact on the Environment and Road Network:

What is not well known is the Green GFL Tank Truck carries 7600 IGAL and starts its day at about 0400 to 0500 in Chemainus and climbs over the Malahat to Swartz Bay for the 0700 Sailing to Fulford Hrb. Returns to Swartz Bay on the 0950 from Fulford Hrb. Then returning to the drop zone in Langford. Then climbs up the Malahat and back in Chemainus and arrives about 3:00PM and overnights.

$1,455,000 \text{ IGAL} / 7600 \text{ IGAL} = 192 \text{ Truck Loads Off Island.}$

$803,160 \text{ IGAL} / 7600 \text{ IGAL} = 106 \text{ Truck Loads Off Islands. Reduction of 86 Loads.}$

The Omega Truck doesn't have to return to the Burgoyne Bay Site as often, half as many times, saving time, roadwork and the environment.

Respectfully Submitted to the Salt Spring Island LCC for consideration.

David Courtney, Burgoyne Bay Farm, Salt Spring Island, BC

Part II - Consideration of - 1. Compact Dewatering Plant. 2. SAF Compact Secondary Water Treatment Plant. With the sheer decrease in the Volume of Water, dispersing to ground is a distinct possibility at the Burgoyne Bay Site. Backstopped by both Ralston and Vassos's extensive Reports. The assistance of Dr. Vassos and Integrated Sustainability would be advantageous for a cost effective solution.

Appendix:

<https://omega-lws.com/>

Facebook Reels - <https://www.facebook.com/profile.php?id=100089262075083>

