RHINO EVIRONMENTAL SERVICES

Oscar Long.

Registered Onsite Wastewater Practitioner

2848 Schmid Road Sorrento B.C V0E 2W1

Cell 1-250-515-2619

email: rhinoenvironmental@hotmail.ca

A Septic System Compliance / Performance Inspection Report:

To support the capability of additional wastewater flows from a 4-bedroom residence with a maximum occupancy of 10 persons.

This report is subject to the attached Statement of General Conditions on page 5

Report for: [redacted] January 21st 2025

Regarding the onsite wastewater system serving the property located at **2302 Eagle Bay Road, Blind Bay BC.**

Legal Description – Lot 3, Section 19, Township 22, Range 10, W6M KDYLD, Plan KAP9025

Tax Roll # 20-789-007876.000

PID – 009-757-741

REGISTERED ONSITE WASTEWATER PRACTITIONER ASTTBC OSCAR LONG PL IN OW0685

Type of Assessment carried out

At your request, we attended the above property to assess the compliance and performance of the onsite septic system serving the property, with the aim of determining its suitability for additional flow from a 4 Bedroom residence with a maximum of 10 persons on a short-term rental basis.

Type of Sewage System Present

This property has a single onsite sewage system that consists of a 2727.65 litre Castall septic tank which collects Black Water flows from the residence. The flow then

continues by gravity into a concrete distribution box. This box is a device which is intended to disperse treated effluent equally to each of the 2 deep drywells. The purpose of the dispersal field is to apply the wastewater evenly to the soils surrounding the system - this is where the organisms and characteristics of the soil treat the harmful contents in the wastewater. Today this is referred to as a **Conventional** Type **1 Gravity to a dual drywell Dispersal septic system.**

Background

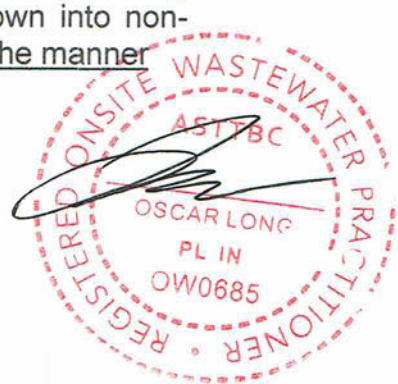
When reading this report, it is important to understand that as Registered Onsite Wastewater Practitioners, we are operating based on standards set out by our governing body. In the published Standards for Authorized persons we are encouraged to use **'standard phrases'** and **'standard terms'** to define the different things we may find - this standard terminology helps add clarity to the audience of the report.

Report audience – to further clarify the way this report is written it is important to understand who might read it. Primarily this report is intended for the sole benefit of the local building authority, but due to the nature of a home's evolution, these reports might be shared by you during future real estate transactions, home renovations and or during future maintenance/restoration of your septic system. So, the audience of this report may include, homeowners, realtors, lawyers, wastewater practitioners, engineers & governing agencies to name a few.

Standard terms - you will find standard terms used when recommending ways to deal with items noted. These words such as: **maintenance, repairs & improvements** may be found in bold throughout this report and then summarized at the end. Keep in mind that unless under the direct supervision of a registered person, you are not legally allowed to work on a septic system, so, these recommendations are made with the assumption that if done, they will be carried out by a registered person.

Expected Performance Summary

The provincial requirements for the size and features used in a sewage system have changed over the years but the expected performance of a system has not. Wastewater should be securely collected in the tank without leakage, backup or damage, freely travel through each component and be distributed through each dispersal pipe in the field in a uniform manner without interference from soil, roots, sewage sludge, groundwater or damage. Wastewater entering a dispersal area should freely seep out and down into non-saturated soils below the pipes. In short, the system should perform in the manner intended by its design.



This Systems Performance Summary

This system is operating as it was intended by design.

1. The dispersal areas appear to be operating below its design intent (a positive feature). To elaborate, this system does not appear to have received Daily Design Flows that have met or exceeded its design. I am confident that this system has not been used in an abusive manner and has not malfunctioned in any way
2. **This onsite wastewater system substantially meets standards in place at the time of construction (1980 or thereabouts). The dispersal system is described as a Conventional gravity system.**
3. ***What is a conventional gravity system?***
4. ***A conventional gravity system is the simplest form of an onsite wastewater system and requires deep usable soil depths (>30 inches). A conventional gravel system is comprised of a septic tank and drain field. The system is sited to allow gravity to advance wastewater throughout the septic system.***

See image at the end of this report.

This Systems Compliance Summary

This system is operating in compliance with the regulations in place at the time of construction. The following minor items are recommended to be installed for this system to be in compliance with current standards.

1. An owner's manual and maintenance plan should be provided to the owner of the system
2. Care should be taken to ensure that any installed upstream water softeners/ devices are well maintained and working correctly
3. No Vehicular traffic should be allowed to cross or park on the dispersal area
4. Any leaking taps or toilets should be repaired as a matter of urgency
5. Install an effluent filter in the outlet baffle of the septic tank.
6. Do not travel across the septic tank with any vehicle traffic

System Records

A sewage filing search was carried out through the interior health authority and were able to provide documentation for this system. So as part of this inspection I have attempted to determine the legitimacy of this system based on the regulatory standards that were in place at the time of construction. This on site wastewater system was installed under the now defunct sewage disposal regulations, which were repealed in 2005, and replaced with the sewerage system regulation.

Maintenance Records

No records of maintenance were provided. However, the existing owner stated that this system was pumped at intervals of approximately 2 years. This would be appropriate for this system.

Usage

Previous usage – The homeowner indicated that in general 2-people have been living in the home on a full-time basis. This does not represent excessive occupancy.

Evaluation of the system

Transport pipe

The 'transport pipe' refers to the piping from the building to the septic tank and from the tank to the distribution box.

Upstream of tank – The upstream transport pipe was unobstructed and functioning normally

Downstream of tank – the run of pipe from the septic tank to the distribution box was observed clear and flowing in a normal manner.

Downstream of D-Box – There was no evidence of ponding of effluent at the surface or breakout of effluent from the bank below the dispersal field.

Septic tank

Location – approximately 3 meters from the foundation wall at the rear of the house home. A single compartment 2727.65 litre septic tank is located.

Access – There is riser to grade that it is sealed to prevent nuisance odors, as well as preventing parasites another macrofauna from leaving the tank. To clarify at no point during this inspection did I observe any evidence that parasites have been able to exit the tank to the open environment. Under the sewage disposal regulations risers to surface we're not required, so it is therefore not mandatory to install one. Having access ability from the surface ensures convenient quick and easy access to the septic tank if it is required.

Condition – The tanks liquid operating levels appeared normal – The tank appeared to be operating as intended. No evidence of backing up or malfunction was observed.

Maintenance recommended – Septic tank should be pumped at intervals of not more than 2 years.

Distribution Box.

Distribution Box means a watertight component that receives effluent from a septic tank or other treatment unit and distributes effluent via gravity in approximately equal portions to two or more distribution laterals in the soil treatment area.

This component was located utilizing a soil probe. During this inspection there was no physical evidence that any malfunction exists related to this component. The soil around this component was not saturated and no unpleasant odor was noted this suggests normal functionality of this distribution box. This is a positive feature.

Dispersal field

Intended function – also referred to as a drywell-based dispersal field – the dispersal system is intended to somewhat equally spread effluent into non saturated soils - this is where the organisms and characteristics of the soil treat the harmful contents in the wastewater.

This Dispersal system is referred to as a STEG system. To explain an effluent sewer that uses gravity may be called a septic tank effluent gravity (STEG) system, while a pumping system may be called a septic tank effluent pumping (STEP) system. It is also possible to have a hybrid system that uses gravity and pumping. Gravity and pumping

effluent sewer systems both have advantages and disadvantages. These are very common within this geographical area.

The next component within the waste water system is the Dry Wells. This drywell system consists of 3 drywells. This is due to the fact that there are 6 bedrooms within the residence. To explain a dry well dispersal system, effluent is discharged from the septic tank to a 36" diameter concrete vessel, cylindrical in shape. There would be multiple perforations in this vessel, which facilitates discharge into a rock bed. Typically these rock beds utilize 2-3" minus drain rock. In cases where bedrock is not close to the surface, a dry well is typically 4-6' deep. I measured this drywell at 4 feet. These dry wells are considered to be a hazardous environment and it is not recommended to access such a vessel. Toxic gasses and pathogens are most definitely present and pose a severe risk to personal injury or death if entered without adequate experience. Dry wells are considered to be **Not Recommended** under the current standards, but if looked after in terms of daily flow and regular pumping intervals, operate in a healthy manner. Dry wells tend to exhibit catastrophic failure i.e. soft, smelly soil, or ponded sewage as opposed to exhibiting minimal malfunction. In cases where dry well systems are not pumped frequently, solids from the septic tank can be carried over and form a blinding, or clogging, layer within the drain rock surrounding the concrete vessel. I strongly recommend that a pumping interval of not more than three years between septic tank pump outs is maintained. To confirm that this system has not been in a state of malfunction, I utilized soil sampling at a depth of approximately 36" to determine whether sewage has historically ponded within this area. Whilst physically looking at the soil samples, I was attempting to find unnaturally discoloured soil and unexpected colour change, which in most cases is indicative of a high liquid condition within the soil. At no point whilst looking at the samples was a strong odour of sewage detected and therefore it is my opinion that this system has not become saturated and will function normally. I can also confirm by visual examination of the dry well that effluent levels have not

exceeded the output capacity of the system. I feel it is appropriate to state that this component is in very good condition. Liquid levels were minimal and no sludge was detected. This is a very positive feature. **Any changes to this systems use without filing with IHA is considered to be an offense to the health act**

The physical location of the system appeared to meet all of the requirements in terms of dimension and setbacks to property lines. There are no wells located within the 30m critical horizontal setback.

Condition – In general, this dispersal system exceeds the minimum standards as they were set out in the Regulations in place at the time of construction.

Water flow test –. A flush test was performed with wastewater flows reaching the septic tank with adequate flow velocity. Typically, the flow from the house to the tank should possess adequate velocity to both transport sewage and scour the pipe from debris. This is beneficial to the long-term operation of this system component This confirms that

this dispersal system is not hydraulicly overloaded and is functioning as its design intended

Conclusion

This type of system (STEG) can have an extended lifespan, and if the maintenance plan is followed should continue to operate in a healthy manner

Based on the results of this inspection I can confidently confirm that this onsite wastewater system Should not be negatively affected by the addition of 10 occupants utilizing the 4 bedroom residence.

Please contact us with any questions or concerns regarding the information in this report.

Thank you

Helpful information

Rhino Environmental Services approved helpful info, including septic friendly cleaning tips along with other practical do's and don'ts for home owners with septic systems.

CAUTIONS AND WARNINGS:

- **Gases within the septic tank and pump chamber can be explosive and/or cause asphyxiation. DO NOT enter tank risers or tanks at any time. Lids are to be secured at all times.**
- **Sewage poses a health risk – avoid contact.**
- **Garbage disposal units should NOT to be used with septic systems. A garburator will increase suspended solids in the system, overload the septic tank, degrade wastewater treatment and decrease drain field life.**
- **No water softeners, roof drains or perimeter drains to drain into the wastewater system.**
- **Irrigation over the mound or drain field should be closely monitored. It should be sufficient to ensure healthy grass growth but excessive amounts of water should be avoided. Excessive irrigation infiltrates into the underlying sand**

- **Irrigation over the mound or drain field should be closely monitored. It should be sufficient to ensure healthy grass growth but excessive amounts of water should be avoided. Excessive irrigation infiltrates into the underlying sand and soil, reducing its ability to treat the wastewater, and can cause system failure.**

- **Structures, roads, paths, parking, swimming pools, and any impervious materials are prohibited from being placed on drain fields. Any of these will cause failure of system.**

DO'S AND DON'TS:

Your sewerage system relies on treatment inside the septic tank, and in the soil of the distribution field - primarily by bacteria - to reduce the harmful qualities of the wastewater. Long life of the system, preventing health hazards, and minimizing impacts on the environment depend on your proper use and maintenance of the system. Generally, proper use of the system involves:

1. **Promoting bacteria growth by avoiding products and chemicals that will reduce or eliminate bacteria growth**
2. **Minimizing non-biodegradable material**
3. **Minimizing fats, oils, and grease**
4. **Not overloading the system beyond its capacity to treat the sewage.**
5. **Ensuring that maintenance is carried out every 3 years or sooner.**

Here's a list of tips to ensure proper treatment and long life of your system:

Avoid, reduce, and control the use of disinfectants, bleach, and anything that

Kills bacteria. Limited quantities of these products are generally OK, but avoid excessive use.

Do not use Drano or Liquid Plumber style products to clear clogged plumbing – they are very damaging to bacteria.

Do not put into the system: lubricating oils, greases, other petroleum products, antifreeze or other automotive fluids, chemical wastes, toxins, paints, solvents, thinners, caustic cleaners, pesticides, herbicides

Avoid, reduce, and control the quantities of fats, oils, and grease from food preparation that enter the septic system. They are difficult to break down in the septic tank, cause effluent filter clogging, and can drastically shorten the life of the system by clogging the sand and soil in the dispersal system. Limited quantities are OK, but it is important to use strategies to reduce - like collecting fat from fried foods, oil from deep frying, etc., in coffee cans or similar – and disposing in garbage.

Avoid putting non-biodegradable material into the system, or other materials that decompose slowly. Quicker buildup of solids in the tank will increase the required frequency of pumping out the system.

Objects like the following should not be put into the system: bandages, strings, rags, cotton balls, coffee grounds, paper towels, condoms, disposable diapers, cigarette butts, plastics, metals, cat litter, and other materials that do not decompose easily.

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Hair can cause thickening and matting of the scum in the tank by entangling other solids, and can cause clogging of the effluent filter. Laundry lint poses a similar problem. Some hair and lint is unavoidable and OK, but minimizing the amount of hair and lint entering the system is advisable. Dispose of hair and laundry dryer lint in garbage to the degree that is practical.

In-sink garbage disposal units increase the organic matter entering the system and should not be used unless the system is designed and sized to accommodate the increased organic loading. Composting or disposal in the garbage of waste food is preferable to disposal in the sewage system.

Be aware of the volume of wastewater going into the system. Try to "even out" the flows when feasible. Doing the entire week's laundry for a large household all in one day, for example, can flush the system, negatively affecting the treatment ability of the system for that day and some time to come. If other uses are also high, the level of treatment can be greatly reduced. Failure of the distribution system to safely disperse effluent can also result.

Septic tank additives can do more harm than good. The "experts" consistently advise AGAINST their use.... They work by breaking up the solids in a septic tank. These solids then become suspended in the wastewater and are pumped to the soil. Soil clogging and drastically reduced life of the soil dispersal system will result. Septic tanks are intended to promote settling and retention of solids to avoid soil clogging – additives work against this.

Consider attending a CSRD septic savvy workshop!

General contacts

A list of contractors who are certified as Registered Onsite Wastewater Practitioners (ROWP'S) is available through: http://owrp.asttbc.org/c/finder.php

Statement of general conditions:

This document does not constitute any form of warranty or guarantee, nor does it provide assurance of continued performance to any degree of the system evaluated.

Rhino Environmental Services and its agents expressly disclaim any warranty or guarantee anything expressed or implied arising from this septic system evaluation.

Reliance on Provided Information

Rhino Environmental Services has relied on the accuracy and completeness of information provided by its client the home owner and by other professionals. We are not responsible for any deficiency in this document that results from a deficiency in this information.

Standard of Care

We exercise a standard of care consistent with that level of skill and care ordinarily exercised by members of the profession currently practising under similar conditions.

This information is only our opinion as viewed in the snapshot of time that we were on the site assessing the system.

Review

We recommend that our client engage Rhino Environmental Services to review this document and discuss our conclusions and recommendations.

Limitation of Liability Clause

In all cases the liability of Rhino Environmental Services and/or Oscar Long is limited to the fees charged. By accepting and using this report the client accepts that Rhino Environmental Services and Oscar Longs liability are limited in this way.

Photography Acquired during the inspection

Image showing septic tank Location.

Image showing 4`` PVC inlet baffle correctly positioned

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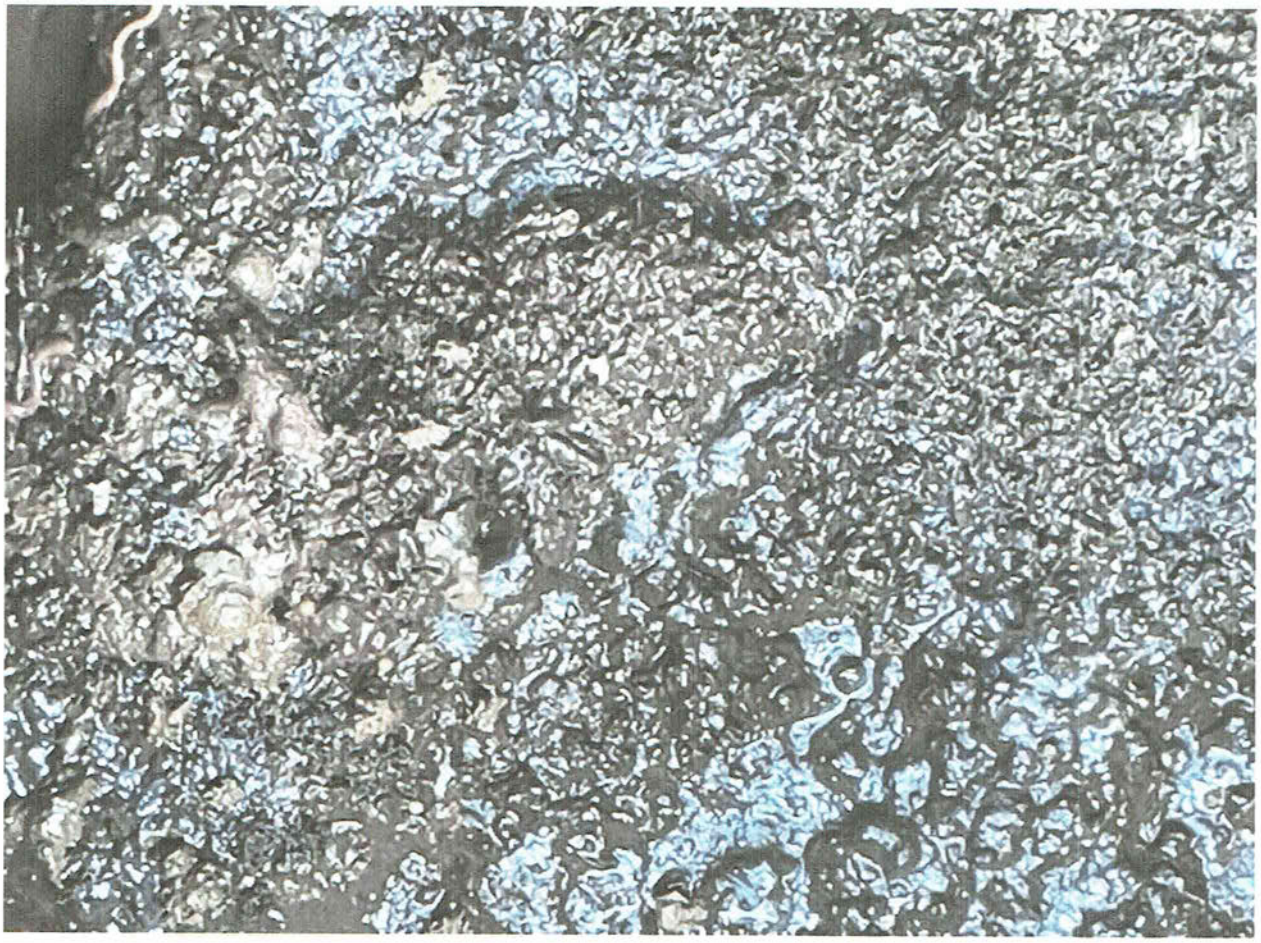

Image showing a healthy scum layer

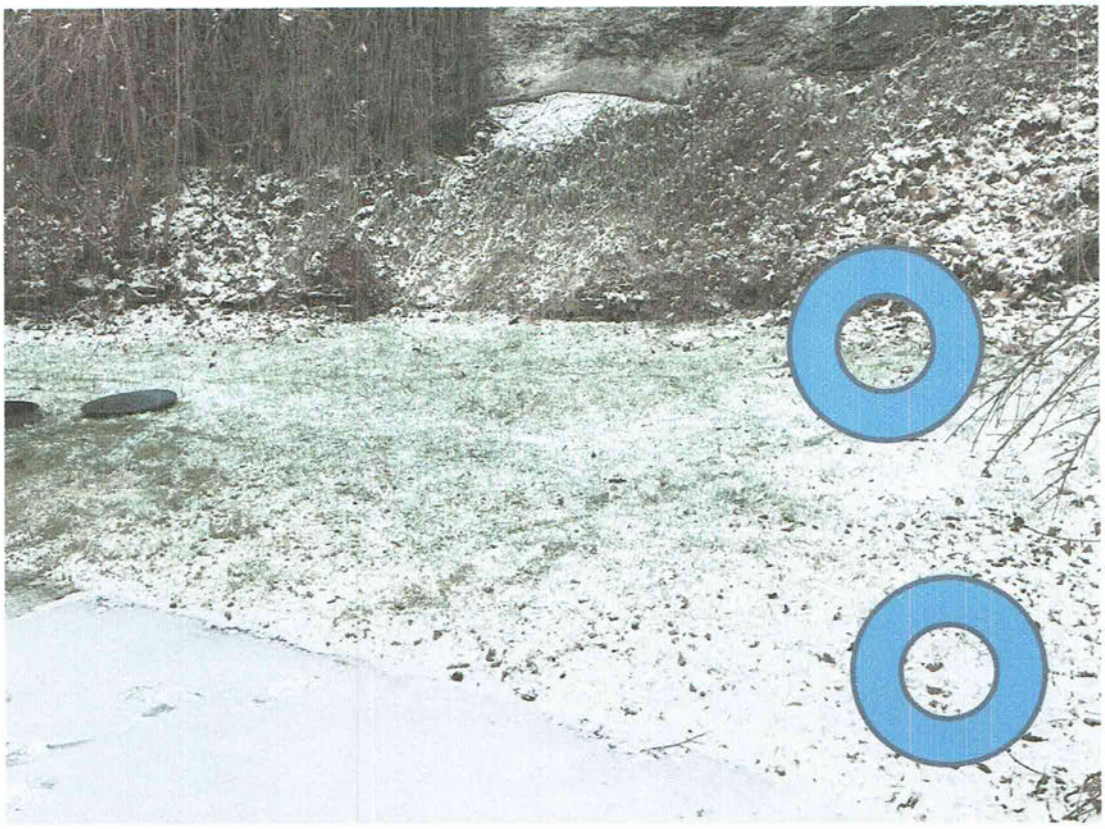

Image showing the drywell locations

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Image showing Gravelly Sand for receiving soils

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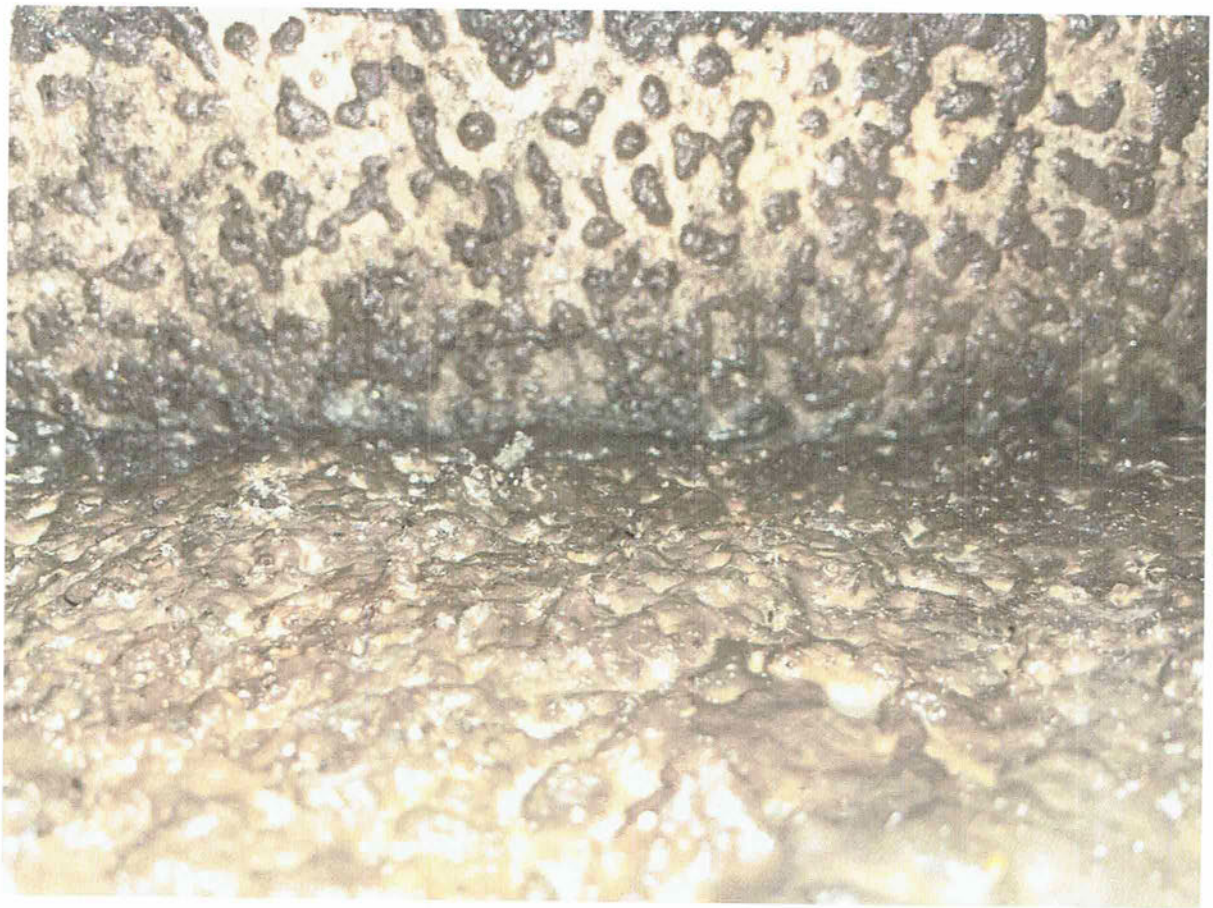

Image showing Working level of the tank. Please note that there is no unusual staining above working level. This demonstrates that this tank has never been in a state of malfunction.

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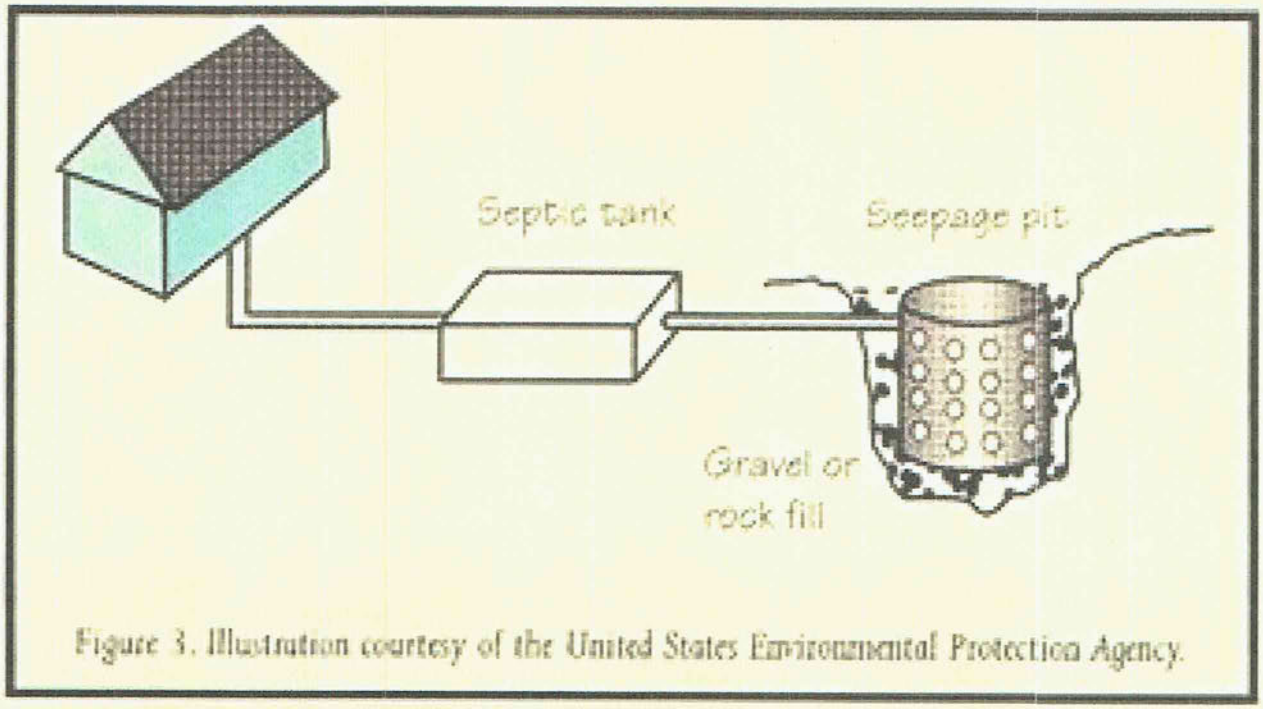

Figure 3. Illustration courtesy of the United States Environmental Protection Agency.

Schematic of a Seepage Pit (Dry Well)

Are there additional structures, existing or planned, with plumbing fixtures? Yes ☐ No ☐	If yes, please describe size and intended use: No

Planned Uses

1. Will the basement be finished or unfinished?

☑ Finished ☐ Unfinished ☐ Not applicable (no basement)

2. Do you plan on having a self-sufficient living suite in addition to the main residence, either immediately or in future? ☐ Yes ☑ No

If yes, please provide details: _____

3. Do you plan on having a Bed and Breakfast? ☐ Yes ☑ No

If yes, please provide details: TUP (short term rental)

4. Do you plan on having an in-sink garbage disposal unit? ☐ Yes ☑ No

5. Do you plan on having a water softener or other water treatment system? ☐ Yes ☑ No

If yes, please describe: _____

Other Information

6. Do you OR will you have a well? ☐ Yes ☑ No

If yes, please describe its general location on the lot: _____

7. If no, the source of domestic drinking water is: Table water intake, water dispensers

8. Are there any neighboring wells within 30 m of your property boundaries? ☐ Yes ☑ No

If yes, please describe their locations: _____

9. Are there any covenants or easements on the property that could affect the sewerage system? ☐ Yes ☑ No

If yes, please describe their description and locations: _____

10. Will the residence be fitted with hot tub or Jacuzzi please list: No

11. How many bathrooms and WC, s will be installed: 2 full bathrooms and a half bathroom

Items to be Provided by Owner

The following items are to be provided by the Owner prior to project commencement and the Owner agrees herein to supply them at the owner's expense:

1. Plans and specifications of building, site access and landscaping plans
2. Plot plan or lot survey
3. Land Title's Search results
4. Reference plans and terms of any covenants or easements
5. Location of all existing services BC One call
6. Copies of any/all registered covenants or easements
7. Copy of most recent property tax notice
8. Design Fee or 50% deposit (To be discussed)

Declaration Statement

The information given above is true and accurate for the purpose of planning, designing, constructing and maintaining a Sewerage System for said property, and that any changes, alterations or amendment to this above information (before construction of the sewerage system) will be provided to OSCAR M. LONG, the "authorized person," as defined in the B.C. Health Act, Sewerage System Regulation 324/2004, in writing prior to any installation of a sewerage system.

Date of Signed Declaration: Jun 20/2025

Name of Owner(s) [redacted]

Owner(s) Signature(s) [redacted]

BRITISH COLUMBIA | Ministry of Finance

2024 PROPERTY TAX NOTICE

issued under the Taxation (Rural Area) Act

DUE DATE: July 2, 2024

eTaxBC Enrolment Code: w5a2

May 13, 2024

006631

[redacted]
2302 EAGLE BAY RD
BLIND BAY BC V0E 1H1

Jurisdiction: 789
Roll Number: 07876.000
Folio Number: 789 007876.000
Account Number: RPT-1086-4200

Letter Id:	L0608572448
Property Address:	2302 EAGLE BAY RD BLIND BAY BC V0E 1H1
PID:	009-757-741

Legal Description

22 LOT 3, PLAN KAP9025, SECTION 19, TOWNSHIP 22, RANGE 10, MERIDIAN W6, KAMLOOPS DIV OF YALE LAND DISTRICT

P00006521 I0006521 P00003261

TO AVOID LATE PAYMENT PENALTIES claim your 2024 Home Owner Grant by July 2, 2024
Apply online at gov.bc.ca/homeownergrant or by phone, toll free 1 888 355-2700

	Class	Land Value	Improvements	Rate	No Grant A	Reg Grant B	Add'l Grant C
Provincial Services							
School	01	377,000	492,000	1.50990	1,312.10	1,312.10	1,312.10
Less: Home Owner Grant					0.00	(770.00)	(1,045.00)
Net School					1,312.10	542.10	267.10
Provincial Rural Tax	01	377,000	492,000	0.36000	312.84	312.84	312.84
Police Tax	01	377,000	492,000	0.07830	68.04	68.04	68.04
Local Services							
EA C FIRE SERVICE	01	377,000	492,000	0.32139	279.29	279.29	279.29
OKANAGAN REG LIBRARY	01	377,000	492,000	0.09783	85.01	85.01	85.01
G COLUMBIA SHUSWAP	01	377,000	492,000	0.86067	747.92	747.92	747.92
N OKAN/COL SHUS HOSP	01	377,000	492,000	0.23001	199.88	199.88	199.88
BC ASSESSMENT	01	377,000	492,000	0.03470	30.15	30.15	30.15
MUNICIPAL FINANCE AUTHORITY	01	377,000	492,000	0.00020	0.17	0.17	0.17
Parcel Tax							
S SHUSWAP LIQ WASTE					9.32	9.32	9.32
TOTAL 2024 PROPERTY TAXES					3,044.72	2,274.72	1,999.72
BALANCE					3,044.72	2,274.72	1,999.72

You must claim your Home Owner Grant each year by the due date. Your social insurance number is required.

The Rural Property Tax Notice is for the 2024 calendar year and has been sent to all registered property owners.

Keep the top portion for your records

BRITISH COLUMBIA | Ministry of Finance

Mailing Address:
PO Box 9446 Stn Prov Govt
Victoria BC V8W 9V6

REMITTANCE ADVICE
2024 PROPERTY TAX NOTICE

FOLIO NUMBER	ACCOUNT NUMBER	DUE DATE:	TOTAL AMOUNT PAID
789 007876.000	RPT-1086-4200	Jul 2, 2024	
A – Pay this amount if you are not applying for the	B – Pay this amount if you are applying for the regular home owner grant 2,274.72	C – Pay this amount if you are applying for the additional home owner grant 1,999.72	