



**Valley
Environmental**

David Cassidy, RPBio.
3265 Webber Road
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November 12, 2022

Planning Department
Regional District of Okanagan-Similkameen
101 Martin Street, Penticton, BC V2A 5J9

Re: Riparian Assessment / Hardship at 4535 & 4545 Mill Road, Naramata, BC

Valley Environmental (VE) has been retained as a Qualified Environmental Professional (QEP) for the single-family developments at this property to complete a riparian areas protection regulation (RAPR) report. An initial review of the property under the RAPR reveals that any single-family development on the property will be in a hardship including a holding tank.

A hardship indicates that the proposed developments will encroach into the riparian setback. As such, each of the proposed developments will require riparian / native planting compensation (shrubs & trees), as per provincial requirements. This compensation plan will help offset environmental impacts to fish (riparian) habitat. It is the responsibility of the QEP to design an appropriate compensation plan which will be reviewed and authorized by provincial RAPR review staff.

Prior to proceeding with a RAPR Hardship Protocol with the province, the property owner will pursue a variance with the RDOS for the proposed single-family development including the holding tank. The variance may include those for building setbacks as well as those for locating a holding tank.

VE understands that the property owners have hired an engineer to design a septic system with holding tank for each property/development. Furthermore, VE understands that the Interior Health Authority (IHA) has approved both septic systems and holding tanks. IHA is responsible for ensuring environmental (public) health in regards to holding tanks and septic systems.

If you require any additional information or anything requires clarification, do not hesitate to contact us at 250-490-0161 or david.cassidy@shaw.ca.

Regards,

David Cassidy, BSc. / R.P.Bio. / QEP
Senior Environmental Biologist



Regional District of Okanagan Similkameen
101 Martin Street
Penticton, British Columbia
V2A 5J9

October 31, 2022

Attention: RDOS Building Authority

CC: Parkland Enterprises, c/o Rene Doucette, Owners
Donalyn and Robert Hirtz, Owners
Marion Masson, CPHI(C) Interior Health Authority

Re: Lots 21 and 22, Plan KAP 3889, DL 211
4535 and 4545, Mill Road, Naramata, BC

To whom it may concern,

Oland Engineering Ltd was consulted by Mr. Rene Doucette to design on-site sewerage systems for the two subject lots. I visited the sites to discuss a proposed development and evaluate the options for on-site sewerage.

It was immediately clear from the initial site visit, that the many constraints on the property would present a challenge for developing an acceptable sewerage system for the site.

I, along with experts in Hydrogeology have been able to design systems within proximity to surface water in the past. Our designs use a high level of pre-treatment as well as a permeable reactive layer of organic material under the effluent dispersal zone to reduce nutrient loading to the nearby lake or stream.

The constraints for both subject lots, pushes the boundaries to the extreme. The constraints include:

- A very small area for effluent dispersal and the construction of the treatment system.
- The lake setback will only be approximately 10m to the dispersal area as opposed to the typical 30 m setback required by the Health Regulation.
- The traveled portion of Mill Road borders the property line and, in one section, encroaches on the property, leaving the only dispersal system area vulnerable to traffic and road maintenance.
- The soils are not well suited for infiltration of effluent.
- The typical required setbacks to property lines, the lake and the building footprint cannot be met.

I have over 30 years of Engineering experience in the design and construction supervision of on-site sewerage systems. In doing so, I have the responsibility to design to protect human health and the environment. I am required to evaluate the risks of possibly creating a health or environmental hazard and must design systems accordingly.

To provide sewerage service to either of these lots, I strongly feel that a holding tank with a solid maintenance plan is by far the best solution to allow responsible development of these lots.

I have successfully used holding tank designs throughout the Okanagan, including within RDOS for several properties in the Tulameen area. (Samples attached).

The process to acquire a permit from Interior Health includes proof of a pump and haul contract, a valid and responsible engineering design, rational as to why on-site effluent dispersal is not a viable option and an operating plan. (See attached).

These subject lots were recently purchased with the understanding that a cottage with plumbing could be constructed as the lots are zoned accordingly. I understand that RDOS has Bylaws that restrict the use of holding tanks. Passing a variance to allow a more responsible solution to effluent discharge, in this case, is the right thing to do in my professional opinion.

Onsite treatment and discharge of sewage effluent on these lots pose a very high risk of creating a health and/or environmental hazard. I want to use holding tanks for these lots because I believe it is the safest solution.

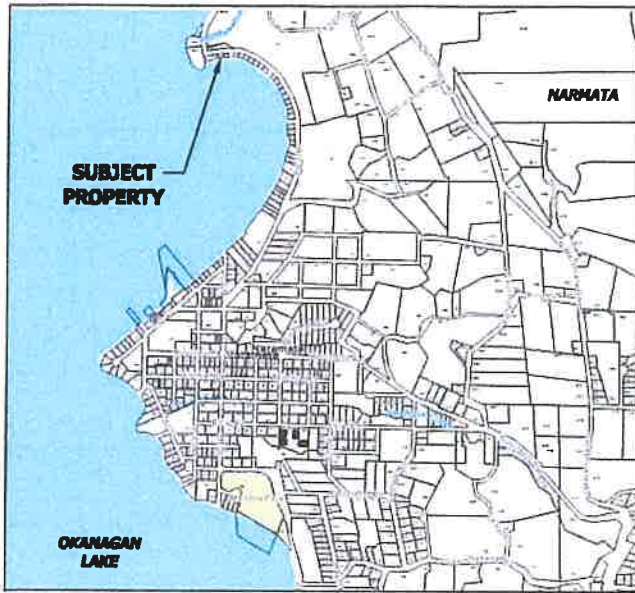
If you have any questions or require additional information, please contact the undersigned.

Sincerely yours,



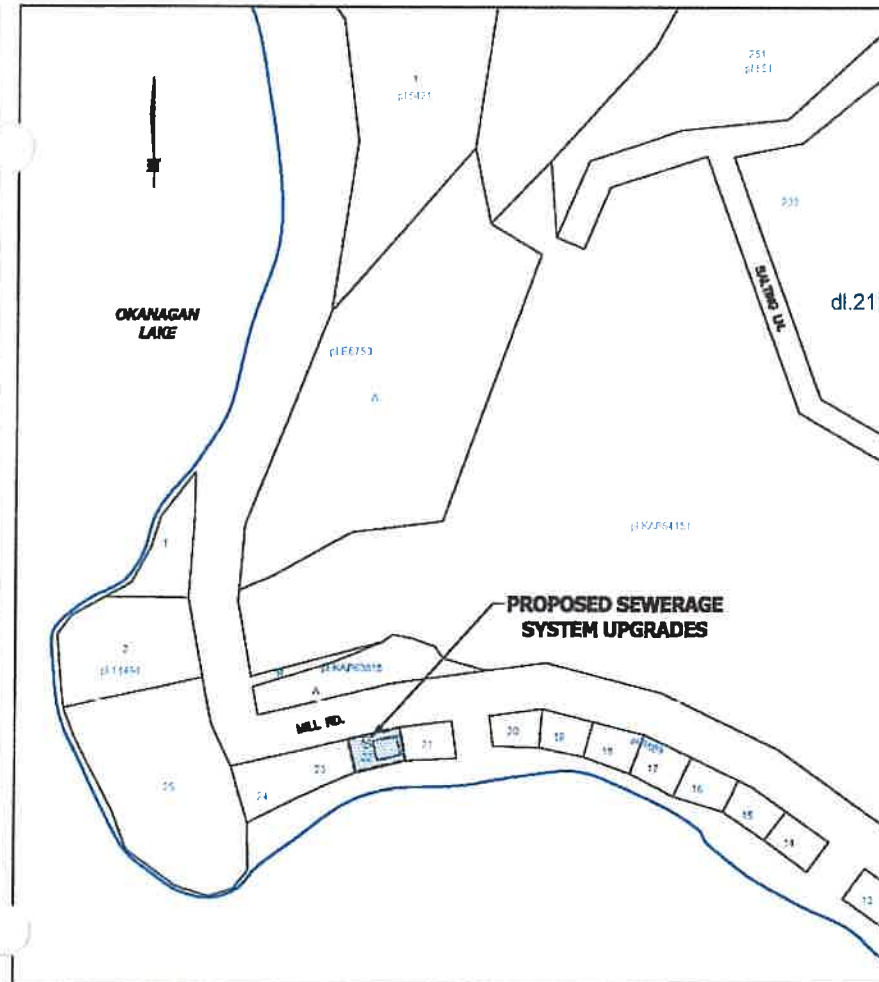
C. Jeffrey Oland, P. Eng.

22-036



KEYPLAN

N.T.S.



LOCATION PLAN

SCALE: 1:3000

ON-SITE SEWERAGE SYSTEM FOR: 4545 MILL ROAD, NARAMATA, BC

LEGAL: LOT 22, PLAN KAP3889, DISTRICT
LOT 211, SDYD

CIVIC: 4545 MILL ROAD, NARAMATA, BC

PID: 010-694-471

ROLL: 17-715-02283.000

OWNER: DONALYN & ROBERT HIRTZ

NOTES:

1. THE SEPTIC TANKS SHALL BE LOCATED TO PROVIDE A MIN. FALL OF $\frac{1}{8}$ " PER FOOT IN ALL BUILDING SEWER DRAINS AND PLACED ON UNDISTURBED NATIVE SOIL.
2. ROOF AND SITE DRAINAGE SHOULD BE DIVERTED AWAY FROM TANKS. THE SEPTIC TANKS SHALL BE INSPECTED AND PUMPED WHEN TANK ALERTS INDICATE.
3. WATER-SAVING DEVICES AND PRACTICES SHOULD BE IMPLEMENTED.

ISSUED FOR REVIEW

DATE: Aug. 5, 2022

ISSUED FOR CONSTRUCTION

DATE: _____

ASBUILT INSPECTION

DATE: _____

DRAWN BY: W.G.S.

DATE: Aug. 5, 2022



**OLAND
ENGINEERING
LIMITED**

1805 Capistrano Drive
Kelowna, BC V1V 2Z3

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C. JEFFREY OLAND, P. ENG.

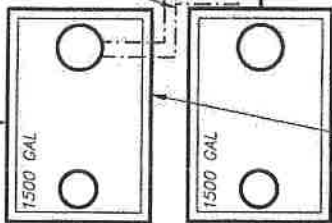
ON-SITE SEWAGE SYSTEM FOR: 4545 MILL ROAD, NARAMATA, BC

MILL ROAD

38mm CONDUITS FOR ALARM WIRING. 75% ALARM PANEL TO BE LOCATED WITHIN HOME, AND THE 90% PANEL TO BE LOCATED OUTSIDE ON HOME

1.0m

21.3



100mm (4") PVC CLEANOUT

PANELS (2) TO INCLUDE VISIBLE HIGH LEVEL ALARMS

100mm (4") PVC CLEANOUT

13.7

3 BEDROOM HOME

LOT 21

2 x 6800L (1500 GAL) H20 RATED SINGLE- CHAMBERED SEPTIC TANKS c/w POLYLOK LIDS & CAST IRON FRAME & COVERS (H20 LOADING RATED). ACCESSIBLE OPENINGS TO SERVE AS PUMP-OUT PORTS (SEE DETAIL PAGE)

LOT 22

LOT 23

20.6

RETAINING WALL

OKANAGAN LAKE

1 SITE PLAN
SCALE: 1:100



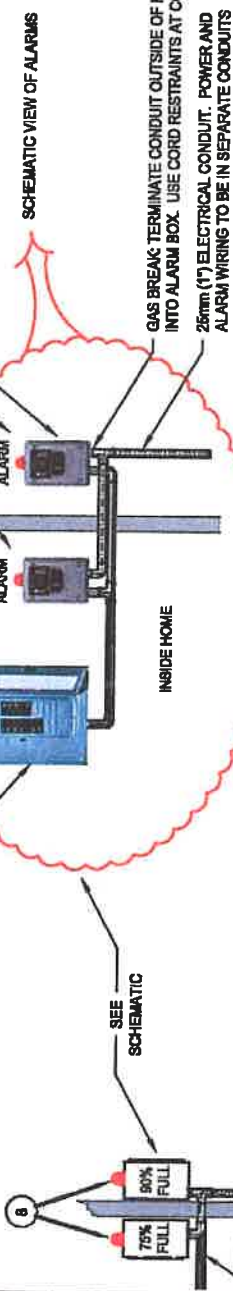
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APR 10 2022



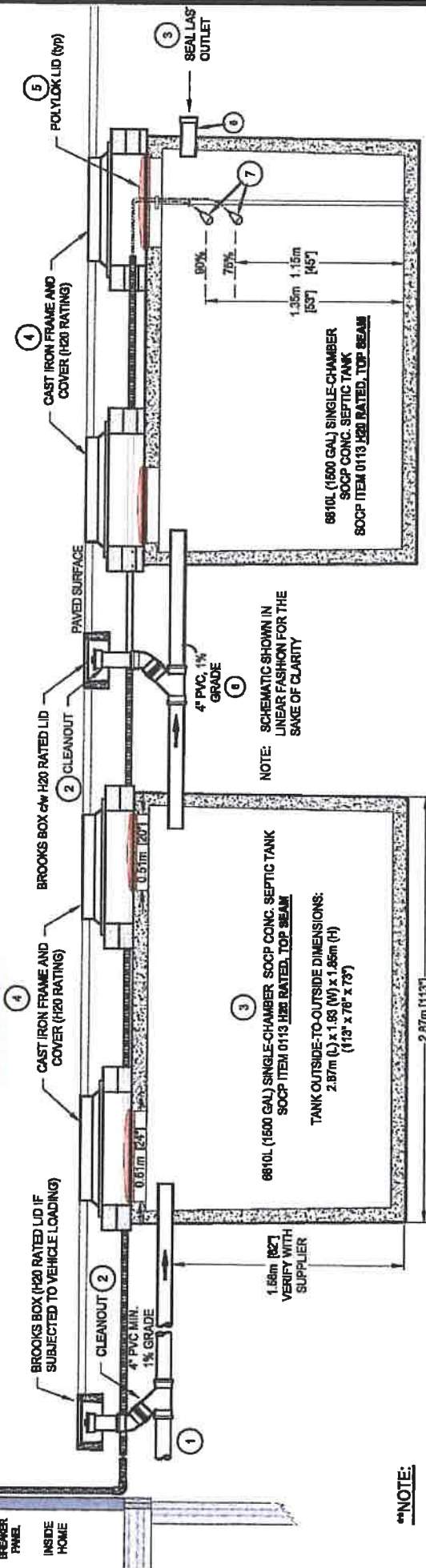
ON-SITE SEWAGE SYSTEM FOR:

4545 MILL ROAD, NARAMATA, BC

BREAKER PANEL: EACH ALARM TO BE ON SEPARATE BREAKERS



GAS BREAK: TERMINATE CONDUIT OUTSIDE OF HOUSE AND BEFORE ENTRY INTO ALARM BOX. USE CORD RESTRAINTS AT CONDUIT TERMINATION
25mm (1") ELECTRICAL CONDUIT. POWER AND ALARM WIRING TO BE IN SEPARATE CONDUITS



NOTE:

1. COMPACT ALL BACKFILL AROUND TANK AND UNDER PIPE IN MAX. 300mm LIFTS
2. SCHEMATIC SHOWN IN LINEAR FASHION FOR CLARITY

1 HOLDING TANKS DETAIL

SCALE: 1:40

MATERIALS LIST

1. 100mm (4") ABS OR PVC SEWER OUTLET AS SPECIFIED BY THE B.C. PLUMBING CODE MIN. 1% GRADE, MAX. 45° BENDS BED AND COMPACT UNDER ALL PIPING
2. 2 x 100mm (4") CLEANOUTS. HOUSE WITH BROOKS UTILITY BOXES, c/w (H20 RATED LIDS)
3. 2 x 6810L (1500 IMP. GAL.) SINGLE-CHAMBERED CUSTOM H-20 LOAD RATED SEPTIC TANKS (SUEP PRECAST ITEM 113 SHOWN)
4. 4 x C.I. FRAME AND COVERS, c/w LIDS WITH 0.6m (24") OPENINGS, PLUS GRADE RINGS TO BRING TO PAVED SURFACE ELEVATION
5. 2 x 51cm (20") & 2 x 60cm (24") POLYLOK LIDS
6. ~7m of 100mm (4") PVC TO CONNECT TANKS AND CLEANOUTS. AT FINAL TANK OUTLET, SEAL PIPE TO PREVENT LEAKAGE
7. 2 x SUE SINGLE MASTER FLOATS c/w 15' CORDS
8. 2 x SUE RHOMBUS TANK ALERTS TO DETECT 75% & 90% FILL LEVELS. (TAXT-01H OR AS RECOMMENDED BY SUPPLIER). EXTERNAL ALERT TO BE SUITABLE FOR OUTSIDE MOUNTING



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