

# MONROE COUNTY DEPARTMENT OF PUBLIC HEALTH

111 Westfall Road – Room 910 – Rochester, NY 14620  
(585) 753-5060

## Procedures for Residential Wastewater Treatment System Repairs

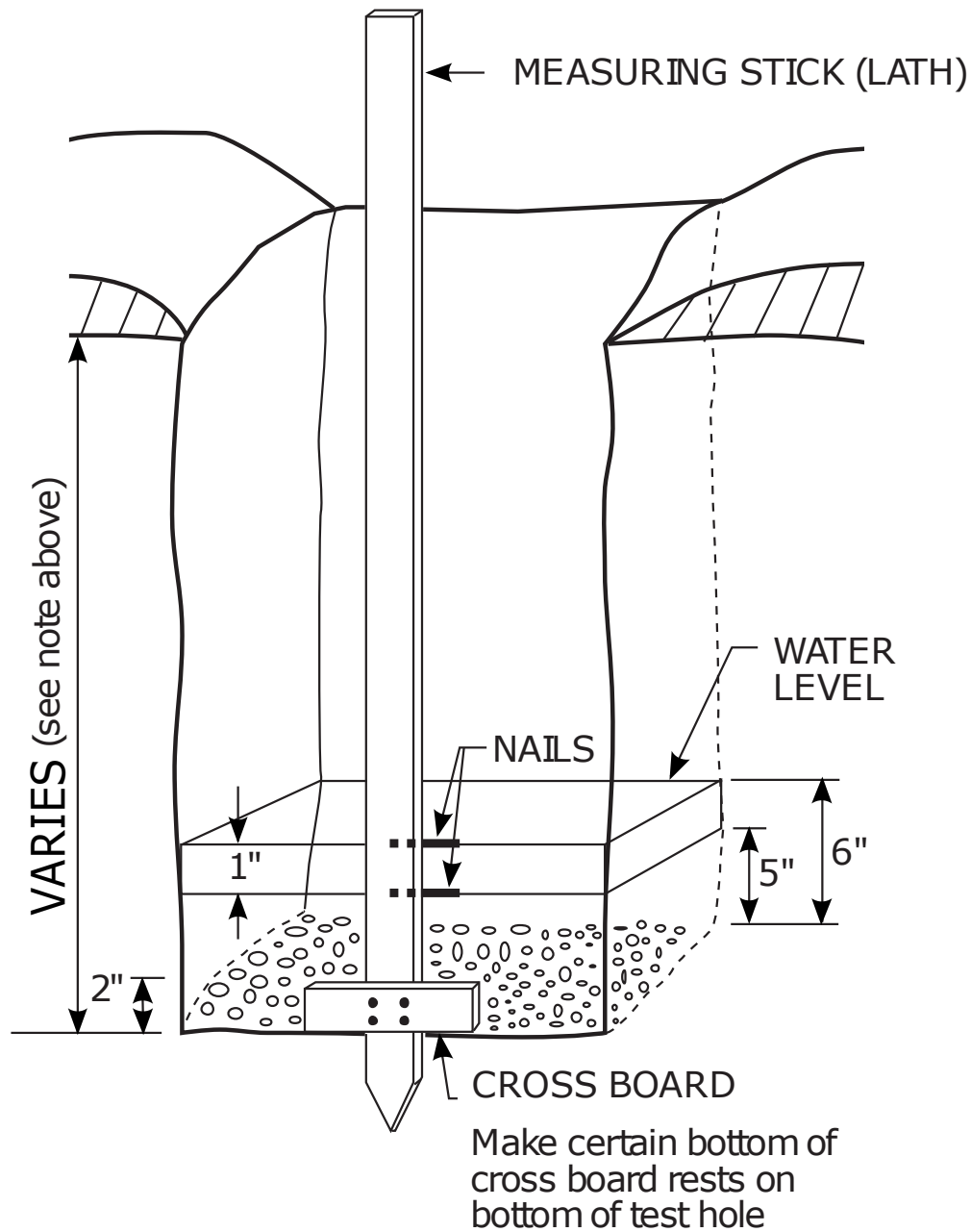
1. Prepare the repair permit application form.
  - a. Conduct three percolation tests in the proposed leach field location and indicate results on the application. Instructions on how to conduct percolation tests are shown below.
  - b. Using the longest stabilized percolation rate, number of bedrooms and enclosed tables, indicate leach field size. It is a good idea to slightly oversize the leach field to compensate for times that the system may be used more than normal or for exceptionally wet times.
  - c. Include a sketch of the proposed system.
  - d. Installer and owner signatures required.
2. Send the completed repair permit application to Monroe County Department of Public Health (MCDPH) with the repair fee. This fee covers permit review, approval and inspection of the system after it is installed.
3. After being received, MCDPH staff will review the application form for compliance with current codes and regulations. **We will also conduct a site inspection** to verify site conditions for soil type, topography, separation requirements and signs of high groundwater that may affect system performance. If the proposal is accepted, a copy of the approved permit will be sent to both the owner of the property and the installer. The approved repair permit is valid for two years after the approval date, after which it is subject to review.
4. After receipt of the approved permit, the system may be installed. Installation of systems should occur in dry weather conditions. **If ground water enters the trenches or soil conditions vary from the soils in which the percolation tests were done in, stop installation and contact us immediately.**
5. **Contact MCDPH before backfilling the system.** Our staff will perform an inspection to record septic tank / leach field locations. **Please call at least 24 hours before you are ready for an inspection.**
6. Upon satisfactory inspection, a copy of the inspection report will be sent out to both the property owner and the installer of the system.

## **Instructions for Percolation Tests for Repairs**

**(see detail)**

1. Dig three holes with a diameter of 12 inches to the estimated depth of the proposed absorption trenches (18-30 inches). All three holes must be in the proposed leach field area and should be roughly 30 feet from each other.
2. Pre-soak the test holes by completely filling them with water and allowing the water to completely seep away. Pre-soaking should be done the day before the percolation tests are run.
3. Remove any loose soil from the percolation holes.
4. Fill the holes with water to a depth of 6 inches (to top nail on lath). Avoid splashing / pouring the water quickly as this will stir up any remaining loose soil and may affect test results.
5. Observe and record the time in minutes required for the water to drop 1 inch (from 6 inches to 5 inches).
6. For each hole, repeat the test (as called for in steps 4 and 5 above) a minimum of three times and continue until the time for the water to drop 1 inch for two successive tests gives approximately equal results (within 10% of each other). The longest time of the three tests will then be used to represent the stabilized rate of percolation. **Use this longest stabilized rate as the basis of design in determining the length of absorption trench using Table 5, 5A or 5B.**
7. Do not backfill the test holes, cover them with a board and mark with stake. Percolation holes will be checked for soil type, signs of high ground water table and seepage by Monroe County Department of Public Health staff.

- Dig a hole about 12" in diameter
- Depth for Conventional System = 18"-30"
- Depth for Alternative System = 6"-12"
- Depth for Deep Trench or Seepage Pit shall be as determined by site specific design
- Scrape sides and remove loose soil from bottom
- Install measuring stick
- Presoak and saturate soil
- Observe and record the time in minutes required for the water to drop from 6" to 5"
- Repeat test at least 3 times until results for two consecutive tests are approximately equal



SOIL PERCOLATION TEST  
 STANDARD MCDPH DETAIL  
 N.T.S

FIGURE 1

<b>Table 4</b>															
<b>Required Length of Absorption Trench (in feet)</b>															
<b>(Based Upon 2 ft. wide trench)</b>															
<b>Daily Flow Rate (gallons per day)</b>															
<b>Percolation Rate (min./inch)</b>	<b>2 Bedrooms</b>			<b>3 Bedrooms</b>			<b>4 Bedrooms</b>			<b>5 Bedrooms</b>			<b>6 Bedrooms</b>		
	220	260	300	330	390	450	440	520	600	550	650	750	660	780	900
1-5	92	108	125	138	162	187	184	216	250	230	270	312	275	325	374
6-7	110	130	150	165	195	225	220	260	300	275	325	375	330	390	450
8-10	123	145	167	184	217	250	245	290	333	306	360	417	367	433	500
11-15	138	162	188	207	244	281	275	325	375	344	406	469	413	488	563
16-20	158	186	214	236	279	321	315	372	429	393	464	536	472	557	643
21-30	184	217	250	275	325	375	367	433	500	459	542	625	550	650	750
31-45	220	260	300	330	390	450	440	520	600	550	650	750	660	780	900

**Table 4 Notes:**

- (a) Dosing required if there is 500-feet or more of total trench length.
- (b) Alternate Dosing required if there is 1000-feet or more of total trench length.

Table 4R															
Required Length of Absorption Trench (in feet)															
(For Gravelless products with allowable 25% REDUCTION)															
Daily Flow Rate (gallons per day)															
Percolation Rate (min./inch)	2 Bedrooms			3 Bedrooms			4 Bedrooms			5 Bedrooms			6 Bedrooms		
	220	260	300	330	390	450	440	520	600	550	650	750	660	780	900
1-5	69	81	93.8	104	122	140	138	162	188	173	203	234	206	244	280.5
6-7	82.5	97.5	113	124	146	169	165	195	225	206	244	281	248	293	337.5
8-10	92.3	109	125	138	163	188	184	218	250	230	270	313	275	325	375
11-15	104	122	141	155	183	211	206	244	281	258	305	352	310	366	422.3
16-20	119	140	161	177	209	241	236	279	322	295	348	402	354	418	482.3
21-30	138	163	188	206	244	281	275	325	375	344	407	469	413	488	562.5
31-45	165	195	225	248	293	338	330	390	450	413	488	563	495	585	675

**Table 4 Notes:**

- (a) Dosing required if there is 500-feet or more of total trench length.
- (b) Alternate Dosing required if there is 1000-feet or more of total trench length.

Table 4A															
Required Length of Absorption Trench (in feet)															
(For Gravelless products with required 25% ADDITION)															
Daily Flow Rate (gallons per day)															
Percolation Rate (min./inch)	2 Bedrooms			3 Bedrooms			4 Bedrooms			5 Bedrooms			6 Bedrooms		
	220	260	300	330	390	450	440	520	600	550	650	750	660	780	900
1-5	115	135	156	173	203	234	230	270	313	288	338	390	344	406	467.5
6-7	138	163	188	206	244	281	275	325	375	344	406	469	413	488	562.5
8-10	154	181	209	230	271	313	306	363	416	383	450	521	459	541	625
11-15	173	203	235	259	305	351	344	406	469	430	508	586	516	610	703.8
16-20	198	233	268	295	349	401	394	465	536	491	580	670	590	696	803.8
21-30	230	271	313	344	406	469	459	541	625	574	678	781	688	813	937.5
31-45	275	325	375	413	488	563	550	650	750	688	813	938	825	975	1125

**Table 4 Notes:**

- (a) Dosing required if there is 500-feet or more of total trench length.
- (b) Alternate Dosing required if there is 1000-feet or more of total trench length.

Table 6					
Acceptable Gravelless Absorption Trench Products*					
Manufacturer	Product Model	Design Adjustment Applied to Req'd Overall Trench Length	Reference Design Table	Allowed for New Install	Allowed for Repair or Replacement
Advanced Drainage Systems (ADS) www.ads-pipe.com	Bio 2 Chamber	25% Addition	4A	Yes	Yes
	Bio 3 Chamber	25% Reduction	4R	Yes	Yes
	ARC 18 Chamber	25% Addition	4A	Yes	Yes
	ARC 24 Chamber	25% Reduction	4R	Yes	Yes
	ARC 36 Chamber	25% Reduction	4R	Yes	Yes
	ARC 36 HC Chamber	25% Reduction	4R	Yes	Yes
	ARC 36 HC H-20 Chamber	25% Reduction	4R	Yes	Yes
	Standard Bio (34" wide)	25% Reduction	4R	Yes	Yes
	BioDiffuser HC H-20 (34")	25% Reduction	4R	Yes	Yes
Cultec www.cultec.com	Contractor EZ-24 Chamber	25% Addition	4A	Yes	Yes
	Contractor 100 Chamber	25% Reduction	4R	Yes	Yes
Infiltrator Systems www.infiltratorsystems.com	Equalizer 24	25% Addition	4A	Yes	Yes
	Quick4 Equalizer 24	25% Addition	4A	Yes	Yes
	Quick4 Equalizer 24 HD	25% Addition	4A	Yes	Yes
	Quick4 Equalizer 36	25% Reduction	4R	Yes	Yes
	Quick4 Plus Equalizer 36 LP	1:1	4	Yes	Yes
	Quick4 Standard	25% Reduction	4R	Yes	Yes
	Quick4 Plus Standard	25% Reduction	4R	Yes	Yes
	Quick4 Plus Standard LP	1:1	4	Yes	Yes
	High Capacity H-20	25% Reduction	4R	Yes	Yes
Presby Environmental www.presbyeco.com	EZflow 1202H	1:1	4	No	Yes
	Enviro-Septic System	25% Reduction	4R	No	Yes
Eljen Corporation www.eljen.com	Advanced Enviro-Septic System	use 6.0 ft <sup>2</sup> /LF rating	N/A	No	Yes
	Geotextile Sand Filter	use 6.0 ft <sup>2</sup> /LF rating	N/A	No	Yes

**Table 6 Notes:**

\*All systems subject to MCDPH approval prior to installation.

\*New installations subject to compliance with section VIII.(c)

\*The above list is not an endorsement of any of the products by MCDPH. This department does not "approve" proprietary products. However, products are reviewed to determine their compliance with NYS Appendix 75-A and local

\*Products shall be installed in accordance with the manufacturer's recommendations.

\*This list shall be updated as new products are accepted. Check with MCDPH to see if new products have been