

DeLaTorre Septic and Trucking LLC.

ONSITE WASTEWATER SYSTEM INSPECTION REPORT

Homeowner:
3974 Ciarlo Lane
Vacaville, Ca 95688

Billing Address:

Certified Inspector: Herrera & Wilmot
DeLaTorre Septic and Trucking LLC
Po Box 5582
Vacaville CA 95696

Date of Inspection: 06/25/2021

Additional Pty Info (if applicable)

Are there any state or local Authorities requesting this inspection of the septic system? Choose an item.

Does this evaluation/inspection meet the requirements of state and local agencies? N/A

Has the City, County, State or other governing body been contacted to perform any inspection/evaluation of the Septic System as may be required? N/A

INSPECTION RESULTS: ☒ **PASSED** ☐ **FAILED** ☐ **REPAIRS NEEDED**

Comments:

During the time of inspection all components were in working condition.

Section 1

Location of the system: ☐ East ☐ West ☐ North ☒ South ☐ N/A.

Was water run into the system for 30 minutes? ☒ Yes ☐ No 30 _ minutes total

Does the septic tank have a visible riser? ☒ Yes ☐ No

Estimated size of tank: Choose an item. Gallons 1800 Basis for estimate: Pump Glass

(If Applicable) how many feet apart are well and septic leach lines? N/A

Does the separation of the well and septic meet local requirements? ☐ Yes ☐ No ☒ N/A

Section 2 Disposal Field

Any evidence of malfunction? ☒ No ☐ Yes (please check all applicable observed conditions)

☐ Wet areas

☐ Unusual green/lush vegetation

☐ Liquid discharges to surface

☐ Discharge pipe of unknown origin

☐ Localized surface settling

☐ Other (described above)

Based on a visual evaluation only – Is system working properly? ☒ Yes ☐ No

If tank is being opened and pumped please answer the following questions:

Septic Tank Material ☒ Concrete ☐ Fiberglass ☐ Other

Liquid level in tank ☒ Normal ☐ Below normal ☐ Above normal

Access openings in tank ☐ One ☒ Two ☐ Three ☐ Four ☐ None.

Number of risers ☐ One ☒ Two ☐ Three ☐ Four ☐ None

Condition of baffles and/or sanitary tees: 3" inlet and 3" outlet.

Inlet baffle or "T" ☒ Present and functional ☐ Not Functional ☐ None Present ☐ Not visible

Outlet baffle or "T" ☒ Present and functional ☐ Not Functional ☐ None Present ☐ Not visible

Tank was pumped? ☐ Yes ☒ No (if no, explain under comments)

Is tank adequately sized for # of bedrooms? ☐ Yes ☐ No ☒ Not applicable # of Bedrooms Choose an item.

System working properly at time of inspection? ☒ Yes ☐ No

Recommendations:

Septic systems are subterranean; therefore, it is impossible to determine their overall condition. Also, when no water is entering the field lines, i.e., if the house is vacant, a determination of their status is difficult. No prediction can be made as to when or if a system might fail. This report comments on the workability of the system on the day of the inspection only and is in no way intended to be a warranty. Workability can alter by factors such as excessive rainfall, heavy water usage, faulty plumbing, neglect or physical damage to the system. All tanks require pumping maintenance.

PLEASE PROVIDE PICTURES OF FINDINGS



Resource Management

Thank you for submitting your payment information. This receipt serves only to confirm that your payment information has been successfully received and will now be submitted for payment approval with your financial institution. Once funds are received they will be credited effective the transaction date.

Please print this receipt and keep it for your records.

Business Name/Applicant Name : Brian & Kendra Just

Invoice/Permit # : 3974 Ciarlo

Site Address : 3974 Ciarlo Lane


City, State Zip : Vacaville Ca 95688

Payment Amount: \$450.80

By consenting with the processing of this transaction, you are authorizing to debit your account for a one-time payment that may be processed as early as today. If you need to stop payment on this transaction you may contact your financial institution. If stop payment is not received in a timely manner, it may not be stopped. If you have any questions you may contact our Customer Support.

Receipt Number: 3810924263

Transaction Date: 07/22/2021 04:35 PM

Payment Type:  echeck

Account Number: *0688

Solano County is pleased to be able to offer you the convenience of making secured online payments. The county online payment center is administered by FIS PayDirect. To use this service a convenience fee of 2.35% of the amount paid or a minimum of \$2.35 will be assessed by FIS PayDirect at the time of payment. A convenience fee will not be charged for eCheck payments. We encourage you to print and save your receipt. You will receive an email confirmation when paying for your permit. If you have any questions, please contact the Solano County Department of Resource Management at 707-784-6765. Thank You.

Septic Permit Fee ✓ paid.



**DEPARTMENT OF RESOURCE MANAGEMENT
ENVIRONMENTAL HEALTH SERVICES**

675 TEXAS ST., SUITE 5500
FAIRFIELD CA 94533
(707) 784-6765

SEWAGE DISPOSAL PERMIT

S2021-0103

Status: Issued
Issued Date: 08/03/2021
Expiration Date: 08/04/2022
Site Address: 3974 Ciarlo Ln
APN: 0105040420

Property Owner:

JUST BRIAN & KENDRA JT
3974 CIARLO LN

Applicant:

Contractor:

SNW Builders
PO Box 1164

Registered Consultant:

EX Wastewater Design
2253 1st Ave

Project Details:

Building Type: Single Family Dwelling

Construction Type: Expansion

Tier:

Description of Work: One time, one-bedroom exemption. LNU
rebuild is going from 2 bedroom to 3 bedroom.
Additional 225 lineal feet of 36 inch wide by
36 inch deep conventional trench. See also
B2021-0531

Refer to Sewage Disposal Application for Complete System Design Information

*THIS PERMIT IS ISSUED SUBJECT TO ALL STATE LAWS AND ORDINANCES IN THE COUNTY OF
SOLANO, STATE OF CALIFORNIA, AND IS REVOCABLE FOR VIOLATION AT ANY TIME. ALL
WORK SHALL BE DONE IN CONFORMANCE WITH THE APPROVED APPLICATION.*

*Call (707) 784-6765 to schedule and receive confirmation of an inspection a minimum of 48 hours prior to
conducting the field work.*

TERRY SCHMIDTBAUER
Director
(707) 784-6765

JEFF BELL
Interim Environmental Health
Manager
(707) 784-6765

DEPARTMENT OF RESOURCE MANAGEMENT



SOLANO
COUNTY

675 Texas Street, Suite 5500
Fairfield, CA 94533-6342
(707) 784-6765
Fax (707) 784-4805

www.solanocounty.com

Environmental Health Division

August 3, 2021

Brian and Kendra Just
3974 Ciarlo Lane
Vacaville, CA 95688
kendrajust@yahoo.com

RE: Septic Permit S2021-0103 – Conditions of Approval
3974 Ciarlo Lane, Vacaville CA 95688, APN 0105-040-420 – see also B2021-0531

Dear Mr. and Mrs. Just,

The Solano County Environmental Health Division has reviewed the submitted application and plans for a conventional septic system expansion, using the Solano County one-time one-bedroom exemption, to service the rebuild of the single-family residence at 3974 Ciarlo Lane, which was destroyed by the LNU Lightning Complex Fire, parcel 0105-040-420 – see also B2021-0531. This expansion will expend the one time use of the one-bedroom exemption for the property.

Permit number S2021-0103 is placed in an approved status and forwarded to the Building Division – permit S2021-0103 will issued concurrently with B2021-0531.

Approval for S2021-0103 is forwarded with the following conditions:

1. Pre-construction meeting requirement:
Please contact Environmental Health at 707.784.1636 at least 24 hours in advance to schedule a pre-construction meeting prior to commencing construction of the leachfield expansion.
2. The leachfield expansion shall meet the minimum 25 ft. property line setback

The installation of the septic system shall be in accordance with Solano County Code Chapter 6.4:

I. Design:

Construction of the septic system will be performed by SNW Builders Inc. and be overseen by Ex Wastewater Design and Solano County Environmental Health.

1. The approved expansion of the existing septic system shall take the form of at least 225 lineal feet of 36 inch wide by 36 inch deep conventional leachline trench, tied into the end/last d-box of the existing system.

SAEED IRAVANI
Building Official
Building & Safety

ALLAN CALDER
Program Manager
Planning Services

JEFF BELL
Interim
Manager
Environmental
Health

SARAH PAPPAKOSTAS
Senior Staff Analyst
Administrative
Services

MATT TUGGLE
Engineering Manager
Public Works
Engineering

CHARLES BOWERS
Operations
Manager
Public Works
Operations

CHRIS DRAKE
Parks Services
Manager
Parks

MISTY KALTREIDER
Water & Natural
Resources Program
Manager

2. Any deviations from the approved plans will require prior approval from Ex Wastewater Design and Environmental Health
3. Any deviations from the approved plans will require submittal of "as-built" plans to document the revision

II. Inspections:

Environmental Health will require the following inspections for this permit:

1. **Preconstruction meeting** where the location of all major components of the system are marked on the ground and onsite conditions verified
2. **Open Trench** where the depth and length of the trenches will be verified
3. **Rock and Pipe** where the depth and type of rock under the leach lines are verified
4. **Final** system inspection

Note: One or more of the above mentioned inspections may be performed on the same visit.

Feel free to contact me with any additional questions or concerns you may have about this letter.

Sincerely,



Anthony Endow
Senior Environmental Health Specialist
Solano County Environmental Health
ayendow@solanocounty.com
Direct: (707) 784-3185
Office: (707) 784-6765

CC: Peter Ex, Ex Wastewater Design (exsepticdesign@gmail.com – via email)

Sam Maynard, SNW Builders Inc. (smaynard@snwbuilders.com – via email)



Department of Resource Management
Environmental Health Services Division
 675 Texas Street, Suite 5500, Fairfield, CA 94533 - 707/784-6765
www.solanocounty.com

SEWAGE DISPOSAL SYSTEM PERMIT APPLICATION

SITE ADDRESS 3974 Ciarlo Ln, Vacaville		APN 0105-040-420	APPLICATION NO. S2021-0103
PROPERTY OWNER Brian & Kendra Just		PHONE NUMBER	
MAILING ADDRESS Same as Site			
CONTRACTOR Sam Maynard SNW BUILDERS, INC.		LICENSE NO. & CLASS 1074328	PHONE NUMBER 707-410-7570
REGISTERED CONSULTANT NAME, ADDRESS, PHONE NUMBER, FAX NUMBER EX Wastewater Design (Peter Ex), 2253 1st Ave, Napa, Ca 707-302-4550			

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Type of Work:

☐ New ☐ Repair ☒ Expansion ☐ Replacement ☐ Destruction

Building Type:

☒ Single Family Dwelling ☐ Multi. Family Dwelling ☐ Commercial

Projected Sewage Flow:

Bedrooms ³ Flow Rate **450** gpd

Water Supply:

☒ On-site well ☐ On/Off-Site Public Water Name of Supplier _____

Soils Testing (Attach Data):

☒ Soil Profile ☒ Hydrometer Zone _____ ☐ Perc. Test Perc. Rate _____ in./hr.

WORKERS' COMPENSATION CERTIFICATE

(one of the following must be completed)

- ☐ 1. A current certificate of Workers' Compensation Insurance coverage is on file with Solano County. Workers' Compensation Insurance Policy No. _____ is currently effective.
- ☐ 2. I certify that in the performance of the work for which this permit will be issued I shall not employ any person in any manner so as to become subject to the Workers' Compensation laws in California.

TERMS OF PERMIT

I hereby certify that the above information, attached test data and submitted plans are true and correct and that the proposed work shall comply with all permit conditions and applicable laws, ordinances, standards, and regulations. I agree to obtain all required inspections, maintain a copy of the approved permit and plans at the job site until final approval, and obtain written approval prior to deviating from the approved permit or plans, covering any part of the system or placing the system into operation. It is understood that the issuance of a permit in no way indicates that a guarantee of perfect and indefinite operation of this system is made by the Solano County Environmental Health Services Division.

Kendra Just

7/22/2021

Signature of Owner/Agent

Sam Maynard

Date

7/22/2021

Signature of Contractor

Date

Do Not Write Below This Box

Permit Approved: By: *A. Endow*

Date *8/3/2021*

Permit Denied: By: _____

Date _____

PERMIT CONDITIONS

Septic Tank

Size _____ gallons

Maximum sewer stub-out depth below grade _____ inches

Disposal Field

Application Rate _____ gal/day/ft²

Leach Trench Depth _____ inches

Total Leach Trench Infiltration Area _____ feet²

Leach Trench Width _____ inches

Total Leach Trench Length _____ feet

☒ Attached Plans

☒ Attached Letter of Approval

Other: *Can Rebuild w/ +1 bedrooms (3 total) - additional 225 linear ft. of 36 inch wide by 36 inch deep conventional trench*

Fee Paid \$ *450.80* Date *7/22/2021* Receipt No. *3810924263* Expiration Date _____

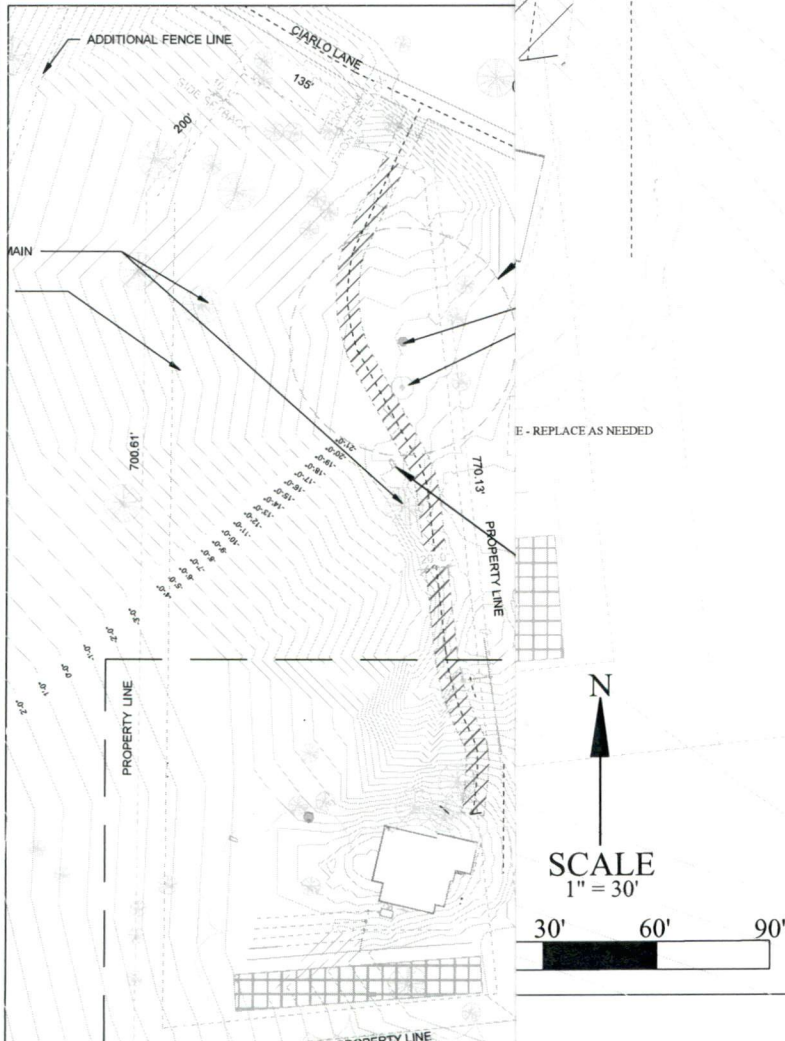
30% LNU Fine fee reduction.

PROJECT DESCRIPTION:
EXISTING 2 BEDROOM DWELLING WAS DESTROYED IN 2020 WILDFIRE. REPLACEMENT DWELLING WILL HAVE 3 TOTAL BEDROOMS. THE EXISTING STANDARD GRAVITY SEPTIC SYSTEM WILL BE EXPANDED TO ACCOMMODATE THE ADDITIONAL FLOWS.

GENERAL INFORMATION:
1. THIS SEPTIC SYSTEM IS BEING EXPANDED TO ACCOMMODATE WASTEWATER FLOWS FROM A 3 BEDROOM RESIDENCE. THE CONDITION OF THE EXISTING LEACHLINES HAVE NOT BEEN INSPECTED AND WERE INSTALLED IN 1985. EX WASTEWATER DESIGN MAKES NO GUARANTEE OR WARRANTY AS TO THE EXPECTED LIFESPAN THE SEPTIC SYSTEM.
2. POTABLE WATER IS SERVED BY AN ONSITE WATER WELL.
3. EX WASTEWATER DESIGN HAS PREPARED THESE PLANS BASED UPON INFORMATION OBTAINED FROM SOLANO COUNTY RECORDS, SITE VISITS, THE PROPERTY OWNER AND ITS REPRESENTATIVES, AND HAS PREPARED THE PLANS IN ACCORDANCE WITH SOLANO COUNTY REQUIREMENTS.
4. THIS SEPTIC SYSTEM IS BEING EXPANDED PER SOLANO COUNTY CODE SEC. 6.4-42 WHICH ALLOWS FOR A ONE TIME ONLY EXPANSION OF THE EXISTING SEPTIC SYSTEM TO ACCOMMODATE A ONE BEDROOM ADDITION. THEREFORE, THIS SYSTEM MAY NOT FULLY MEET CHAPTER 6.4 CODE REQUIREMENTS.

DISPERSAL TRENCH REQUIREMENTS:
1. THE BOTTOM OF THE TRENCH SHALL BE LEVEL, WITH A VARIATION OF NO MORE THAN ONE (1) INCH PER 100 LINEAL FEET OF TRENCH.
2. TRENCHES MUST NOT BE EXCAVATED WHEN THE SOIL IS SO WET THAT SMEARING OR COMPACTION OCCURS. IF SMEARING OCCURS, SIDEWALL OF TRENCHES SHALL BE SCARIFIED TO THE DEPTH OF SMEARING AND LOOSE MATERIAL PROVIDED.
3. PRIOR TO BACKFILL THE LEACH LINE MATERIALS SHALL BE COVERED WITH GEOTEXTILE FILTER FABRIC.
4. BACKFILL SHALL BE NATIVE SOIL FREE OF ANY LARGE DEBRIS OR OTHER MATERIAL THAT COULD DAMAGE THE SYSTEM.
5. EROSION CONTROL MEASURES SHALL BE IMPLEMENTED FOLLOWING INSTALLATION.

OVERALL SITE PLAN
SCALE: 1" = 100'



NOTE: THIS SITE PLAN IS NOT INTENDED TO BE USED TO DEFINE LEGAL BOUNDARY RIGHTS OR IMPLY COMPLIANCE WITH LAND USE DIVISION LAWS. SITE FEATURES AND CONTOURS WERE OBTAINED FROM CONSTRUCTION DESIGN PLANS AND SOLANO COUNTY GIS SYSTEM. THESE DRAWINGS WERE DEVELOPED EXCLUSIVELY FOR THIS PROJECT AND ARE NOT TO BE REPRODUCED OR USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF EX WASTEWATER DESIGN.

PETER EX, REHS
2253 1ST AVENUE, NAPA, CA 94558
EXSEPTICDESIGN@GMAIL.COM
707-302-4550

REHS# 7872

EX WASTEWATER
DESIGN

REVISION:

SHEET
1 OF 1


SITE EVALUATION REPORT

Please attach an 8.5" x 11" plot map showing the locations of all test pits triangulated from permanent landmarks or known property corners. The map must be drawn to scale and include a North arrow, surrounding geographic and topographic features, direction and % slope, distance to drainages, water bodies, potential areas for flooding, unstable landforms, existing or proposed roads, structures, utilities, domestic water supplies, wells, ponds, existing wastewater treatment systems and facilities.

Permit #: Z2021-0048	
APN: 0105-040-420	
(County Use Only) Reviewed by:	Date:

Property Owner Brian & Kendra Just			<input checked="" type="checkbox"/> New Construction <input checked="" type="checkbox"/> Addition <input type="checkbox"/> Remodel <input type="checkbox"/> Repair				
Property Owner Mailing Address Same As Site Address			<input checked="" type="checkbox"/> Other: Fire Rebuild – Add 1 Bedroom				
City	State	Zip	<input checked="" type="checkbox"/> Residential - # of Bedrooms: 3 Design Flow : 450 gpd				
Site Address/Location 3974 Ciarlo Ln, Vacaville			<input type="checkbox"/> Commercial – Type:				
			Sanitary Waste:		gpd	Process Waste:	gpd
			<input type="checkbox"/> Other:				
			Sanitary Waste:		gpd	Process Waste:	gpd

Evaluation Conducted By:

Company Name EX Wastewater Design		Evaluator's Name Peter Ex, REHS #7872	Signature (Civil Engineer, R.E.H.S., Geologist, Soil Scientist) 
Mailing Address: 2253 1st Avenue			Telephone Number 707-302-4550
City Napa, Ca 94558	State	Zip	Date Evaluation Conducted 6-25-21

Primary Area

Acceptable Soil Depth: 98 in. Test pit #'s: 1

Soil Application Rate (gal. /sq. ft. /day): 0.22 gal./sq.ft./day (expansion)

System Type(s) Recommended: Standard or Pressure Distribution

Slope: 10-20 %. Distance to nearest water source: 100+ ft.

Hydrometer test performed? No ☐ Yes ☒ (attach results)

Bulk Density test performed? No ☒ Yes ☐ (attach results)

Percolation test performed? No ☒ Yes ☐ (attach results)

Groundwater Monitoring Performed? No ☒ Yes ☐ (attach results)

Expansion Area

Acceptable Soil Depth: 98 in. Test pit #'s: 1
(Test Pit #3 for additional reserve area)

Soil Application Rate (gal. /sq. ft. /day): 0.2 gal/sq.ft./day

System Type(s) Recommended: Standard or Pressure Distribution

Slope: 2-15 % Distance to nearest water source: 100+ ft.

Hydrometer test performed? No ☐ Yes ☒ (attach results)

Bulk Density test performed? No ☒ Yes ☐ (attach results)

Percolation test performed? No ☒ Yes ☐ (attach results)

Groundwater Monitoring Performed? No ☒ Yes ☐ (attach results)

Site constraints/Recommendations: The pre-existing 2-bedroom Residence was burned in 2020 WildFire. Owners are rebuilding a new home with 3 total bedrooms. Per Solano County Code sec. 6.4-42 (b)(1)(A) a one time only expansion of the existing disposal system to accommodate a one bedroom is allowed when a site evaluation demonstrates a minimum 5 feet separation exists between the bottom of the sewage disposal system and seasonal high groundwater and the septic tank is sized or is upgraded and additional leach field is added based upon the additional proportion of flow generated by the bedroom increase.

In order to demonstrate that the existing leach field is suitable for reuse and meets these minimum requirements, a test pit was excavated in the location of the existing leach field. Acceptable soil depth was observed to a total depth of 98" below grade and no signs of high groundwater were observed. A hydrometer sample was collected for analysis at 36" to verify soil texture in the leaching soil horizon and determined to be Clay with a corresponding soil application rate of 0.2 gal. /sq. ft. /day. The existing leach field was installed at 36" depth and per Solano County records an 1800 gallon septic tank was installed. On 6-25-21, Delatorres Septic & Sons inspected the septic tank and performed a flow test on the leachfield (see attached report). As 450 LF of leach line was installed for the original 2 bedroom house, this equates to 225 LF per bedroom. Therefore, EX Wastewater Design has prepared plans to facilitate the expansion of the existing septic system by 225 LF to accommodate the additional bedroom. (see Wastewater System Expansion plans)

Test Pit #

1

PLEASE PRINT OR TYPE ALL INFORMATION

Horizon Depth (Inches)	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
				Side Wall	Ped	Wet			
0-16	<5	SC	S/blk	H	F	SS	M/MF	M/CM	-
16-42	5-10	C	M/blk	H	VF	SS	M/MF	M/CM	-
42-58	10-15	C	M/blk	VH	VF	SS	C/MF	C/MF	-
58-75	40	SC	M/blk	H	VF	SS	C/MF	C/F	-
75-98	45	SC	M/blk	SH	FRB	SS	C/F	F/F	-

Hydro Sample taken @ 36" (see attached report)

Test Pit #

2

Horizon Depth (Inches)	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
				Side Wall	Ped	Wet			
0-45	<5	C	Shrink-Swell	VH	ExF	SS	M/F	M/F	-
45-102	0	SC	M/blk	H	FRB	SS	M/F	-	-

Test Pit #

3

Horizon Depth (Inches)	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
				Side Wall	Ped	Wet			
0-25	25	SCL	M/blk	F	FRB	SS	M/CM	M/MF	Top 6"
25-40	10	SC	M/blk	VH	VF	S	F/F	-	-
Massive Below									

Hydro Sample taken @ 24" (see attached report)



CMP Civil Engineering & Land Surveying Inc.
1607 Capell Valley Road
Napa, CA 94558
(707) 266-2559
Cameron@CMPEngineering.com
CMPEngineering.com



Hydrometer Method for Soils Report

for the:

Sample as provided by Peter Ex

TP#1 36"

3974 Ciarlo Lane

Vacaville, CA 95688

Prepared By:

CMP Civil Engineering & Land Surveying

1607 Capell Valley Road

Napa, CA 94558

(707) 266-2559

7/11/2021

Project #: 00547

Introduction:

This report is a summary of the methods and findings of a hydrometer method for soils test for the sample as provided by Peter Ex on 6/30/2021. A lab soils test was used to classify the type of existing soil found in Test Pit #1 into a specific textural class (ex. sand, silt, clay, loam) The following section outlines the methods and results of this test.

Methods:

On 6/30/2021, a ~100g representative soil sample was provided to CMP by Peter Ex. The Hydrometer Method for Soils with <5% Organic Matter protocol was followed as per standard engineering and laboratory practices as well as the following ASTM standards:

- A ASTM 152H type hydrometer that was calibrated in accordance with ASTM standard E126 and NIST circular No. 555 was used to determine density.
- ASTM D4643 and/or D2216 procedures were followed for properly desiccating soil sample.

The results from this test were classified using a standard soil textural triangle as shown below:

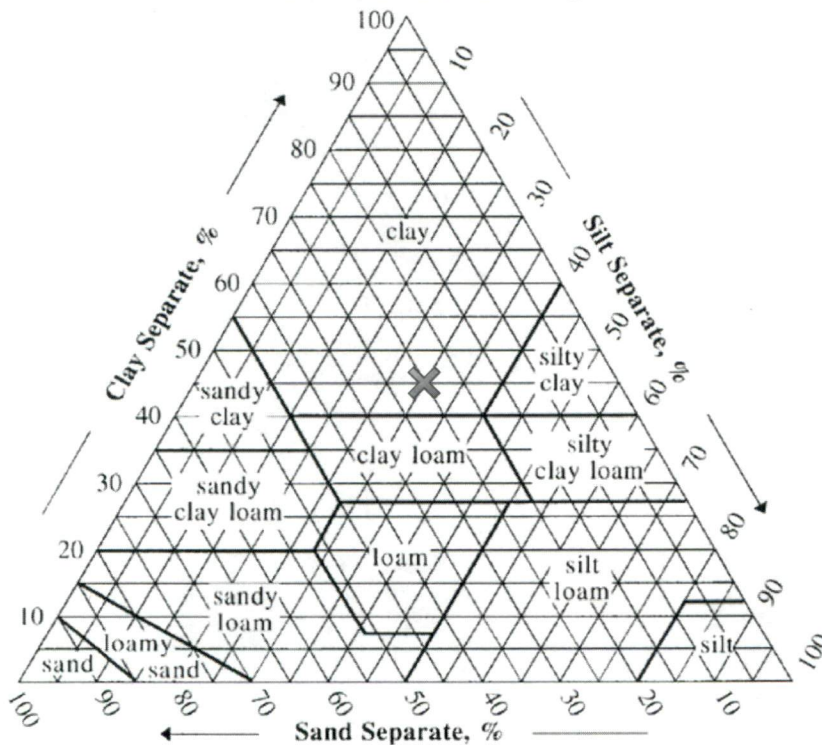


Figure 1. Standard soil textural triangle.

Data:

Table 1. Density and temperature readings for blank sample and soil mixture at specified times.

<u>SAMPLE</u>	<u>TIME</u>	<u>HYDROMETER READING</u> <u>(g/L)</u>	<u>TEMPERATURE</u> <u>(degrees C)</u>
BLANK	40 seconds	7.0	25.0
SOIL MIXTURE	40 seconds	44.0	25.0
SOIL MIXTURE	6 hours	28.0	29.0

Calculations:

1). Adjust hydrometer values for blank:

40 Second Sample: $44.0 \text{ g/L} - 7.0 \text{ g/L} = 37.0 \text{ g/L}$

6 Hour Sample: $28.0 \text{ g/L} - 7.0 \text{ g/L} = 21.0 \text{ g/L}$

2). Adjust hydrometer values for temperature (in Celsius):

40 Second Sample: **No Correction – Temperature Negligible**

6 Hour Sample: $21.0 \text{ g/L} + (4)0.36 = 22.44 \text{ g/L}$

3). Silt + Clay % (Divide corrected 40 S reading by sample weight (g), and multiple by 100):

$((37.0 \text{ g/L}) / (50\text{g})) \times 100 = 74.0\% \text{ Silt + Clay}$

4). Clay % (Divide corrected 6 hr. reading by sample weight (g), and multiple by 100):

$((22.44 \text{ g/L}) / (50\text{g})) \times 100 = 44.88\% \text{ Clay}$

5). Silt % (Subtract Clay % from Silt + Clay %):

$74.0\% - 44.88\% = 29.12\% \text{ Silt}$

6). Sand % (Subtract Silt + Clay % from 100):

$100\% - 74.0\% = 26\% \text{ Sand}$

Using the Soil Textural Triangle, these percentages indicate a soil classification of: **Clay**

Findings:

Based upon the above results, we conclude that the soil makeup of the sampled soil is composed of **Clay**.



CMP Civil Engineering & Land Surveying Inc.
1607 Capell Valley Road
Napa, CA 94558
(707) 266-2559
Cameron@CMPEngineering.com
CMPEngineering.com



Hydrometer Method for Soils Report

for the:

Sample as provided by Peter Ex

TP#3 30"

3974 Ciarlo Lane

Vacaville, CA 95688

Prepared By:

CMP Civil Engineering & Land Surveying

1607 Capell Valley Road

Napa, CA 94558

(707) 266-2559

7/11/2021

Project #: 00547

Introduction:

This report is a summary of the methods and findings of a hydrometer method for soils test for the sample as provided by Peter Ex on 6/30/2021. A lab soils test was used to classify the type of existing soil found in Test Pit #3 into a specific textural class (ex. sand, silt, clay, loam) The following section outlines the methods and results of this test.

Methods:

On 6/30/2021, a ~100g representative soil sample was provided to CMP by Peter Ex. The Hydrometer Method for Soils with <5% Organic Matter protocol was followed as per standard engineering and laboratory practices as well as the following ASTM standards:

- A ASTM 152H type hydrometer that was calibrated in accordance with ASTM standard E126 and NIST circular No. 555 was used to determine density.
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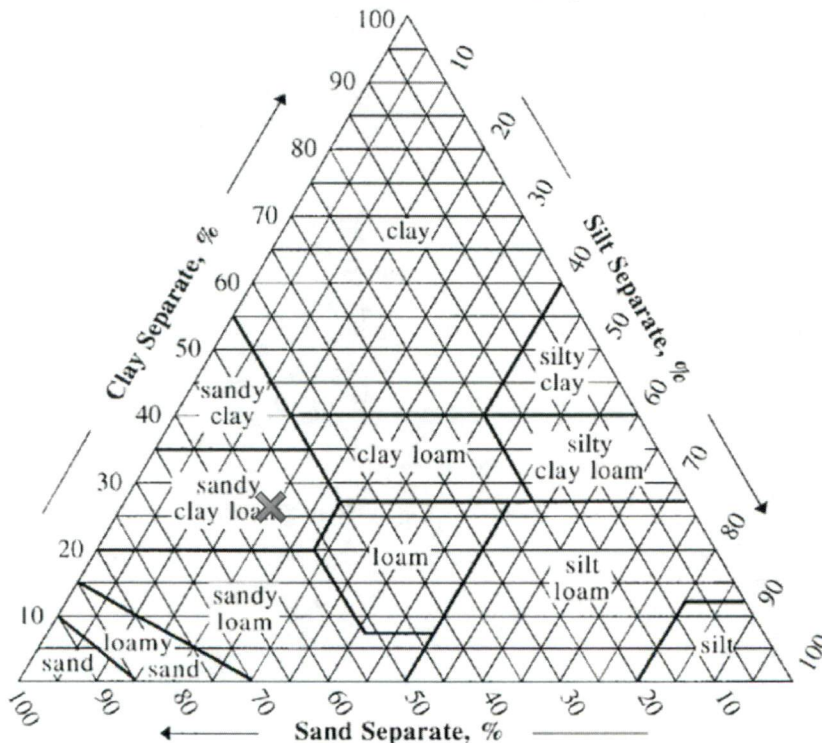


Figure 1. Standard soil textural triangle.

Data:

Table 1. Density and temperature readings for blank sample and soil mixture at specified times.

<u>SAMPLE</u>	<u>TIME</u>	<u>HYDROMETER READING</u> <u>(g/L)</u>	<u>TEMPERATURE</u> <u>(degrees C)</u>
BLANK	40 seconds	7.0	25.0
SOIL MIXTURE	40 seconds	30.0	25.0
SOIL MIXTURE	6 hours	19.0	29.0

Calculations:

1). Adjust hydrometer values for blank:

40 Second Sample: $30.0 \text{ g/L} - 7.0 \text{ g/L} = 23.0 \text{ g/L}$

6 Hour Sample: $19.0 \text{ g/L} - 7.0 \text{ g/L} = 12.0 \text{ g/L}$

2). Adjust hydrometer values for temperature (in Celsius):

40 Second Sample: **No Correction – Temperature Negligible**

6 Hour Sample: $12.0 \text{ g/L} + (4)0.36 = 13.44 \text{ g/L}$

3). Silt + Clay % (Divide corrected 40 S reading by sample weight (g), and multiple by 100):

$((23.0 \text{ g/L}) / (50\text{g})) \times 100 = 46.0\% \text{ Silt + Clay}$

4). Clay % (Divide corrected 6 hr. reading by sample weight (g), and multiple by 100):

$((13.44 \text{ g/L}) / (50\text{g})) \times 100 = 26.88\% \text{ Clay}$

5). Silt % (Subtract Clay % from Silt + Clay %):

$46.0\% - 26.88\% = 19.12\% \text{ Silt}$

6). Sand % (Subtract Silt + Clay % from 100):

$100\% - 46.0\% = 54\% \text{ Sand}$

Using the Soil Textural Triangle, these percentages indicate a soil classification of: **Sandy Clay Loam**

Findings:

Based upon the above results, we conclude that the soil makeup of the sampled soil is composed of **Sandy Clay Loam**.

DeLaTorre Septic and Trucking LLC.

ONSITE WASTEWATER SYSTEM INSPECTION REPORT

Homeowner: <u>3974 Ciarlo Lane</u> <u>Vacaville, Ca 95688</u>	Billing Address:	Certified Inspector: Herrera & Wilmot DeLaTorre Septic and Trucking LLC Po Box 5582 Vacaville CA 95696 Date of Inspection: 06/25/2021
Additional Pty Info (if applicable)		

Are there any state or local Authorities requesting this inspection of the septic system? Choose an item.

Does this evaluation/inspection meet the requirements of state and local agencies? N/A

Has the City, County, State or other governing body been contacted to perform any inspection/evaluation of the Septic System as may be required? N/A

INSPECTION RESULTS: ☒ **PASSED** ☐ **FAILED** ☐ **REPAIRS NEEDED**

Comments:

During the time of inspection all components were in working condition.

Section 1

Location of the system: <input type="checkbox"/> East <input type="checkbox"/> West <input type="checkbox"/> North <input checked="" type="checkbox"/> South <input type="checkbox"/> N/A.	
Was water run into the system for 30 minutes? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	30_minutes total
Does the septic tank have a visible riser? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Estimated size of tank: Choose an item. Gallons 1800	Basis for estimate: Pump Glass
(If Applicable) how many feet apart are well and septic leach lines? N/A	
Does the separation of the well and septic meet local requirements? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

Section 2 Disposal Field

Any evidence of malfunction? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (please check all applicable observed conditions)	
<input type="checkbox"/> Wet areas	<input type="checkbox"/> Unusual green/lush vegetation
<input type="checkbox"/> Liquid discharges to surface	<input type="checkbox"/> Discharge pipe of unknown origin
<input type="checkbox"/> Localized surface settling	<input type="checkbox"/> Other (described above)
Based on a visual evaluation only – Is system working properly? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

If tank is being opened and pumped please answer the following questions:

Septic Tank Material <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Fiberglass <input type="checkbox"/> Other
Liquid level in tank <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Below normal <input type="checkbox"/> Above normal
Access openings in tank <input type="checkbox"/> One <input checked="" type="checkbox"/> Two <input type="checkbox"/> Three <input type="checkbox"/> Four <input type="checkbox"/> None.
Number of risers <input type="checkbox"/> One <input checked="" type="checkbox"/> Two <input type="checkbox"/> Three <input type="checkbox"/> Four <input type="checkbox"/> None
Condition of baffles and/or sanitary tees: 3" inlet and 3" outlet.
Inlet baffle or "T" <input checked="" type="checkbox"/> Present and functional <input type="checkbox"/> Not Functional <input type="checkbox"/> None Present <input type="checkbox"/> Not visible
Outlet baffle or "T" <input checked="" type="checkbox"/> Present and functional <input type="checkbox"/> Not Functional <input type="checkbox"/> None Present <input type="checkbox"/> Not visible
Tank was pumped? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (if no, explain under comments)
Is tank adequately sized for # of bedrooms? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not applicable # of Bedrooms Choose an item.
System working properly at time of inspection? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Recommendations:

Septic systems are subterranean; therefore, it is impossible to determine their overall condition. Also, when no water is entering the field lines, i.e., if the house is vacant, a determination of their status is difficult. No prediction can be made as to when or if a system might fail. This report comments on the workability of the system on the day of the inspection only and is in no way intended to be a warranty. Workability can alter by factors such as excessive rainfall, heavy water usage, faulty plumbing, neglect or physical damage to the system. All tanks require pumping maintenance.

PLEASE PROVIDE PICTURES OF FINDINGS