To: Adam Molofsky
Environmental Health Specialist II
100 H St. Suit 100, Eureka CA 95501

Subject: 1621 Hufford Road Leach Field Hydraulic Load Test and Reserve Field Area:

Dear Mr. Molofsky,

Hydraulic Load Test:
On January 25, 2026 a Hydraulic load test was performed on the existing septic tank at 1621 Hufford Rd, Orick, CA. Using a 5 gal bucket the flow rate from the residence garden hose was determined to be 5 gpm. The tank was filled for 30 min to add 150 gallons of water, representing 1/3 of a daily design load. At the start of the test the water level in the septic tank was 36" below ground surface. After the 30 min fill period the water level had risen to 29" below ground surface or a rise of 7". The water level was measured at 5 min intervals over the next 30 min. Initial drop rate per 5min was 1.5 in, or 0.3 in per min. As the level dropped the rate of drop slowed to ½" every 5 min during the last measurement at which time the tank had reached its initial level of 36" below ground surface. At completion of the test a visually inspection was completed in the drain field area no signs of surfacing water were observed.

Per the Humboldt County Division of Environmental Health "Hydraulic Load Test" procedure this system would have a Poor condition rating. However based on the testing being conducted on an actively used system, in the winter weather season and 1/3 of it's daily design capacity being discharged in a 1 hr period this system is satisfactory for continued use under its current conditions.

System Reserve Field:
On January 25, 2026 a test pit was excavated to a depth of 8ft. The top 2.5 ft was dark brown top soil, from 2.5ft to 3.5ft was a transition zone from dark brown to yellow brown clay/loam. From 3.5ft to 8ft was yellow brown clay/loam. No ground water or mottling was observed to 8ft below ground surface.

A second pit was dug to a depth of 3.5ft. In this pit an infiltration test was performed. The stable rate of infiltration achieved was ½" per 5 min or 10min/in of infiltration. A sample of soil from 3.5ft depth was taken to SHN soils lab to perform a USDA Textural Analysis. The results from that test indicate a zone 3 Clay Loam soil. Using the 10min/in percolation rate from the Humboldt County OWTS Regulations a soil application rate of 0.554 gpd/sqft can be used. Assuming a rate of 0.5gpd/sqft for a 450 gpd system will require 150 ft of leach filed trench. Assuming 50ft trenches at 10ft on center an area of 20 by 50 will be required.

See attached site map for area of proposed reserve field and test pit locations, and soil test data.

Sincerely

Gregory Hufford, PE

SITE PLAN
1"=100'

SAVED: 2/15/2026 3:54 PM GREG, PLOTTED: 2/15/2026 3:54 PM GREGORY HUFFORD
C:\Hufford\Huffond Properties\Ranch\1621-Hufford-Rd-SitePlan.dwg

PROFESSIONAL ENGINEER GREGORY N. HUFFORD No. 75778 CIVIL STATE OF CALIFORNIA 2/15/25

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 — 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DESIGNER GREGORY N. HUFFORD ADDRESS PO BOX 101 ORICK, CA 95555 PHONE (707) 498-9779 E-MAIL huffbrdgreg@gmail.com	PROJECT HUFFORD RESIDENCE REMODEL 1621 HUFFORD RD SITE PLAN	SHEET 1 DATE 2/15/25 CLIENT HUFFORD

Phone: (707) 441-8855 Email: info@shn-engr.com Web: shn-engr.com
812 W. Wabash Avenue, Eureka, CA 95501-2138

Redwood Creek

MATERIALS TESTING LABORATORY RECEIVING AND SCHEDULING OF TESTS

PROJECT NAME Gravel Extraction on | Date Sampled 1-25-26 | Sampled by Client

PROJECT NUMBER G23045-001 | Date Received 1-28-26

PROJECT MANAGER | Date Recorded | ☐ Lab Billing Program Submitted

TOTAL NUMBER OF SAMPLES | BAGS ____ | BUCKETS ____ | SHELBY TUBES ____ | BRASS LINERS ____

SAMPLE CONDITION: INTACT ☐ DAMAGED ☐ | COMPOSITE ☐ UNDISTURBED ☐

Client Information:

SAMPLE NO. & DEPTH	MOISTURE DENSITY	UNCONFINED COMPRESSION	USDA TEXTURAL ANALYSIS	COARSE SIEVE ANALYSIS 3" to No.4	FINE SIEVE ANALYSIS No.4 to No. 200	% PASSING 200	SAND EQUIVALENT	SPECIFIC GRAVITY	PLASTICITY INDEX	COMPACTION CURVE (ASTM-1557)	CAL TRANS CURVE (CT-216)	COMPACTION CHECK POINT	% ORGANICS	LA RATTLER	DURABILITY	SULFATE SOUNDNESS	RICE SPECIFIC GRAVITY	R VALUE	CONSOLIDATION *		DIRECT SHEAR **	TRIAXIAL SHEAR **	LAB SAMPLE NUMBER
Brown Dirt?			X																				26-059
TOTAL																							

Client Information: Greg Hufford

Client Project Name:

Client Project Number: APN:

Invoicing to: Accounting Department:

Reporting to:

2/6/26 (M)

Samples will be retained for 90 days after completion of the testing program. If samples need to bre retained beyond 90 days, indicate how long to retain this sample program ____

* Indicate The Following: Consolidation Loads: ____ Consolidated Drained: ☐ Consolidated Undrained: ☐ Unconsolidated Undrained: ☐ note all points to be saturated Residual Cycles ____

** Indicate The Following: Confining loads: ____

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SOIL TEXTURE ANALYSIS WORKSHEET (RWQCB)

Job Name: Hufford Con
Performed By: SC
Checked By:
Project Manager:

Job Number: 023045.001
Date: 2-4-26
AP Number:

Lab Sample Number	26-059				
Hole #					
Depth					
A. Oven Dry Weight, gm	61.8				
B. Starting time (hr:min:sec)	9:06				
C. Temperature @ 40 sec	68				
D. 1st Hydrometer Reading @ 40 sec	49				
E. Composite correction (gm/L)	X	X	X	X	X
F. True Density @ 40 sec (gm/L) D-E	X	X	X	X	X
G. Temperature @ 2 hrs.	70				
H. 2nd Hydrometer Reading @ 2 hrs.	23				
I. Composite correction (gm/L)	X	X	X	X	X
J. True Density @ 2 hrs. (gm/L)	X	X	X	X	X
K. % Sand = 100-[(F/A)x100]	X	X	X	X	X
L. % Clay = (J/A)x100	X	X	X	X	X
M. % Silt = 100-(L+K)	X	X	X	X	X
N. Combined % Silt & % Clay = (L+M)	X	X	X	X	X
Soil Bulk Density, gm/cc	*	*	*	*	*
USDA Texture	--	--	--	--	--
Soil Percolation Suitability Chart Zone	--	--	--	--	--
1. Total Sample Weight, gm	1005.8				
2. Weight > 2mm Coarse Fragment, gm	125.1				
3. % Coarse Fragment by Weight	X	X	X	X	X
4. % Coarse Fragment by Volume	X	X	X	X	X
5. % Coarse Adjustment	X	X	X	X	X

Locm
3

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SOIL TEXTURE ANALYSIS WORKSHEET (RWQCB)

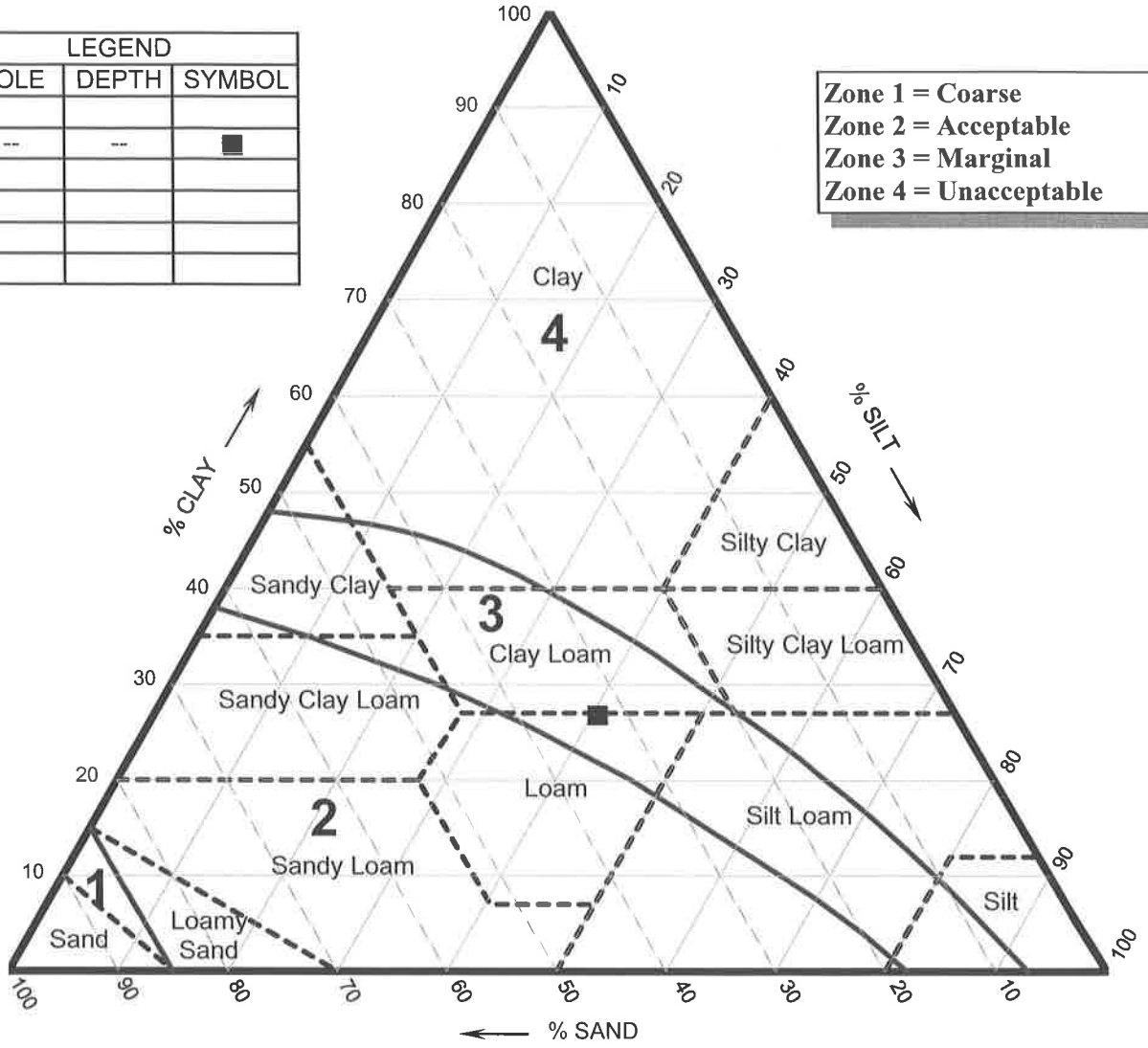
Job Name:	Gravel Extraction on Redwood Creek	**Job Number:**	023045.001
Performed By:	SC	**Date:**	2/4/26
Checked By:	KW	**AP Number:**	N/A
Project Manager:	Bob Brown		

Lab Sample Number	26-059				
Hole #	--				
Depth	--				
A. Oven Dry Weight, gm	61.8				
B. Starting time (hr:min:sec)	9:06:00				
C. Temperature @ 40 sec	68.0				
D. 1st Hydrometer Reading @ 40 sec	49				
E. Composite correction (gm/L)	6.5				
F. True Density @ 40 sec (gm/L) D-E	42.5				
G. Temperature @ 2 hrs.	70.0				
H. 2nd Hydrometer Reading @ 2 hrs.	23.0				
I. Composite correction (gm/L)	6.1				
J. True Density @ 2 hrs. (gm/L)	16.9				
K. % Sand = 100-[(F/A)x100]	31.2				
L. % Clay = (J/A)x100	27.3				
M. % Silt = 100-(L+K)	41.5				
N. Combined % Silt & % Clay = (L+M)	68.8				
Soil Bulk Density, gm/cc	*	*	*	*	*
USDA Texture	Loam				
Soil Percolation Suitability Chart Zone	3				
1. Total Sample Weight, gm	1005.8				
2. Weight > 2mm Coarse Fragment, gm	125.1				
3. % Coarse Fragment by Weight	12.4				
4. % Coarse Fragment by Volume	7.3				
5. % Coarse Adjustment	1.5				

SOIL PERCOLATION SUITABILITY CHART

LEGEND		
HOLE	DEPTH	SYMBOL
--	--	■

Zone 1 = Coarse
Zone 2 = Acceptable
Zone 3 = Marginal
Zone 4 = Unacceptable



NOTES

1. Soil texture is plotted on triangle based on percent sand, silt, and clay as determined by hydrometer analysis.
2. Adjustment for coarse fragments has been made by moving the plotted point in the sand direction an additional 2% for each 10% (by volume) of fragments greater than 2mm in diameter.
3. Adjustment for compactness of soil has been made by moving the plotted point in the clay direction an additional 15% for soils having a bulk-density greater than 1.7 gm/cc, when analyzed.
4. For soils falling in sand, loamy sand, or sandy loam, classification adjustment for bulk density will generally not affect suitability and a bulk-density analysis was not necessary.

JOB NUMBER: 023045.001 **DATE:** 2/4/26

JOB NAME: Gravel Extraction on Redwood

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Reference: 023045.001

SOIL PERCOLATION SUITABILITY / TEXTURAL ANALYSIS RESULTS

Job Name: Gravel Extraction on Red **Sampled By: Client**
Date Sampled: 1/25/26 **Date Tested: 2/4/26**
Date Received: 1/28/26

Sample ID	Depth	% Sand	% Clay	% Silt	% Coarse Fragments by Volume	Zone	Bulk Density
--	--	31.2	27.3	41.5	7.3	3	*
	Material: **Loam**						
							*
	Material:						
							*
	Material:						
							*
	Material:						
							*
	Material:						

* = no peds provided

Regional Water Quality Control Board Zone Descriptions:

Zone 1 - Soils in this zone are very high in sand content. They readily accept effluent, but because of their low silt and clay content they provide minimal filtration. These soils demand greater separation distances from groundwater.

Zone 2 - Soils in this zone provide adequate percolation rates and filtration of effluent. They are suitable for use of a conventional system without further testing.

Zone 3 - Soils in this zone are expected to provide good filtration of effluent, but their ability to accept effluent at a suitable rate is questionable. These soils require wet-weather percolation tests to verify their suitability for effluent disposal by conventional leachfield methods.

Zone 4 - Soils in this zone are unsuitable for a conventional leachfield because of their severe limitations for accepting effluent.