island health

RECORD OF SEWERAGE SYSTEM

ATTACHMENT 8

Filing # (OFFICE USE ONLY) DC22/138

1. Property Information

■ New Construction ☐ Alteration ☐ Repair ☐ Amendment – Original Filing #

Tax Assessment Roll #: Folio# 00872 - 000

PID #: 006- 570 - 208

Legal Description (Plan, Lot, District Lot, Block Numbers): Lot 3, Section 16, Range 2, Quamichan District , Pl 2462

Street (Civic) Address or General Location: 3833 Gibbins Rd.

City: Duncan, BC.

2. Owner Information

Name of Legal Owner: Steve and Jaclyn Poznecov

Mailing Address: 3833 Gibbins Road

Phone: 250 - 715 - 1748

City: Duncan

Prov: BC

Postal Code: V9L 6E8

3. Authorized Person Information

Name of Authorized Person: Stephen J. Purkiss

Mailing Address: 2430 Dragon Veiw Place

Phone: 250-715-7585

City: Quesnel

Prov: BC

Postal Code: V2J 5Y4

Registration #: OW0192

Email: purkiss@telus.net

4. Structure Information

Sewerage System Will Serve: PLUS CARRIAGE HOUSE

■ Single Family Dwelling ☐ Other Structure (specify) ☐ Other Dwelling (specify)

The sewerage system is designed for an estimated minimum daily domestic sewage flow of (check one)

■ Less than or equal to 9,100 litres ☐ More than 9,100 litres but less than 22,700 litres

5. Site Information

Depth of native soil to seasonal high water table or restrictive layer (cm): 117 to 152 cm

Information respecting the type, depth and porosity of the soil is attached ■ Yes ☐ No

GPS Location of System (decimal degrees) Latitude: 48.77610 Longitude: 123.76560

Horizontal Accuracy (m): 10 ■ Recreational GPS ☐ Differential GPS

6. Drinking Water Protection

Will the sewerage system be located less than 30 m from a well? ☐ Yes ■ No

If yes, attach a professional's report and specify the intended distance: NA (m)

Distance of proposed sewerage system to the closest body of surface water: 30m (m)

7. System Information

Sewerage treatment method: ■ Type 1 ☐ Type 2 ☐ Type 3

8. Legal or Regulatory Considerations

■ Construction of the proposed sewerage system will not conflict with legal instruments registered on the property.

Is this filing submitted as the result of an order from the Health Authority? ☐ Yes (attach a copy of the order) ■ No

9. Plot Plan and Specifications

Plot Plan (to scale) and specifications are attached ■ Yes ☐ No

■ The plans and specifications are consistent with Standard Practice

Source of Standard Practice: ■ Ministry of Health Standard Practice Manual ☐ Other

10. Authorized Person's Signature

Signature

Date: June 22 / 2022

OFFICE USE ONLY

Filing Accepted Date: June 22/22

Receipt Number: $200.00 #270531

Revised August 2016

NORTH COWICHAN

E-MAILED

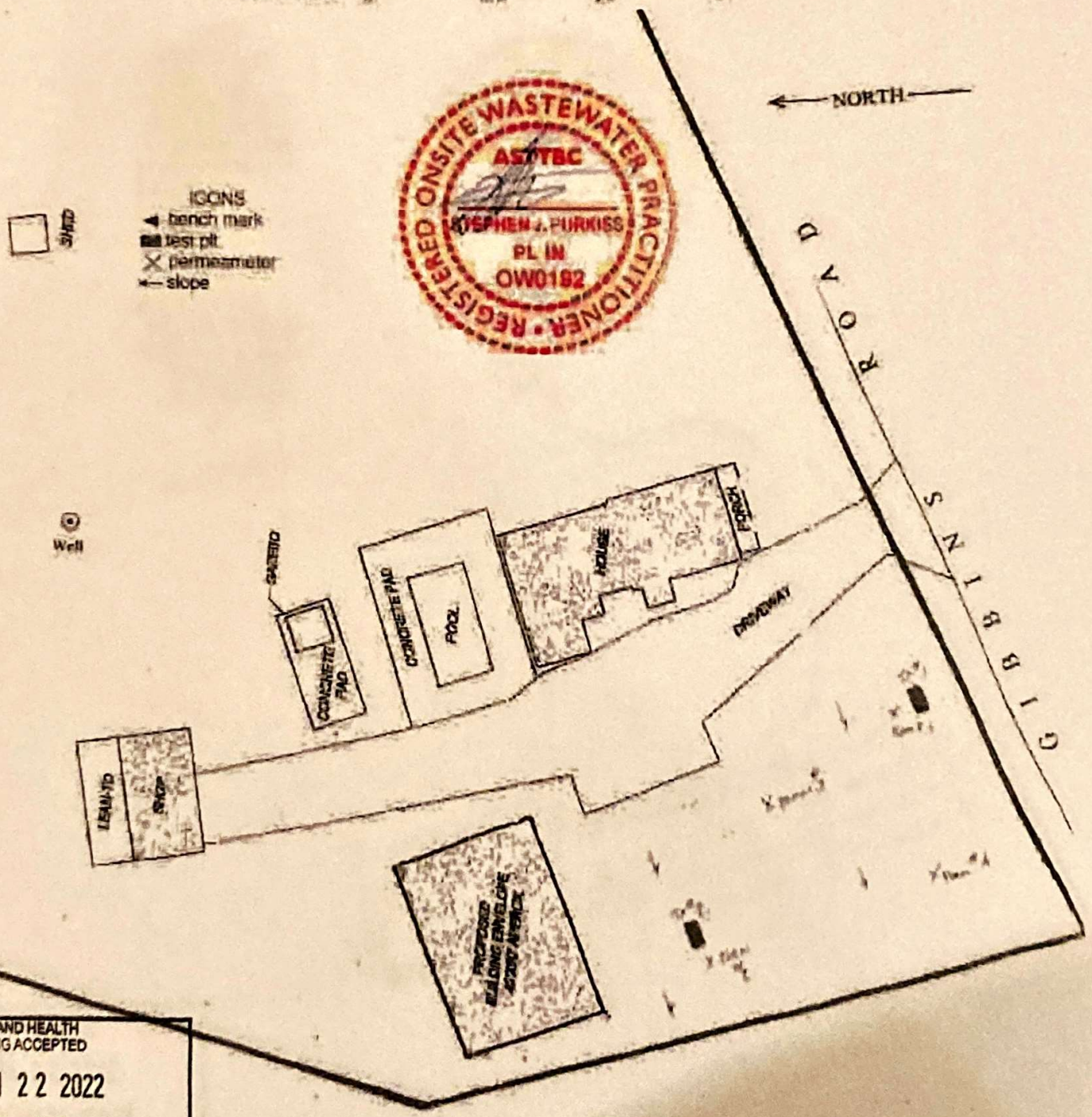
ENTERED JUN 30 2022

ATTACHMENT 8

Legal Description: Lot 3, Section 16, Range 2 Quamichan District Plan # 2462 PID. # 006 – 570 – 208 Filing #	Drawing By: S. Purkiss
	Slope: 3 % LL @ BS
	GPS: N. 48.77610 W. 123.76560 @ 10m
Civic Address: 3833 Gibbins Road, Duncan, BC.	Drawing #: 2 of 2 / Date: June 21/2022
	Title: Soil Test Pits and Permeameter Holes

All Measures In Meters

Scale 1:500 0 10m 20 30



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REGISTERED ONSITE WASTEWATER PRACTITIONER
ASTTBC
STEPHEN PURKISS
PL IM
OW0192

Project

Poznecov @ 3833 Gibins Rd. , Duncan BC.
PID # 006 - 570 - 208

Pressurized System
Timed Dose - Analog Timer

Flows

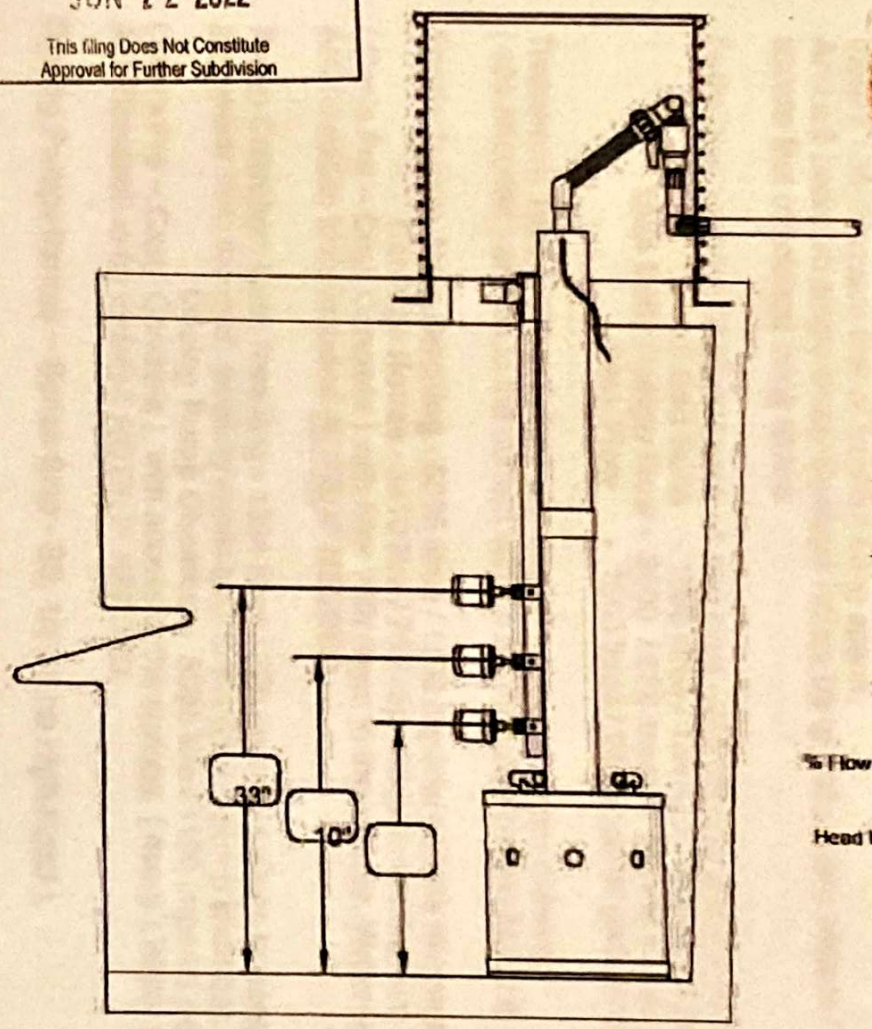
Total Dynamic Head:	27.5	Feet
GPM:	26.4	Gals
Design Flow:	572	gpd

Floats

HWA/Override (YG):	33	Inches
Timer Off (R):	10	Inches

Timer Settings

Dose on demand by timer
Doses: 32 @ 17.88 Imperial gals / 81 litres
= 572 Imp. gals/day DDF
On Time: 41seconds
Off Time: 5 minutes to reset the indexing valve



Pump Chamber: 5005litre / 1100 Imp. Gallon, (Dan's Pre-Cast Tank)
111 litre / 24 Imp. Gals. Per Inch @ Average inside Measure

Input Parameters

Orifice Size	3/16	inches
Residual Head at Last Orifice	2.0	feet
Orifice Spacing	2.0	feet
Number of Laterals per Cell	8	
Lateral Length	40.0	feet
Lateral Line Size	1.25	inches
Lateral Pipe Class/Schedule	40	
Distributing Valve Model	6404	
Manifold Length	20.0	feet
Manifold Line Size	1.50	inches
Manifold Pipe Class/Schedule	40	
Lift to Manifold	15.0	feet
Transport Length	50.0	feet
Transport Line Size	2.00	inches
Transport Pipe Class/Schedule	40	
Discharge Assembly Size	1.50	inches
Flow Meter	None	inches
'Add-on' Friction Losses	0.0	feet

Calculations

Minimum Flow Rate per Orifice	0.62	gpm
Number of Orifices per Zone	42	
Total Actual Flow Rate	26.4	gpm
Number of Lines per Zone	2	
% Flow Differential 1st and Last Orifice	8.0	%
Lift to Manifold	15.0	feet
Residual Head at Last Orifice	2.0	feet
Head Loss in Laterals	0.4	feet
Head Loss Through Distributing Valve	5.9	feet
Head Loss in Manifold	0.2	feet
Head Loss in Transport Pipe	1.9	feet
Head Loss Through Discharge	2.1	feet
Head Loss Through Flow Meter	0.0	feet
'Add-on' Friction Losses	0.0	feet

Total Flow Rate 26.4 gpm
TDH 27.5 feet

ATTACHMENT 8

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REGISTERED ONSITE WASTEWATER PRACTITIONER
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STEPHEN J. PURKISS
PL IN
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Specifications List For: Steve and Jaclyn Poznecov

Civic Address: 3833 Gibbins Road, Duncan, BC.

Legal: Lot # 3, Section 16, Range 2, Quamichan District ,
Plan # 2462 PID # 006 - 570 - 208.

Bedrooms: 4 bedroom single family dwelling up to 330 square meters / 3552 square feet of finished living space.
And a 2 bedroom single family Carriage House up to 240 square meters / 2584 square feet of finished living space.

Daily Design Flow: **4 Bed House** - 1,600 litres / 286 imperial gallons per day.
2 Bed Suite - 1000 litres / 154 imperial gallons per day
Total Daily Design Flow - 2600 / 572 imperial gallons per day
Peak Flow - 1300 litres / 286 imperial gallons per day

Treatment: Type 1 with pressure distribution to trench, as per drawing (see attached) and as to the current version 3 Standard Practice Manual.

Septic Tanks: **Main Dwelling** - 5005 litres / 1100 imperial gallons minimum,
Carriage House - 3410 litre / 750 imperial gallons minimum
(Dan's Pre -- Cast, Concrete) with filter With risers to the surface. Water tested.
Anti floatation to be installed ***NOTE:*** **IF NEEDED.**

Pump Chamber: **Main Dwelling** - 1364 litres / 300 imperial gallons to transfer the grey water from the main dwelling septic tank to the dosing pump chamber.
Dosing Pump Chamber - 5005 litre / 1100 imperial gallons min.
(Dan's Pre -- Cast, Concrete), with access to the surface, (risers).Water tested.
Anti Floatation to be installed ***NOTE:*** **IF NEEDED.**

Dosing Pump: Barnes -- Series Step - SS, 1/2 (.5 hp High Head).

Dose: Dose on demand by Timer @ 81 litres/ 17.88 imp. gallons 32 times a day to a 4 zone indexing valve.

ON TIME OF - 41 SECONDS and an **OFF TIME OF - 5 MINUTES TO RESET VALVE**
32 times = 2,600 litres / 572 imp gals. with a Peak Flow of 1300 litres / 286 imp. gals. dispersing in the septic field per 24 hrs. / day.

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Indexing Valve: 6404 K-RAIN

Panel: SJE Rhombus EZ Series Simplex.

Floats:SJE Rhombus

Field: 97.5meters / 320 feet of tile at 0.9 meter / 3 foot wide title at 3 meters / 10 foot

spacing or the equivalent with chambers, (infiltrators). **Orifice Shields** to be installed over every orificelf using drain rock.

LLR: Minimum system length —19 meters / 62 feet.

Force Main: schedule 40 -- 2 inch PVC pipe with a ball vale and check valve installed above pump in pump chamber. Anti syphon to be installed **IF NEEDED**.

Manifold: Schedule 40 - 3.8 cm / 1.5 inch PVC pipe with ball valves (8) to each lateral.

Laterals: 4 @ 24.38m / 80 feet split in the centre with the manifold.
3.2 cm / 1.25 inch schedule 40 with 3 m / 10 foot horizontal spacing between laterals. 3/16" inch holes drilled at 12 o' clock and spaced at 24 inches / 0.6 meters .
A 3 /16" drain hole drilled at 6 o' clock , at the laterals end.
Orifice shield to be placed under drain hole.

Clean outs: one at the end of each lateral (8 in total)

NOTE: field placement must be done during suitable soil conditions, (dry soils).

Vertical separation: 61 meter / 24 inches minimum of undisturbed natural soils above the restrictive layer, must be maintained at all times.

Pre – Installation Meeting: (Tailgate meeting). Start up meeting is required with the installer prior to the instillation of this design. Other inspections,
(example: before backfilling) may be required as well as a certified stamped letter of installation prior to final sign off. **Inspection fees may be charged.**

REGISTERED ONSITE WASTEWATER PRACTITIONER
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ATTACHMENT 8

Observed Soil Conditions

Test Pit Logs

Date*: June 15 / 2022 Site: 3653 Gibbins Rd. Duncan BC Logged by: Martin Biehn, Mark Gonzales, Steve Furniss

TP# 1 Pit Location: As per drawing 2002 - see attached Slope: 5 % LL @ ES

Soil Horizons (depths measured in cm / m / in / ft)

Depth from	Depth to	Colour	Texture	Structure	Rupture resistance (or density)	Coarse gravel (%)	Roots depth & quantity	Mottles depth & quantity	Moisture seepage
0cm	25cm	Tan	Fill	Crum	Friable	< 15 %	Many fine	nil	Dry
25cm	55cm	Brown	Loamy Sand	Crum	Very friable to loose	< 15 %	Many fine	nil	Dry
55cm	101cm	Tan	Fine Sand	Crum	Very friable to loose	< 15 %	Very few fine	nil	Dry
101cm	117cm	Grey	Fine Sand	Single Grain	Loose	< 15 %	Very few fine	nil	Dry
		Grey Clay		Blocky					

Notes

water seeping @ 100 cm

TP#2

Depth from	Depth to	Colour	Texture	Structure	Rupture resistance (or density)	Coarse gravel (%)	Roots depth & quantity	Mottles depth & quantity	Moisture seepage
0cm	25cm	Tan	Fill	Crum	Friable	< 15 %	Many fine	Nil	Dry
25cm	44cm	Brown	Loamy Sand	Crum	Very friable to loose	< 15 %	Many fine	nil	Dry
44cm	88cm	Light Brown	Loamy Sand	Crum	Very friable to loose	< 15 %	Few fine	nil	Dry
88cm	114cm	Tan	Loamy Sand	Crum	Loose	< 15 %	Very few fine	nil	Dry
114cm	139	Grey	Fine Sand	Single Grain	Loose	< 15 %	Nil	Few fine	Damp
		Clay							Water

Notes

Perm layer Clay (Blocky) - many Stones, not sized.

Based on USDA *Field Book for Describing and Sampling Soils* (2002).
* Date water table measured

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REGISTERED ONSITE WASTEWATER PRACTITIONER
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STEPHEN FURNISS
PL IN
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4" PERMEAMETER TEST

ATTACHMENT 8

Client: Pozwood			Job #
Location: 3833 Gibbins Road, Duncan BC			Date: June 15/2022
Weather: Cloudy Dry	Auger Hole (AH)#:		AH location: As per Drawing 2 of 2
AH Depth:	AH diameter: 7.5		AH radius (a): See attached
Permeameter ID#:	Height of air hole (H):	Perm. ID = cm	Tested by:

Test Results:

Time of Day	Total elapsed time min	Interim time min	Water level reading mm	Drop in Level mm	Rate of fall mm/min	Remarks or Observations
Test Hole #1	34 cm Deep			80 mm	5/min	4360 mm/day
Test Hole #2	28 cm Deep			70 mm	5/min	3815 mm/day
Test Hole #3	36 cm Deep			100 mm	5/min	5450 mm/day
Test Hole #4	36 cm Deep			80 mm	5/min	4360 mm/day
						Stable rate of fall (stable fall)

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REGISTERED ONSITE WASTEWATER PRACTITIONER
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PL IN
OW0192

K(fs) = 80 (stable fall) x 54.5 (CSS soil factor) = 4360 mm/day

4" Permeameter

AH Diameter	7	7.5	8	8.5	9	9.5	10	10.5
Soil Factor CS	72.0	69.8	67.3	65.1	62.2	58.9	58.7	55.5
SS	56.3	54.5	52.5	50.8	47.2	46.2	45.4	44.0
US	32.4	31.4	30.5	29.5	28.0	27.4	26.3	25.9

AH Diameter	11	11.5	12	12.5	13	13.5	14
Soil Factor CS	53.8	52.4	50.4	49.8	48.9	47.9	47.0
SS	41.5	40.7	39.7	39.3	38.5	37.5	36.8
US	25.1	24.6	24.2	23.7	23.5	23.2	22.8

SOIL FACTORS
CS = COURSE SAND
SS = STRUCTURED SOILS
US = UNSTRUCTURED SOILS (CLAY)