



## VERTICAL SEEPAGE PIT CAPACITY TEST AND SOIL PROFILE RESULTS FORM

Qualified Professional to complete all information and certify/sign.

Attach a final test hole locations diagram and any other information or documentation applicable to the site evaluation review.

SITE LOCATION:	CITY:	APN:
OWNER NAME:	PHONE:	EMAIL:
OWNER MAILING ADDRESS:	CITY:	ZIP:
QUALIFIED PROFESSIONAL COMPANY:		
QUALIFIED PROFESSIONAL NAME:	PHONE:	EMAIL:
DEHQ Percolation Permit #:	Building Permit/Land Use Project #:	

### Final Test Hole Locations Diagram

Attach a diagram showing the final locations of all soil profile/capacity test holes, including those test holes with refusal, shallow groundwater, or failing capacity tests. May use provided template or separate diagram.

### Capacity Test Summary and Design Information

Total Septic Tank Capacity Required*:	gallons	Total Seepage Pit Capacity Required**?	gallons	Measured 24-Hour Volume:	gallons
Does the 24-Hour Volume meet the total minimum seepage pit capacity required?				Yes	No
Does the 24-Hour Volume meet the minimum capacity requirement for each individual pit of 1,667 gallons?				Yes	No
Number of seepage pits needed for Primary Dispersal:		Number of seepage pits needed for Reserve Dispersal:			
*Per LAMP Tables 7.2-1 and 7.2-2.					
**Required capacity is five times required septic tank capacity or 5,000 gallons/day minimum, whichever is greater. See Capacity Tables in guidance section.					

### Initial Site Screening Information

Location	Percent Slope and Description. Provide slope information to show predominant range of slope. <small>Slope Classes: 0-3% Nearly Level; 3-7% Gently Sloping; 7-12% Strongly Sloping; 12-20% Moderately Sloping; 20-30% Steep; 30-40% Very Steep; &gt;40% Extremely Steep.</small>				
Tank Location Area					
Primary Dispersal Area					
Reserve Dispersal Area					
Any plans or need for grading of property or OWTS areas?	Yes	No	If Yes, grading detail must be included in the OWTS Layout Report.		
Is water well located up slope from existing or proposed OWTS location?	Yes	No	NA		
Slope Instability Screening for slopes 30% or more. Check all conditions that apply for areas within 100 feet of proposed septic system locations. If any of the below items are checked, a Slope Stability Study is required for the OWTS Layout Report review.					
Unconsolidated Fill	Significant Erosion Rills	Tension Cracks	Leaning Trees	Evidence of Prior Earth Movements or Slides	
Other:				No instability conditions observed.	
Describe location and extent of rock outcroppings or other significant features (include on diagram):					

# Vertical Seepage Pit Soil Profile and Capacity Test Results Form

## Test Hole Soil Description and Groundwater Check

Initial boring total depth must be a minimum of 10 feet below design depth for groundwater check. For percolation rate equivalents to 1-5 minutes per inch, groundwater check is minimum 20 feet below design depth (see LAMP Section 6.3). Groundwater to be measured a minimum of **\*24-hours after completion** of the test boring. For ongoing groundwater monitoring, use the Groundwater Monitoring form.

Test Hole # _____ ID:			Date Drilled:		Diameter:	in		
Depth (ft)	Soil Type		Depth (ft)	Soil Type				
Surface								
Total Depth:	ft	Proposed Cap Depth:		ft	Depth to Refusal:		ft	
Drill Date		Stabilized Groundwater			Stabilized Groundwater			
Depth to Water:	ft	Check Date*:			Depth to Water:			ft

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## Testing Step 1: Presoak

The test hole shall be filled with water to the proposed cap depth and a continuous presoak shall be maintained at the proposed cap depth for a minimum 8-hours. Where cap levels cannot be maintained during the presoak, maintain a continuous presoak to the alternative depth that is achievable. The remaining tests will be conducted at a depth no higher than this alternative presoak depth. Document the gallons of water used for the presoak. In no case shall less than 5,000 gallons of water be used within a 1-hour period in the attempted presoak when the cap or alternative water depth cannot be maintained. In no case shall the sidewall of permeable soil below the cap/alternative level be less than ten (10) feet.

<b>Presoak Test Date:</b>		<b>Test Hole Start Total Depth:</b> ft		<b>Proposed Cap Depth:</b> ft	
<b>Water Filling Start Time:</b>		<b>Water Filling End Time:</b>		<b>Initial Volume of Water Used:</b> gallons	
<b>Initial Result:</b>		1) Water level able to reach proposed cap depth and can be maintained at that level. 2) Water level unable to reach proposed cap depth but can be maintained at a different level. 3) Water level unable be maintained in test hole (minimum 5,000 gallons of water over 1-hour period required).			
<b>Presoak Start Time:</b>		<b>Presoak End Time:</b>		<b>Presoak Total Time:</b>	
<b>Actual Water Level Depth Maintained for Test:</b> (Absorptive capacity testing to be conducted at this level)			<b>Total Gallons of Water Used to Maintain Cap/Alternative Water Level for 8-Hour Test:</b> gallons		
<b>Is there a minimum of 10 feet of sidewall available below water level depth?</b> Yes      No			<b>For fast draining soils, was a minimum of 5,000 gallons water used within 1-hour period?</b> Yes      No		

## Testing Step 2: Soils Uniformity Test

Following the pre-soak, fill test hole to cap depth and measure water drop at 15-minute intervals, or more frequently if needed, until the drop stops or until test hole empties. Graph results (Graph Generator available for use) and attach. If results/graph shows non-uniform or varying rates in water level drop over time, the soil will be considered non-uniform and not suitable for vertical seepage pit dispersal system usage.

<b>Test Date:</b>			<b>Test Start Time:</b>			<b>Test End Time:</b>		
<b>Test Total Time:</b> hours			<b>Test Hole Total Depth Start:</b> ft			<b>Water Level Depth Start Test:</b> ft		
<b>Proposed Cap Depth:</b> ft			<b>Test Hole Total Depth End:</b> ft			<b>Water Level Depth End Test:</b> ft		
Hour	Time	Depth Reading (ft)	Hour	Time	Depth Reading (ft)	Hour	Time	Depth Reading (ft)
0.00			2.25			4.50		
0.25			2.50			4.75		
0.50			2.75			5.00		
0.75			3.00			5.25		
1.00			3.25			5.50		
1.25			3.50			5.75		
1.50			3.75			6.00		
1.75			4.00			6.25		
2.00			4.25			6.50		

# Vertical Seepage Pit Soil Profile and Capacity Test Results Form

## Testing Step 3: Conduct either the Static Head or the Falling Head Absorption Capacity Test

Static Head Absorption Capacity 2-Hour Test			
Fill test hole to cap depth and maintain water column at that level for a 2-hour period. The volume of water used to maintain the water column over the 2-hour period is documented. The volume (in gallons) for the 2-hour test is multiplied by 12 to obtain a 24-hour capacity. Adjust to 4-foot diameter test hole, if needed. Total minimum seepage pit capacity per day required is 5 times the required minimum septic tank capacity or minimum 5,000 gallons per day. Minimum per seepage pit capacity required is 1,667 gallons per day.			
Test Date:	Test Hole Diameter:	in	Proposed Cap Depth:
			ft
Test Start Time:	Test End Time:		Test Total Time:
			hrs
Start Test Hole Total Depth:	ft	Test Start Water Depth:	ft
End Test Hole Total Depth:	ft	End Test Water Depth:	ft
		Total Volume Water Used for 2-Hour Test:	gallons
Total Volume Water for 24-Hours: 2-Hour test result x 12		gallons	Adjusted Total Volume Water for 24-Hours: Convert to a 4' Diameter Test Hole
			gallons

Falling Head Absorption Capacity Test- 2-Hour Test			
Fill test hole to cap depth and monitor the water drop over a 2-hour period. The depth of water drop is measured at the completion of the 2-hour test and the amount of water absorbed calculated. The volume in gallons for the 2-hour test is multiplied by 12 to obtain a 24-hour capacity. Adjust to 4-foot diameter test hole, if needed.			
Test Date:	Test Hole Diameter:	ft	Proposed Cap Depth:
			ft
Test Start Time:	Test End Time:		Test Total Time:
			hrs
Start Test Hole Total Depth:	ft	Test Start Water Depth:	ft
End Test Hole Total Depth:	ft	End Test Water Depth:	ft
		Total 2-Hour Test Water Drop:	ft
Total Volume of Water in Cubic Feet Used for 2-Hour Test: <i>Volume in Cubic feet (ft³) = 3.142 x r² x h</i>		ft³	Total Volume of Water in Gallons Used for 2-Hour Test: <i>Volume in Gallons = volume (ft³) x 7.48 gallons/1ft³</i>
			gallons
Total Volume Water for 24-Hours: (24-Hour Volume = 2-Hour Volume x 12)		gallons	Adjusted Total Volume Water for 24-Hours: Converted to a 4' Diameter Test Hole
			gallons

Vertical Seepage Pit Soil Profile and Capacity Test Results Form

Qualified Professional Comments:

Qualified Professional Certification/Stamp	
I hereby certify that the information provided on this form and the associated attachments is accurate and true and representative of the site conditions. I also certify that my license or registration is current and active, and the work was performed in accordance with the scope of my license or registration, and with all applicable San Diego County Ordinances, state laws, and regulations.	
Qualified Professional Signature	Date
Print Name	Title/License or Registration No.

TEST HOLE LOCATIONS DIAGRAM

Capacity Test Locations: Use this space or attach test hole diagram. Show parcel(s) boundaries, wells, structures, and other features.

## Vertical Seepage Pit Guidance Tables and Information

Minimum Single Family Dwelling Septic Tank and Seepage Pit Absorptive Capacities (minimum per individual seepage pit capacity is 1,667 gallons per day)		
Number of Bedrooms Per Dwelling Unit	Minimum Tank Size Required	Minimum Total Absorptive Capacity Required (5x tank capacity)
1-3	1000 Gallons	5000 Gallons
4	1200 Gallons	6000 Gallons
5-6	1500 Gallons	7500 Gallons
7-8	2000 Gallons	10000 Gallons
Based on number of bedrooms (LAMP Tables 7.2-1 and 7.2-2)		

Minimum Multiple Dwelling Septic Tank and Seepage Pit Absorptive Capacities (minimum per individual seepage pit capacity is 1,667 gallons per day)			
Primary Dwelling	Second Dwelling	Minimum Tank Size	Minimum Total Absorptive Capacity Required (5x tank capacity)
1 Bedroom	1 Bedroom	1000 Gallons	5000 Gallons
2 Bedrooms	1 Bedroom	1200 Gallons	6000 Gallons
2 Bedrooms	2 Bedrooms	1500 Gallons	7500 Gallons
3 Bedrooms	1 Bedrooms	1500 Gallons	7500 Gallons
3 Bedrooms	2 Bedrooms	1500 Gallons	7500 Gallons
4 Bedrooms	1 Bedrooms	1500 Gallons	7500 Gallons
4 Bedrooms	2 Bedrooms	2000 Gallons	10000 Gallons
Based on number of bedrooms (LAMP Tables 7.2-1 and 7.2-2)			

Static Head Test: Minimum Volume in Gallons Needed Over 2-Hour Test for Test Hole to Absorb				
1667 Gallons	5000 Gallons	6000 Gallons	7500 Gallons	10000 Gallons
139	417	500	625	833

Falling Head Test: Minimum Water Drop in Feet Needed Over 2-hour Test for Test Hole to Absorb						
Diameter of Test Hole	Volume per 1 ft depth (gallons)	1667 Gallons	5000 Gallons	6000 Gallons	7500 Gallons	10000 Gallons
4.0'	94.01	1.48'	4.43'	5.32'	6.65'	8.86'
3.5'	71.98	1.93'	5.79'	6.95'	8.68'	11.58'
3.0'	52.88	2.63'	7.88'	9.46'	11.82'	15.76'
2.0'	23.5	5.91'	17.73'	21.28'	26.60'	35.46'
1.0'	5.88	23.63'	70.86'	85.03'	106.29'	141.72'

## Vertical Seepage Pit Guidance Tables and Information - Continued

### Falling Head Calculations

**1) Convert 2-hour test water drop in feet to volume in cubic feet.**

$3.142 \times \text{radius}^2 \times \text{height} = \text{Volume in Cubic feet (ft}^3\text{)}$

**2) Convert 2-hour test volume in cubic feet to volume in gallons.**

$\text{Volume (ft}^3\text{)} \times 7.48 \text{ gallons/ft}^3 = \text{Volume in Gallons}$

**3) Determine 24-hour test volume.**

$2\text{-Hour Test Volume} \times 12 = 24\text{-Hour Volume}$

**4) Adjust 24-hour test volume to a 4-foot diameter test hole (if needed). See Below for Example and Conversion Factor Table.**

$24\text{-Hour Volume} \times \text{conversion factor} = 24\text{-Hour Volume for 4 feet diameter test hole}$

**Example for a 30' water drop in a 3' diameter over a 2-hour test period:**

1) Convert to cubic feet:  $3.142 \times (1.5 \text{ ft})^2 \times 30 \text{ ft} = 3.142 \times 2.25 \text{ ft}^2 \times 30 \text{ ft} = 212 \text{ ft}^3$

2) Convert to gallons:  $212 \text{ ft}^3 \times 7.48 \text{ gal/ft}^3 = 1586 \text{ gallons}$

3) Convert to 24-hours:  $1586 \times 12 = 19,032 \text{ gallons}$

4) Adjust to 4-foot diameter test hole:  $19,032 \text{ gallons} \times 1.33 = 25,313 \text{ gallons}$

### Conversion to a 4' Diameter Test Hole

**Measured 24-Hour Volume x Conversion Factor = Adjusted 24-Hour Volume**

1) Divide 4' by test hole diameter (x') = conversion factor (or use conversion factor from table)

2) Multiply the measured volume by the conversion factor to get the final volume for a 4' diameter test hole

**Example** for a 3' diameter test hole with a measured volume of 19032 gallons:

$4' \text{ diameter} \div 3' \text{ diameter} = 1.33 \text{ conversion factor}$

$19032 \text{ gallons measured volume} \times 1.33 \text{ conversion factor} = 25,313 \text{ Gallons for 4' Diameter Test Hole}$

#### Conversion Factor Table

From Diameter (ft)	To Diameter (ft)	Conversion Factor
1.0	4.0	4.0
2.0	4.0	2.0
3.0	4.0	1.33
3.5	4.0	1.14
4.0	4.0	1.0