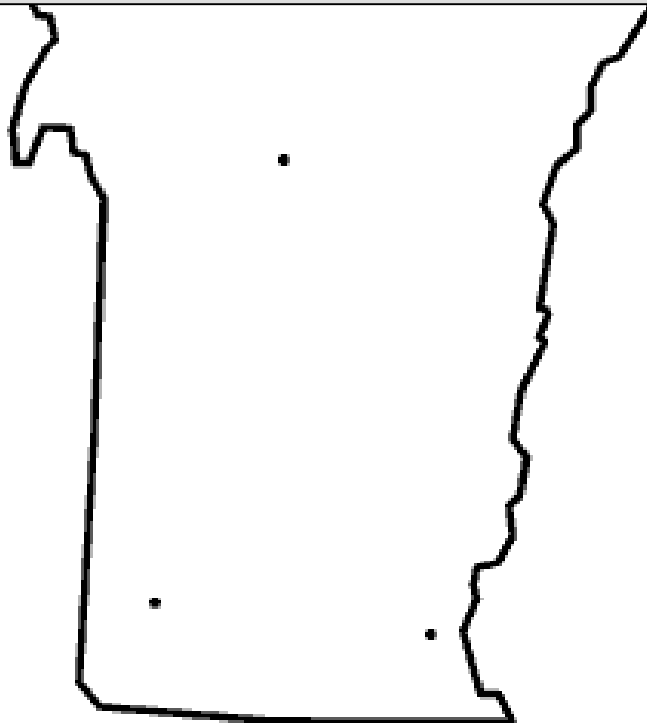


**Enviro-Septic[®] Wastewater Treatment
Systems Design and Installation Manual
Vermont State Attachment**



The information in this manual is subject to change without notice. Your suggestions and comments are welcome. Please contact us at

Presby Environmental, Inc.
143 Airport Road
Whitefield, NH 03598
Phone: 1-800-473-5298 Fax: (603) 837-9864
Website: www.presbyenvironmental.com

Enviro-Septic® U.S. Patent Nos. 6,461,078; 5,954,451; 6,290,429 with other patents pending. Canadian Patent Nos. 2185087; 2187126 with other patents pending. Simple-Septic® U.S. Patent No. 5,606,786. Presby Maze® U.S. Patent No. 5,429,752.

Enviro-Septic®, Simple-Septic®, and Presby Maze® are registered trademarks of Presby Environmental Inc. Multi-Level™ is a trademark of Presby Environmental, Inc.

© 2004 Presby Environmental, Inc. All rights reserved



State of Vermont

AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation
State Geologist

RELAY SERVICE FOR THE HEARING IMPAIRED
1-800-253-0191 TDD>Voice
1-800-253-0195 Voice>TDD

Innovative/Alternative System Approval

General Use per §1-309 of the
Wastewater System and Potable Water Supply Rules, effective August 16, 2002

#2004-02

Vendor Information

Presby Environmental, Inc.
Route 117, P.O. Box 617
Sugar Hill, NH 03585

Contact

David W. Presby, President
Presby Environmental, Inc.
Route 117, P.O. Box 617
Sugar Hill, NH 03585
Phone (800) 473-5298
Fax (603) 823-8114
Web: www.PresbyEnvironmental.com

Technology Name

Enviro-Septic® Leaching System

Technology Type

Septic Tank Effluent Treatment &
Distribution System

Expiration Date

November 1, 2006

Approval

The Enviro-Septic® Leaching System may be used as part of a subsurface wastewater disposal system approved under the Wastewater System and Potable Water Supply Rules, effective August 16, 2002 under the following conditions:

1. The leaching systems must be designed, installed and operated as described in the Enviro-Septic® & Simple Septic® Leaching Systems Design and Installation Manual and the Vermont State Attachment filed with the Agency of Natural Resources (Agency) on November 29, 2004.
2. This approval is based on treatment only of domestic wastewater of low and moderate strength as specified in §1-519(a)(1)(C) & (D) of the Wastewater System and Potable Water Supply Rules, effective August 16, 2002.
3. The system may be used for both new and replacement systems.

Innovative/Alternative System Approval
#2004-02

4. If the Wastewater System and Potable Water Supply Rules, effective August 16, 2002 are revised during the term of this approval, this approval shall be revised as needed to conform to the revisions.
5. Each application for use shall demonstrate the ability to construct a fully complying replacement system.
6. The designer shall provide a copy of this approval letter to any landowner who is a prospective purchaser of an Enviro-Septic® Leaching System prior to the sale of the system and prior to the filing of any application for a site-specific approval by the Agency for the purchaser's property. The application filed with the Agency shall include the landowner's written acknowledgement of this approval letter. Prior to any sale of the property or completion of a sales agreement to sell the property, a copy of the site-specific permit shall be provided to the prospective purchaser.
7. The vendor shall submit an annual report to the Agency by April 1 of each year containing the following information for the 12 month period ending December 31 of the previous year:
 - A. The number of permitted systems installed in Vermont, including those permitted by the Agency and those permitted by Towns under authority of 24 V.S.A. Chapter 102.
 - B. The address of each installation.
 - C. The name of the owner at the time of installation and any known change in ownership.
 - D. All known problems or failures, with a brief summary of the cause and remedial measures taken.
8. When a project is subject to the Wastewater System and Potable Water Supply Rules, effective August 16, 2002, site-specific permission for the use of this product is required in the form of a Water Supply – Wastewater Disposal System Permit.
9. A site-specific permit for the use of this product may be revoked if the system fails to function properly. Revocation of the permit will require that the use of the building be discontinued unless another wastewater disposal system is installed based on prior written approval by the Agency.
10. A town that regulates wastewater disposal systems under 24 V.S.A., Chapter 102 and whose ordinance permits, may approve use of an Enviro-Septic® Leaching System subject to all conditions in this approval.

Innovative/Alternative System Approval
#2004-02

11. This approval is not a representation or guarantee of the effectiveness, efficiency or operation of an Enviro-Septic® Leaching System.

Design and Review Conditions

The following conditions will be used by the Department in reviewing permit applications that include an Enviro-Septic® Leaching System:

Equipment

- Enviro-Septic® Leaching System

Design and Application

- The leaching system shall be designed in accordance with the approved Vermont State Attachment to the Enviro-Septic® & Simple Septic® Leaching Systems Design and Installation Manual. The designer shall assure that the system will properly function in all seasons.
- The designer must assess the ventilation path for the particular application and make any necessary provisions to assure proper flow and control of odor emissions.
- The designer shall include in the design a septic tank effluent filter with easy access for inspection and cleaning.

Installation Inspection

- The leaching system shall be installed accordance with the approved plans and under the instruction and guidance of an installer/inspector trained by the manufacturer.
- The leaching system shall be inspected by a Professional Engineer registered in Vermont as a civil, civil/sanitary, sanitary or environmental engineer or a Licensed Type B Designer, approved by the Vendor, during installation of the system and installation of any tanks before backfilling, and after backfilling and grading is complete. The inspection shall include checking for levelness of the pipes, and inspecting for damage and proper assembly.
- The engineer or site technician shall inspect all transport piping for proper installation and watertightness before backfilling.

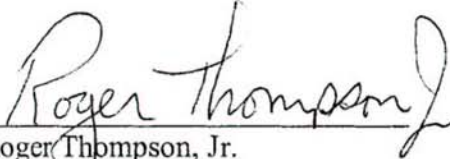
Innovative/Alternative System Approval
#2004-02

Permitting

- The permit shall run with the land.
- A copy of the permit shall be provided to any prospective purchaser prior to the sale.
- Each new owner of the property shall inform the appropriate Regional Environmental Office of the Agency within 30 days of the transfer of the property and include the name and mailing address of the new owner.

Effective December 3, 2004

by


Roger Thompson, Jr.
Regional Office Program Manager

U:\Innovative System\Presby.Enviro-Septic.Approval.doc

Enviro-Septic® Wastewater Treatment Systems Design and Installation Manual

Vermont State Attachment

Introduction

Purpose The purpose of this attachment is to provide information specific to the State of Vermont for use in the design and installation of wastewater treatment systems using the Presby Environmental, Inc., group of products.

Certification required Presby Environmental, Inc., requires all designers and installers to be certified. Certification is obtained by attending the “Enviro-Septic® Designer and Installer Certification Course” presented by Presby Environmental, Inc.

Until designers and installers are certified, designs and installations must be approved/inspected by Presby Environmental, Inc., or its sanctioned representatives.

Special Note: Presby Environmental, Inc., highly recommends that all individuals involved in the approval or permitting process also attend these sessions.

Installer requirement Installers of Enviro-Septic® systems must provide Presby Environmental, Inc., with a copy of a completed “System Installation Form” for each new or replacement system installed.

Reference: See “Appendix A – System Installation Form.”

Presby Environmental, Inc., standards All wastewater treatment systems using Presby Environmental, Inc., products must be designed and installed in compliance with the procedures and specifications described in *The Enviro-Septic® & Simple-Septic® Leaching Systems Design and Installation Manual*.

This attachment is to be used in conjunction with the State of Vermont Wastewater Management Division “Environmental Protection Rules, Chapter 1, Wastewater System and Potable Water Supply Rules, Effective August 16, 2002” (Vermont Rules).

State standards take precedence While the Presby Environmental, Inc., standards form the basis for designing and installing Enviro-Septic® products, the information in this State attachment takes precedence in the event of conflicts.

Continued

Introduction, Continued

In this attachment

This attachment contains State specific information on the following subjects.

Subject	Page
Bed design restrictions – 61-120 percolation rates	3
Design flow	3
Filtrate system	3
High flow	3
Loading limits	3
Low flow	3
Multi-Level™ restriction	3
Non-conventional system configuration restriction	4
Pressure distribution lines	4
Pumps used to gain elevation	4
Raised systems fill extensions	4
Sand fill and clean fill requirements	4
Setbacks	4
Simple-Septic® restriction	4
Slow percolation rate design restriction	4
Soil moisture construction limitation	4
“System sand” requirements	4
System size limitation	5
Venting requirements	5
Wastewater strength	5
Quick Reference Guide for Percolation Rates of 1-60 Minutes/Inch	6
Quick Reference Guide for Percolation Rates of 61-120 Minutes/Inch	11
2-Bedroom Sizing Table (percolation rates 61-120 min/inch)	15
3-Bedroom Sizing Table (percolation rates 61-120 min/inch)	15
4-Bedroom Sizing Table (percolation rates 61-120 min/inch)	16
5-Bedroom Sizing Table (percolation rates 61-120 min/inch)	16
6-Bedroom Sizing Table (percolation rates 61-120 min/inch)	17
Additional Bedroom Sizing Table (percolation rates 61-120 min/inch)	17
Commercial System Sizing Table (percolation rates 61-120 min/inch)	18
Slow Percolation Level Sand Bed Diagrams	19
Slow Percolation Sloping Sand Bed Diagrams	20
Slope Design Chart	21
Appendix A – System Installation Form	23

Technical Support

Presby Environmental, Inc., provides technical support to all individuals using our products. For questions about our products or the information contained in this manual, please contact us at 1-800-473-5298.

State Specific Information

Bed design restrictions – 61-120 percolation rates Beds in soils with percolation rates from 61-120 minutes per inch must be designed as basic serial systems. A multiple bed system uses a distribution box with equalizers. No bed in a multiple bed system can accept more than 500 GPD. Separate beds by at least six feet of naturally occurring undisturbed soil. To accommodate construction access, additional separation distance may be necessary.

Special Note: All systems with percolation rates of 61-120 minutes per inch must be designed as mounds.

Design flow Design flow is defined in §1-504 of the “Environmental Protection Rules, Chapter 1, Wastewater System and Potable Water Supply Rules, Effective August 16, 2002.” Contact the appropriate Regional Office for design flows for uses not listed.

When design flow is determined by water meter use, take the average daily use from a peak month and multiply it by a peaking factor of 2 to 3 times.

Design flows below 300 gallons per day may not be used without a variance.

Note: The maximum allowed linear loading rate for an Enviro-Septic[®] system shall be no greater than that which could be achieved under the Rules for a conventional pipe and stone system.

Filtrate system A filtrate system may be used with Enviro-Septic[®], but no additional area size reduction will be granted.

High flow High flow is a volume greater than design flow of 900 GPD.

In-ground system requirement All in-ground systems must be installed level until in-ground sloping systems have been approved.

Loading limits Each line of a distribution box system and each section of a combination system has a maximum limit design flow of 500 GPD.

Low flow Low flow is a volume design flow of 900 GPD or less.

Multi-Level[™] restriction Multi-Level[™] system installations require variances. Required separation to groundwater and bedrock must be maintained. For appropriate sizing, contact Presby Environmental, Inc.

Continued

State Specific Information, Continued

Non-conventional system configuration restriction	Non-conventional system configurations as described in “Section H” of the <i>Enviro-Septic[®] & Simple-Septic[®] Leaching Systems Design and Installation Manual</i> may not be used for systems with percolation rates from 61-120 minutes per inch.
Pressure distribution lines	The use of pressure distribution lines in Enviro-Septic [®] wastewater treatment systems is prohibited.
Pumps used to gain elevation	Systems incorporating pumps to gain elevation have to use differential venting and velocity reduction to control liquid flow. <u>Reference:</u> See “Pump System Requirements,” p. 32, of the <i>Enviro-Septic[®] & Simple-Septic[®] Leaching Systems Design and Installation Manual</i> .
Raised systems fill extensions	Raised systems that slope 10% or less require 3’ extensions on each side (including system sand and sand fill) before tapering. Sloping systems that slope greater than 10% require 3’ extensions on three sides and 5’ on the down slope side before tapering. Tapering is to be 3 horizontal feet for each 1 foot of vertical drop. A dense soil blanket is required around the fill perimeter of raised systems.
Sand fill and clean fill requirements	Sand fill should meet the requirements of §1-517(c) (1), (2), (3) (Vermont Rules). Clean fill is clean, permeable fill material.
Setbacks	Setbacks for in-ground systems are measured from the edge of the “system sand.” Mounded systems are measured according to 1-517(b) (5), (6), (7) (Vermont Rules).
Simple-Septic[®] restriction	Simple-Septic [®] pipe may be used for drainage purposes, but not for wastewater treatment.
Soil moisture construction limitation	If a fragment of soil from about 9” below the surface can easily be rolled into a wire, the soil moisture content is too high for construction. <u>Reference:</u> See “Section D,” p. 8, of the <i>Enviro-Septic[®] & Simple-Septic[®] Leaching Systems Design and Installation Manual</i> .
“System sand” requirements	“System sand” should meet the requirements of §1-517(c) (2) (Vermont Rules).

Continued

State Specific Information, Continued

**System size
limitation**

To meet Vermont requirements, at no time may an Enviro-Septic[®] system be designed to have a sand footprint less than 50% of a stone and pipe system.

Note: Sand fill cannot be included in the system sand footprint when determining the minimum size.

**Venting
requirements**

All Enviro-Septic[®] systems must be vented. Pumped systems require differential venting.

Reference: See “Section J,” p. 33, of the *Enviro-Septic[®] & Simple-Septic[®] Leaching Systems Design and Installation Manual*.

**Wastewater
strength**

Where wastewater strength is high, additional Enviro-Septic[®] pipe is recommended. In some cases additional sand area footage will be required to accommodate the additional pipe.

Presby Environmental, Inc., provides technical support to all individuals using our products. For questions regarding high wastewater strength, please contact us at 1-800-473-5298.

Quick Reference Guide for Percolation Rates of 1-60 Minutes/Inch

Purpose The unique Enviro-Septic[®] design provides an infinite number of system configurations that vary in length, width, slope, and shape. The purpose of this guide is to help designers compare layouts for any site quickly and easily.

We recommend designers become familiar with the *Enviro-Septic[®] & Simple-Septic[®] Leaching Systems Design and Installation Manual* before using this Quick Reference Guide.

Exceptions require variance Exceptions to any requirements used in this quick reference guide require a variance.

Distance measurements The distances used in this guide, including minimum distances required by the “Chapter 1, Wastewater System and Potable Water Supply Rules” for SHWT and restrictive features are measured from the bottom of the Enviro-Septic[®] pipe.

Procedure Complete these tasks to size a single level Enviro-Septic[®] system.

Task 1: Determine the minimum linear feet of Enviro-Septic[®] pipe required.

Use the percolation rate and the number of bedrooms or the commercial GPD in Table A below to determine the minimum linear feet of Enviro-Septic[®] pipe required.

Table A: Minimum Linear Footage

Perc rate Min/Inch	Number of Bedrooms					Add'l Room	Commercial Per 100 GPD
	2	3	4	5	6		
1-4	85	123	165	207	249	42	47
5-6	90	135	180	225	270	45	50
7-9	100	150	200	250	300	50	55
10-13	110	165	220	275	330	55	60
14-19	120	180	240	300	360	60	66
20-30	130	195	260	325	390	65	71
31-40	140	210	280	350	420	70	77
41-50	150	225	300	375	450	75	83
51-60	160	240	320	400	480	80	89

Example: A three-bedroom home with an 18 min/inch percolation rate requires 180 feet of pipe.

Note: Each bedroom has a design flow of 150 GPD.

Continued

Quick Reference Guide for Percolation Rates of 1-60 Minutes/Inch, Continued

Task 2: Determine the percentage of slope on the proposed system.

Note: The maximum slope for a single level system is 20%. In some cases, sites with slopes exceeding 20% may be regraded and reshaped to provide adequate leachfield sites. (§1-516(d)) (Vermont Rules).

In certain instances slopes of up to 25% may be acceptable. See §1-502(b)(1)(C) (Vermont Rules).

Do you know the percentage of slope on the proposed system?

If yes, go to Task 3.

If no, follow this procedure to determine the percentage of system slope.

Step	Action
1	Identify the highest elevation of the proposed location.
2	Identify the lowest elevation of the proposed location.
3	Subtract the lowest elevation from the highest elevation = elevation change.
4	Measure the horizontal distance between the two elevations = horizontal length.
5	Divide the elevation change by the horizontal length = percentage of site slope.
6	Choose a percentage of slope to be used for the system. <u>Note:</u> The system slope does not need to be the same as the site slope.
7	Go to Task 3.

Task 3: Determine the minimum center-to-center pipe spacing.

Use the percolation rate and the percentage of system slope in Table B below to determine the required minimum center-to-center pipe spacing.

Table B: Pipe Spacing

Percentage of System Slope	Percolation Rate					
	1-10	11-20	21-30	31-40	41-50	51-60
0-10%	1.5'	1.5'	1.75'	2.0'	2.5'	3.0'
11-15%	1.5'	1.75'	2.0'	2.25'	2.75'	3.25'
16-20%	1.75'	2.0'	2.25'	2.5'	3.0'	3.5'
21-25%	2.0'	2.25'	2.5'	2.75'	3.25'	3.75'

Example: A slope of ten percent or less with an 18 min/inch percolation rate requires pipe spacing of 1.5'.

Continued

Quick Reference Guide for Percolation Rates of 1-60 Minutes/Inch, Continued

Task 4: Determine system length and width.

IF...	THEN use Table C below to...
system length is most critical	<ul style="list-style-type: none"> find the pipe length in the left column follow that row across to a number equal to or greater than the required total linear feet of Enviro-Septic® follow that column down through the number of lines row and across left to the required center-to-center spacing.
system width is most critical	<ul style="list-style-type: none"> find the pipe spacing in the bottom left hand column and follow that row across to the desired width follow that column up through the number of lines row and up to the required total linear feet of Enviro-Septic® follow that row left to determine the pipe length.

Table C: Length and Width

Pipe Length/Ft	Total Linear Feet of Enviro-Septic®													
20	40	60	80	100	120	140	160	180	200	220	240	260	280	300
25	50	75	100	125	150	175	200	225	250	275	300	325	350	375
30	60	90	120	150	180	210	240	270	300	330	360	390	420	450
35	70	105	140	175	210	245	280	315	350	385	420	455	490	525
40	80	120	160	200	240	280	320	360	400	440	480	520	560	600
45	90	135	180	225	270	315	360	405	450	495	540	585	630	675
50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
55	110	165	220	275	330	385	440	495	550	605	660	715	770	825
60	120	180	240	300	360	420	480	540	600	660	720	780	840	900
65	130	190	260	325	390	455	520	585	650	715	780	845	910	975
70	140	210	280	350	420	490	560	630	700	770	840	910	980	1050
75	150	225	300	375	450	525	600	675	750	825	900	975	1050	1125
80	160	240	320	400	480	560	640	720	800	880	960	1040	1120	1200
85	170	255	340	425	510	595	680	765	850	935	1020	1105	1190	1275
90	180	270	360	450	540	630	720	810	900	990	1080	1170	1260	1350
95	190	285	380	475	570	665	760	855	950	1045	1140	1235	1330	1425
100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
# of Lines	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Spacing														
1.50	2.50	4.00	5.50	7.00	8.50	10.00	11.50	13.00	14.50	16.00	17.50	19.00	20.50	22.00
1.75	2.75	4.50	6.25	8.00	9.75	11.50	13.25	15.00	16.75	18.50	20.25	22.00	23.75	25.50
2.00	3.00	5.00	7.00	9.00	11.00	13.00	15.00	17.00	19.00	21.00	23.00	25.00	27.00	29.00
2.25	3.25	5.50	7.75	10.00	12.25	14.50	16.75	19.00	21.25	23.50	25.75	28.00	30.25	32.50
2.50	3.50	6.00	8.50	11.00	13.50	16.00	18.50	21.00	23.50	26.00	28.50	31.00	33.50	36.00
2.75	3.75	6.50	9.25	12.00	14.75	17.50	20.25	23.00	25.75	28.50	31.25	34.00	36.76	39.50
3.00	4.00	7.00	10.00	13.00	16.00	19.00	22.00	25.00	28.00	31.00	34.00	37.00	40.00	43.00
3.25	4.25	7.50	10.75	14.00	17.25	20.50	23.75	27.00	30.25	33.50	36.75	40.00	43.25	46.50
3.50	4.50	8.00	11.50	15.00	18.50	22.00	25.50	29.00	32.50	36.00	39.50	43.00	46.50	50.00
3.75	4.75	8.50	12.25	16.00	19.75	23.50	27.25	31.00	34.75	38.50	42.25	46.00	49.75	53.50
4.00	5.00	9.00	13.00	17.00	21.00	25.00	29.00	33.00	37.00	41.00	45.00	49.00	53.00	57.00
4.25	5.25	9.50	13.75	18.00	22.25	26.50	30.75	35.00	39.25	43.50	47.75	52.00	56.25	60.50
4.50	5.50	10.00	14.50	19.00	23.50	28.00	32.50	37.00	41.50	46.00	50.50	55.00	59.50	64.00
4.75	5.75	10.50	15.25	20.00	24.75	29.50	34.25	39.00	43.75	48.50	53.25	58.00	62.75	67.50
5.00	6.00	11.00	16.00	21.00	26.00	31.00	36.00	41.00	46.00	51.00	56.00	61.00	66.00	71.00
	System Width/Ft (Outermost surface of pipe)													

Continued

Quick Reference Guide for Percolation Rates of 1-60 Minutes/Inch, Continued

Task 5: Calculate the total system sand area.

Vermont requires that Enviro-Septic[®] systems be no less than 50% of the area of a pipe and stone system. Complete this task to determine area size.

Add two feet to the system width and two feet to the pipe length from Table C and multiply them together.

If the area calculated above is less than the minimum sand area size required by Vermont in Table D below, the sand area footage must be increased. See “increasing sand area footage” below.

Table D – Minimum Sand Area Size

Perc. Rate	Number of Bedrooms						Commercial Per 100 GPD
	2	3	4	5	6	Add'l	
1-4	125	188	250	313	375	63	63
5-6	153	230	306	383	459	77	77
7-9	188	281	375	469	563	94	94
10-13	225	338	451	563	676	113	113
14-19	272	409	545	681	817	136	136
20-30	342	513	685	856	1027	171	171
31-40	395	593	791	988	1186	198	198
41-50	442	663	884	1105	1326	221	221
51-60	484	726	968	1210	1452	242	242

Square Feet

Example: A 3-bedroom home with a percolation rate of 18-min/inch requires a total sand footprint of 409 square feet.

Increasing sand area footage

Our 3-bedroom home requires 180 linear feet of pipe at 1.5’ on center. Using Table C with 30’ lines, the system width is 8.5’ with a sand area of 32’x10.5’ for a total of 336 square feet of sand. To meet the Vermont 50% area requirement of 409 square feet from Table D, our sand area must be increased. Our sand area may be increased by adding width and/or length to the system.

Adding width: To meet the minimum sand area size required, the minimum pipe spacing may be increased. Add 2 feet to the pipe length and divide the minimum sand area size by that amount to obtain the minimum sand width. Subtract 2 feet from the minimum sand width and find the line spacing that provides at least that system width in Table C.

Continued

Quick Reference Guide for Percolation Rates of 1-60 Minutes/Inch, Continued

Increasing sand area footage (continued)

Adding width example: To increase the sand area footage in our example by adding width, divide 409' by 32' to obtain a sand width of 13'. Subtract 2' from that to obtain the system width of 11' and a line spacing of 2.0' on center in the 6-line column of Table C. This now gives us a sand area of 416 square feet and a system configuration of 6-30' lines spaced 2' on center.

Adding length: Add 2 feet to the system width and divide the minimum sand area size by that amount to obtain the minimum sand length required. Subtract 2 feet from the minimum sand bed length to obtain the pipe line length.

Adding length example: To increase the sand area footage in our example by adding length, divide 409 by 10.5' to obtain a sand bed length of 39'. Subtract 2' from that to obtain a line length of 37'. $39' \times 10.5'$ equals 410 square feet of sand area. The system configuration would be 6-37' lines spaced 1.5' on center.

Quick Reference Guide for Percolation Rates of 61-120 Minutes/Inch

Introduction Systems in high-density soils, soils with slow percolation rates, are limited in configuration in order to adequately disperse and treat effluent and minimize groundwater mounding.

Purpose The purpose of this guide is to help designers choose system layouts for percolation rates in the 61-120 minutes/inch range.

We recommend designers become familiar with the *Enviro-Septic[®] & Simple-Septic[®] Leaching Systems Design and Installation Manual* before using this Quick Reference Guide.

Reminder All systems with percolation rates of 61-120 minutes per inch must be designed as mounds.

Exceptions require variance Exceptions to any requirements used in this quick reference guide require a variance.

Distance measurements The distances used in this guide, including minimum distances required by the “Chapter 1, Wastewater System and Potable Water Supply Rules” for SHWT and restrictive features are measured from the bottom of the Enviro-Septic[®] pipe.

Slope percentages allowed Use Table E below to determine slope percentages allowed.

Table E – Maximum Slopes for Perc. Rates 61-120 min./inch

Perc. Rate	% Slope
61-70	15%
71-90	10%
91-120	0%

Additional site preparation requirement Remove grass, cut brush to ground level, and mold board plow to an approximate depth of 9 inches.

Also see mound construction procedure, §1-517 (Vermont Rules).

Continued

Quick Reference Guide for Percolation Rates of 61-120 Minutes/Inch, Continued

Procedure Complete these tasks to design a single level Enviro-Septic[®] leaching system with percolation rates between 61-120 minutes/inch.

Task 1: Determine the percentage of slope on the proposed system.

Note: The maximum system slope is limited to 15%. In some cases, sites with slopes exceeding 15% may be regraded and reshaped to provide adequate leachfield sites. (§1-517 Vermont Rules).

Do you know the percentage of slope on the proposed system?

If yes, go to Task 2.

If no, follow this procedure to determine the percentage of system slope.

Step	Action
1	Identify the highest elevation of the proposed location.
2	Identify the lowest elevation of the proposed location.
3	Subtract the lowest elevation from the highest elevation = elevation change.
4	Measure the horizontal distance between the two elevations = horizontal length.
5	Divide the elevation change by the horizontal length = percentage of site slope.
6	Choose a percentage of slope to be used for the system.
	<u>Note:</u> The system slope does not need to be the same as the site slope.
7	Go to Task 2.

Task 2: Choose the proper sizing table.

Sizing tables use the number of bedrooms for homes or the GPD flow in commercial installations to determine system size. System size is the total square footage of sand area required for a system. Sand area is designed as one or more individual sand beds. Sand bed lengths vary according to percolation rates and slope percentages. Sand bed widths are limited to 12', 9', and 6' designs and pipe layouts must follow the configurations shown in the sand bed diagrams, pp. 19-20.

When the system is for...	THEN use the following table to complete Task 3.
2-bedrooms	2-Bedroom Sizing, page 15
3-bedrooms	3-Bedroom Sizing, page 15
4-bedrooms	4-Bedroom Sizing, page 16
5-bedrooms	5-Bedroom Sizing, page 16
6-bedrooms	6-Bedroom Sizing, page 17
more than 6 bedrooms	Additional Bedroom Sizing, page 17
commercial use	Commercial System Sizing, page 18

Continued

Quick Reference Guide for Percolation Rates of 61-120 Minutes/Inch, Continued

Task 3: Determine bed(s) widths and lengths.

To determine the number and sizes of beds required, use the proper sizing table identified in task 2.

- Find your percolation rate and slope in the left hand column.
Note: Percolation rates/slopes limit system widths to 12', 9', or 6'. No other system widths are allowed without a variance.
- Follow the row(s) across to the minimum bed length column and choose the longest bed length your site will accommodate.
Note: Beds must be 32'-102' in length.
- If the minimum bed length exceeds 102 feet, divide the system into multiple beds of equal length.
Example: A minimum bed length of 288' could be designed as 3 beds of 96' each.
Note: This example supports using the longest beds possible. Four beds of 72', five beds of 58', etc., are other alternatives. Remember that 32' is the minimum bed length allowable.

Task 4: Design beds.

- Design as many beds as required, inserting 4, 3, or 2 lines of Enviro-Septic[®] pipe in each as dictated by the bed width.
Note: Pipe should extend to within 1' of each end of the sand bed.
Example: A line of pipe in a 96' bed must be 94' long.
Reference: See pipe lengths in Table F below.
- Use the bed diagrams on pp. 19-20 to aid in the design of each bed.

Pipe line and total footage lengths

Based on the bed width and length, this table lists pipe line lengths and total pipe footage in 5' increments.

Table F – Pipe Line and Total Footage Lengths

Bed Width	Number of pipe lines	Bed Length	32	37	42	47	52	57	62	67
		Pipe Length	30	35	40	45	50	55	60	65
6'	2	Total Pipe Ftg.	60	70	80	90	100	110	120	130
9'	3	Total Pipe Ftg.	90	105	120	135	150	165	180	195
12'	4	Total Pipe Ftg.	120	140	160	180	200	220	240	260

Table F – Pipe Line and Total Footage Lengths (continued)

Bed Width	Number of pipe lines	Bed Length	72	77	82	87	92	97	102
		Pipe Length	70	75	80	85	90	95	100
6'	2	Total Pipe Ftg.	140	150	160	170	180	190	200
9'	3	Total Pipe Ftg.	210	225	240	255	270	285	300
12'	4	Total Pipe Ftg.	280	300	320	340	360	380	400

Continued

Quick Reference Guide for Percolation Rates of 61-120 Minutes/Inch, Continued

Avoiding cutting Enviro-Septic[®] pipe It is possible to keep pipe line lengths as multiples of 10' and avoid cutting a 10' pipe section.
Example: Let's say we have a 12' x 88' bed (4-lines of pipe) requiring a total pipe footage of 344'. Dividing 344' by 4 would suggest 4 lines of 86' each. Extending the bed 4 feet would allow 4 lines of 90 feet each and eliminate cutting a section of pipe.

Sizing Tables

2 Bedroom

2-Bedroom Sizing Table (percolation rates 61-120 min/inch)

Perc. Rate/Slope	Sand Area (sq. ft.)	Sand Bed Width	Number of Lines	Ctr. to Ctr. Spacing	Min. Bed Length
61-70 / 0%-4%	523	12'	4	3'	44'
61-70 / 0%-4%	523	9'	3	3'	58'
61-70 / 0%-4%	523	6'	2	3'	87'
61-70 / 5%-10%	601	12'	4	1.5'	50'
61-70 / 5%-10%	601	9'	3	1.5'	67'
61-70 / 5%-10%	601	6'	2	1.5'	100'
61-70 / 11%-15%	628	12'	4	1.5'	53'
61-70 / 11%-15%	628	9'	3	1.5'	73'
71-80 / 0%-4%	559	12'	4	3'	47'
71-80 / 0%-4%	559	9'	3	3'	62'
71-80 / 0%-4%	559	6'	2	3'	93'
71-80 / 5%-10%	643	12'	4	1.5'	54'
71-80 / 5%-10%	643	9'	3	1.5'	71'
71-80 / 5%-10%	643	6'	2	1.5'	107'
81-90 / 0%-4%	602	9'	3	3'	67'
81-90 / 0%-4%	602	6'	2	3'	100'
81-90 / 5%-10%	692	9'	3	1.5'	77'
81-90 / 5%-10%	692	6'	2	1.5'	115'
91-100 / 0%	668	9'	3	1.5'	75'
91-100 / 0%	668	6'	2	3'	111'
101-110 / 0%	735	6'	2	3'	123'
111-120 / 0%	802	6'	2	3'	134'

3 Bedroom

3-Bedroom Sizing Table (percolation rates 61-120 min/inch)

Perc. Rate/Slope	Sand Area (sq. ft.)	Sand Bed Width	Number of Lines	Ctr. to Ctr. Spacing	Min. Bed Length
61-70 / 0%-4%	784	12'	4	3'	65'
61-70 / 0%-4%	784	9'	3	3'	87'
61-70 / 0%-4%	784	6'	2	3'	131'
61-70 / 5%-10%	902	12'	4	1.5'	75'
61-70 / 5%-10%	902	9'	3	1.5'	100'
61-70 / 5%-10%	902	6'	2	1.5'	150'
61-70 / 11%-15%	941	12'	4	1.5'	78'
61-70 / 11%-15%	941	9'	3	1.5'	105'
71-80 / 0%-4%	839	12'	4	3'	70'
71-80 / 0%-4%	839	9'	3	3'	93'
71-80 / 0%-4%	839	6'	2	3'	140'
71-80 / 5%-10%	965	12'	4	1.5	80'
71-80 / 5%-10%	965	9'	3	1.5'	107'
71-80 / 5%-10%	965	6'	2	1.5'	161'
81-90 / 0%-4%	902	9'	3	3'	100'
81-90 / 0%-4%	902	6'	2	3'	150'
81-90 / 5%-10%	1038	9'	3	1.5'	115'
81-90 / 5%-10%	1038	6'	2	1.5'	173'
91-100 / 0%	1003	9'	3	1.5'	111
91-100 / 0%	1003	6'	2	3'	167
101-110 / 0%	1103	6'	2	3'	184
111-120 / 0%	1203	6'	2	3'	201

Continued

Sizing Tables, Continued

4 Bedroom

4-Bedroom Sizing Table (percolation rates 61-120 min/inch)

Perc. Rate/Slope	Sand Area (sq. ft.)	Sand Bed Width	Number of Lines	Ctr. to Ctr. Spacing	Min. Bed Length
61-70 / 0%-4%	1046	12'	4	3'	88'
61-70 / 0%-4%	1046	9'	3	3	116'
61-70 / 0%-4%	1046	6'	2	3'	174'
61-70 / 5%-10%	1203	12'	4	1.5'	101'
61-70 / 5%-10%	1203	9'	3	1.5'	134'
61-70 / 5%-10%	1203	6	2	1.5'	201'
61-70 / 11%-15%	1255	12'	4	1.5'	105'
61-70 / 11%-15%	1255	9'	3	1.5'	139'
71-80 / 0%-4%	1118	12'	4	3'	94'
71-80 / 0%-4%	1118	9'	3	3'	124'
71-80 / 0%-4%	1118	6'	2	3'	186'
71-80 / 5%-10%	1286	12'	4	1.5'	108'
71-80 / 5%-10%	1286	9'	3	1.5'	143'
71-80 / 5%-10%	1286	6'	2	1.5'	214'
81-90 / 0%-4%	1203	9'	3	3'	134'
81-90 / 0%-4%	1203	6'	2	3'	201'
81-90 / 5%-10%	1383	9'	3	1.5'	154'
81-90 / 5%-10%	1383	6'	2	1.5'	231'
91-100 / 0%	1337	9'	3	1.5'	149'
91-100 / 0%	1337	6'	2	3'	223'
101-110 / 0%	1470	6'	2	3'	245'
111-120 / 0%	1604	6'	2	3'	268'

5 Bedroom

5-Bedroom Sizing Table (percolation rates 61-120 min/inch)

Perc. Rate/Slope	Sand Area (sq. ft.)	Sand Bed Width	Number of Lines	Ctr. to Ctr. Spacing	Min. Bed Length
61-70 / 0%-4%	1307	12'	4	3'	109'
61-70 / 0%-4%	1307	9'	3	3'	145'
61-70 / 0%-4%	1307	6'	2	3'	218'
61-70 / 5%-10%	1503	12'	4	1.5'	126'
61-70 / 5%-10%	1503	9'	3	1.5'	167'
61-70 / 5%-10%	1503	6	2	1.5'	251'
61-70 / 11%-15%	1568	12'	4	1.5'	131'
61-70 / 11%-15%	1568	9'	3	1.5'	174'
71-80 / 0%-4%	1398	12'	4	3'	117'
71-80 / 0%-4%	1398	9'	3	3'	155'
71-80 / 0%-4%	1398	6'	2	3'	233'
71-80 / 5%-10%	1608	12'	4	1.5'	134'
71-80 / 5%-10%	1608	9'	3	1.5'	179'
71-80 / 5%-10%	1608	6'	2	1.5'	268'
81-90 / 0%-4%	1504	9'	3	3'	168'
81-90 / 0%-4%	1504	6'	2	3'	251'
81-90 / 5%-10%	1730	9'	3	1.5'	193'
81-90 / 5%-10%	1730	6'	2	1.5'	288'
91-100 / 0%	1671	9'	3	1.5'	186'
91-100 / 0%	1671	6'	2	3'	279'
101-110 / 0%	1838	6'	2	3'	307'
111-120 / 0%	2005	6'	2	3'	335'

Continued

Sizing Tables, Continued

6 Bedroom

6-Bedroom Sizing Table (percolation rates 61-120 min/inch)

Perc. Rate/Slope	Sand Area (sq. ft.)	Sand Bed Width	Number of Lines	Ctr. to Ctr. Spacing	Min. Bed Length
61-70 / 0%-4%	1569	12'	4	3'	131'
61-70 / 0%-4%	1569	9'	3	3'	174'
61-70 / 0%-4%	1569	6'	2	3'	262'
61-70 / 5%-10%	1804	12'	4	1.5'	150'
61-70 / 5%-10%	1804	9'	3	1.5'	200'
61-70 / 5%-10%	1804	6	2	1.5'	301'
61-70 / 11%-15%	1883	12'	4	1.5'	157'
61-70 / 11%-15%	1883	9'	3	1.5'	209'
71-80 / 0%-4%	1677	12'	4	3'	140'
71-80 / 0%-4%	1677	9'	3	3'	186'
71-80 / 0%-4%	1677	6'	2	3'	280'
71-80 / 5%-10%	1929	12'	4	1.5'	161'
71-80 / 5%-10%	1929	9'	3	1.5'	214'
71-80 / 5%-10%	1929	6'	2	1.5'	322'
81-90 / 0%-4%	1805	9'	3	3'	201'
81-90 / 0%-4%	1805	6'	2	3'	301'
81-90 / 5%-10%	2076	9'	3	1.5'	231'
81-90 / 5%-10%	2076	6'	2	1.5'	346'
91-100 / 0%	2005	9'	3	1.5'	223'
91-100 / 0%	2005	6'	2	3'	334'
101-110 / 0%	2206	6'	2	3'	368'
111-120 / 0%	2406	6'	2	3'	401'

Additional bedroom

Additional Bedroom Sizing Table (percolation rates 61-120 min/inch)

For each bedroom over six, add these additional footages

Perc. Rate/Slope	Sand Area (sq. ft.)	Sand Bed Width	Number of Lines	Ctr. to Ctr. Spacing	Min. Bed Length
61-70 / 0%-4%	261	12'	4	3'	22'
61-70 / 0%-4%	261	9'	3	3'	29'
61-70 / 0%-4%	261	6'	2	3'	44'
61-70 / 5%-10%	300	12'	4	1.5'	25'
61-70 / 5%-10%	300	9'	3	1.5'	33'
61-70 / 5%-10%	300	6	2	1.5'	50'
61-70 / 11%-15%	313	12'	4	1.5'	26'
61-70 / 11%-15%	313	9'	3	1.5'	35'
71-80 / 0%-4%	280	12'	4	3'	24'
71-80 / 0%-4%	280	9'	3	3'	31'
71-80 / 0%-4%	280	6'	2	3'	47'
71-80 / 5%-10%	322	12'	4	1.5'	27'
71-80 / 5%-10%	322	9'	3	1.5'	36'
71-80 / 5%-10%	322	6'	2	1.5'	54'
81-90 / 0%-4%	301	9'	3	3'	34'
81-90 / 0%-4%	301	6'	2	3'	50'
81-90 / 5%-10%	346	9'	3	1.5'	39'
81-90 / 5%-10%	346	6'	2	1.5'	58'
91-100 / 0%	334	9'	3	1.5'	38'
91-100 / 0%	334	6'	2	3'	56'
101-110 / 0%	368	6'	2	3'	62'
111-120 / 0%	401	6'	2	3'	67'

Continued

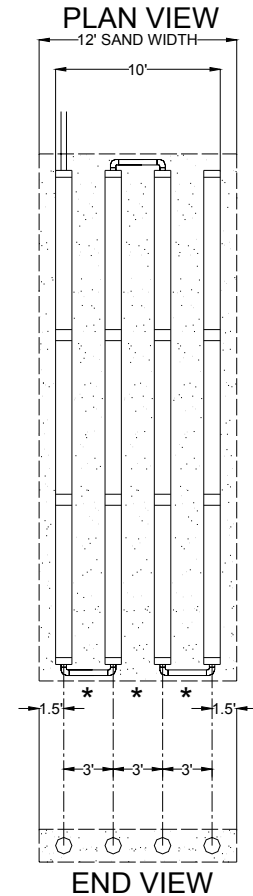
Sizing Tables, Continued

Commercial per
100 GPD

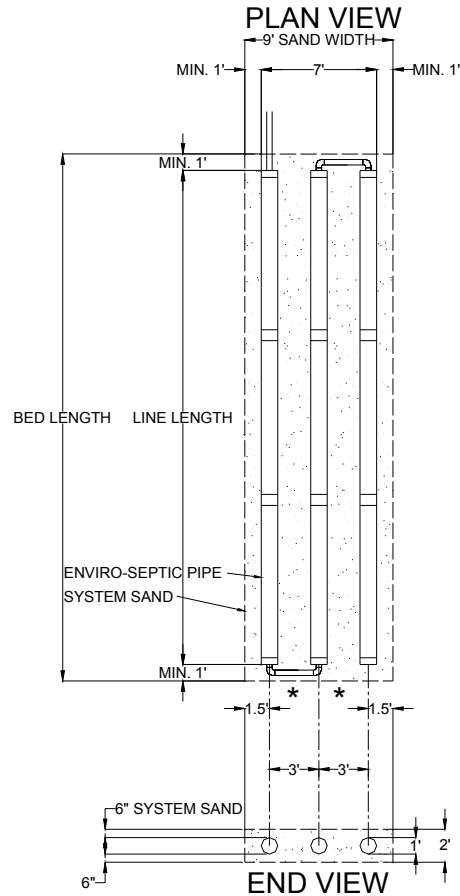
Commercial System Sizing Table for Each 100 GPD
(percolation rates 61-120 min/inch)

Perc. Rate/Slope	Sand Area (sq. ft.)	Sand Bed Width	Number of Lines	Ctr. to Ctr. Spacing	Min. Bed Length
61-70 / 0%-4%	261	12'	4	3'	22'
61-70 / 0%-4%	261	9'	3	3'	29'
61-70 / 0%-4%	261	6'	2	3'	44'
61-70 / 5%-10%	300	12'	4	1.5'	25'
61-70 / 5%-10%	300	9'	3	1.5'	33'
61-70 / 5%-10%	300	6	2	1.5'	50'
61-70 / 11%-15%	313	12'	4	1.5'	26'
61-70 / 11%-15%	313	9'	3	1.5'	35'
71-80 / 0%-4%	280	12'	4	3'	24'
71-80 / 0%-4%	280	9'	3	3'	31'
71-80 / 0%-4%	280	6'	2	3'	47'
71-80 / 5%-10%	322	12'	4	1.5'	27'
71-80 / 5%-10%	322	9'	3	1.5'	36'
71-80 / 5%-10%	322	6'	2	1.5'	54'
81-90 / 0%-4%	301	9'	3	3'	34'
81-90 / 0%-4%	301	6'	2	3'	50'
81-90 / 5%-10%	346	9'	3	1.5'	39'
81-90 / 5%-10%	346	6'	2	1.5'	58'
91-100 / 0%	334	9'	3	1.5'	38'
91-100 / 0%	334	6'	2	3'	56'
101-110 / 0%	368	6'	2	3'	62'
111-120 / 0%	401	6'	2	3'	67'

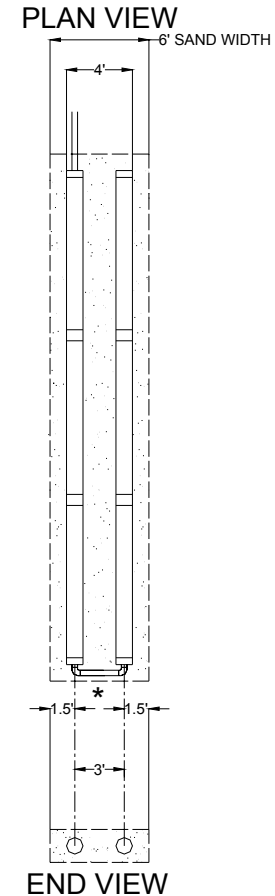
Slow Percolation Level Sand Bed Diagrams



12' WIDE BED



9' WIDE BED

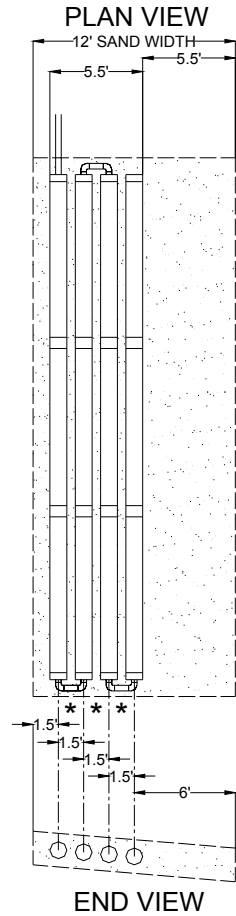


6' WIDE BED

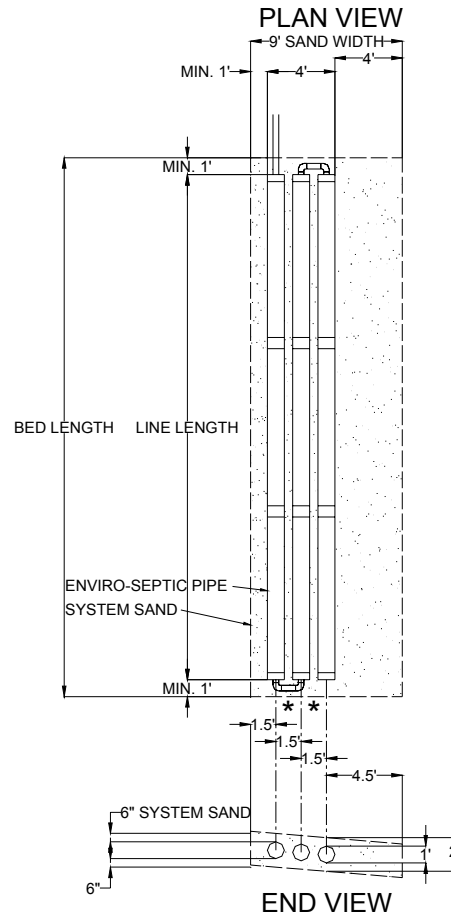
*ENVIRO-SEPTIC PIPE CONSTANT 3.0 FEET ON CENTER AT 0-4% SLOPE IN RESTRICTIVE SOILS

BED LENGTHS MAY VARY, BUT BED WIDTHS AND PIPE LAYOUTS MUST BE CONFIGURED AS ABOVE.

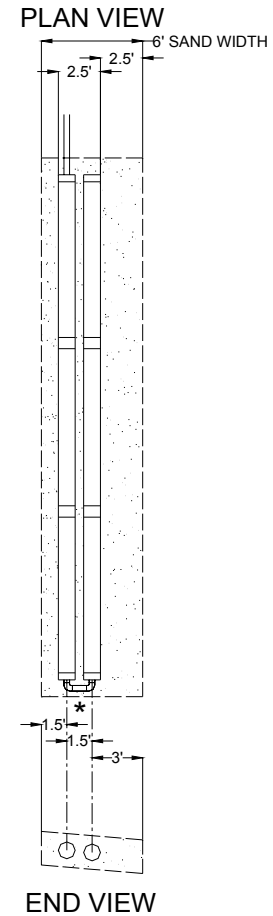
Slow Percolation Sloping Sand Bed Diagrams



12' WIDE BED



9' WIDE BED



6' WIDE BED

* ENVIRO-SEPTIC PIPE CONSTANT 1.5 FEET ON CENTER AT 5-15% SLOPE IN RESTRICTIVE SOILS

BED LENGTHS MAY VARY, BUT BED WIDTHS AND PIPE LAYOUTS MUST BE CONFIGURED AS ABOVE.

SLOPE DESIGN CHART

SYSTEM SLOPE

	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%													
5.00'	5/8	0.050	1 3/16	0.100	1 13/16	0.150	2 3/8	0.200	3	0.250	3 5/8	0.300	4 3/16	0.350	4 13/16	0.400	5 3/8	0.450	6	0.500	6 5/8	0.550	7 3/16	0.600	7 13/16	0.650
4.75'	9/16	0.048	1 1/8	0.095	1 11/16	0.143	2 1/4	0.190	2 7/8	0.238	3 7/16	0.285	4	0.333	4 9/16	0.380	5 1/8	0.428	5 11/16	0.475	6 1/4	0.523	6 13/16	0.570	7 7/16	0.618
4.50'	9/16	0.045	1 1/16	0.090	1 5/8	0.135	2 3/16	0.180	2 11/16	0.225	3 1/4	0.270	3 3/4	0.315	4 5/16	0.360	4 7/8	0.405	5 3/8	0.450	5 15/16	0.495	6 1/2	0.540	7	0.585
4.25'	1/2	0.043	1	0.085	1 1/2	0.128	2 1/16	0.170	2 9/16	0.213	3 1/16	0.255	3 9/16	0.298	4 1/16	0.340	4 9/16	0.383	5 1/8	0.425	5 5/8	0.468	6 1/8	0.510	6 5/8	0.553
4.00'	1/2	0.040	15/16	0.080	1 7/16	0.120	1 15/16	0.160	2 3/8	0.200	2 7/8	0.240	3 3/8	0.280	3 13/16	0.320	4 5/16	0.360	4 13/16	0.400	5 1/4	0.440	5 3/4	0.480	6 1/4	0.520
3.75'	7/16	0.038	7/8	0.075	1 3/8	0.113	1 13/16	0.150	2 1/4	0.188	2 11/16	0.225	3 1/8	0.263	3 5/8	0.300	4 1/16	0.338	4 1/2	0.375	4 15/16	0.413	5 3/8	0.450	5 7/8	0.488
3.50'	7/16	0.035	13/16	0.070	1 1/4	0.105	1 11/16	0.140	2 1/8	0.175	2 1/2	0.210	2 15/16	0.245	3 3/8	0.280	3 3/4	0.315	4 3/16	0.350	4 5/8	0.385	5 1/16	0.420	5 7/16	0.455
3.25'	3/8	0.033	3/4	0.065	1 3/16	0.098	1 9/16	0.130	1 15/16	0.163	2 5/16	0.195	2 3/4	0.228	3 1/8	0.260	3 1/2	0.293	3 7/8	0.325	4 5/16	0.358	4 11/16	0.390	5 1/16	0.423
3.00'	3/8	0.030	3/4	0.060	1 1/16	0.090	1 7/16	0.120	1 13/16	0.150	2 3/16	0.180	2 1/2	0.210	2 7/8	0.240	3 1/4	0.270	3 5/8	0.300	3 15/16	0.330	4 5/16	0.360	4 11/16	0.390
2.75'	5/16	0.028	11/16	0.055	1	0.083	1 5/16	0.110	1 5/8	0.138	2	0.165	2 5/16	0.193	2 5/8	0.220	3	0.248	3 5/16	0.275	3 5/8	0.303	3 15/16	0.330	4 5/16	0.358
2.50'	5/16	0.025	5/8	0.050	7/8	0.075	1 3/16	0.100	1 1/2	0.125	1 13/16	0.150	2 1/8	0.175	2 3/8	0.200	2 11/16	0.225	3	0.250	3 5/16	0.275	3 5/8	0.300	3 7/8	0.325
2.25'	1/4	0.023	9/16	0.045	13/16	0.068	1 1/16	0.090	1 3/8	0.113	1 5/8	0.135	1 7/8	0.158	2 3/16	0.180	2 7/16	0.203	2 11/16	0.225	3	0.248	3 1/4	0.270	3 1/2	0.293
2.00'	1/4	0.020	1/2	0.040	3/4	0.060	15/16	0.080	1 3/16	0.100	1 7/16	0.120	1 11/16	0.140	1 15/16	0.160	2 3/16	0.180	2 3/8	0.200	2 5/8	0.220	2 7/8	0.240	3 1/8	0.260
1.75'	3/16	0.018	7/16	0.035	5/8	0.053	13/16	0.070	1 1/16	0.088	1 1/4	0.105	1 1/2	0.123	1 11/16	0.140	1 7/8	0.158	2 1/8	0.175	2 5/16	0.193	2 1/2	0.210	2 3/4	0.228
1.50'	3/16	0.015	3/8	0.030	9/16	0.045	3/4	0.060	7/8	0.075	1 1/16	0.090	1 1/4	0.105	1 7/16	0.120	1 5/8	0.135	1 13/16	0.150	2	0.165	2 3/16	0.180	2 5/16	0.195

DIFFERENCE IN ELEVATION BETWEEN LINES OF ENVIRO-SEPTIC® PIPE IN INCHES AND FEET

	14%	15%	16%	17%	18%	19%	20%	21%	22%	23%	24%	25%												
5.00'	8 3/8	0.700	9	0.750	9 5/8	0.800	10 3/16	0.850	10 13/16	0.900	11 3/8	0.950	12	1.000	12 5/8	1.050	13 3/16	1.100	13 13/16	1.150	14 3/8	1.200	15	1.250
4.75'	8	0.665	8 9/16	0.713	9 1/8	0.760	9 11/16	0.808	10 1/4	0.855	10 13/16	0.903	11 3/8	0.950	12	0.998	12 9/16	1.045	13 1/8	1.093	13 11/16	1.140	14 1/4	1.188
4.50'	7 9/16	0.630	8 1/8	0.675	8 5/8	0.720	9 3/16	0.765	9 3/4	0.810	10 1/4	0.855	10 13/16	0.900	11 5/16	0.945	11 7/8	0.990	12 7/16	1.035	12 15/16	1.080	13 1/2	1.125
4.25'	7 1/8	0.595	7 5/8	0.638	8 3/16	0.680	8 11/16	0.723	9 3/16	0.765	9 11/16	0.808	10 3/16	0.850	10 11/16	0.893	11 1/4	0.935	11 3/4	0.978	12 1/4	1.020	12 3/4	1.063
4.00'	6 3/4	0.560	7 3/16	0.600	7 11/16	0.640	8 3/16	0.680	8 5/8	0.720	9 1/8	0.760	9 5/8	0.800	10 1/16	0.840	10 9/16	0.880	11 1/16	0.920	11 1/2	0.960	12	1.000
3.75'	6 5/16	0.525	6 3/4	0.563	7 3/16	0.600	7 5/8	0.638	8 1/8	0.675	8 9/16	0.713	9	0.750	9 7/16	0.788	9 7/8	0.825	10 3/8	0.863	10 13/16	0.900	11 1/4	0.938
3.50'	5 7/8	0.490	6 5/16	0.525	6 3/4	0.560	7 1/8	0.595	7 9/16	0.630	8	0.665	8 3/8	0.700	8 13/16	0.735	9 1/4	0.770	9 11/16	0.805	10 1/16	0.840	10 1/2	0.875
3.25'	5 7/16	0.455	5 3/4	0.488	6 1/4	0.520	6 5/8	0.553	7	0.585	7 7/16	0.618	7 13/16	0.650	8 3/16	0.683	8 9/16	0.715	9	0.748	9 3/8	0.780	9 3/4	0.813
3.00'	5 1/16	0.420	5 3/8	0.450	5 3/4	0.480	6 1/8	0.510	6 1/2	0.540	6 13/16	0.570	7 3/16	0.600	7 9/16	0.630	7 15/16	0.660	8 1/4	0.690	8 5/8	0.720	9	0.750
2.75'	4 5/8	0.385	4 15/16	0.413	5 1/4	0.440	5 5/8	0.468	5 15/16	0.495	6 1/4	0.523	6 5/8	0.550	6 15/16	0.578	7 1/4	0.605	7 9/16	0.633	7 15/16	0.660	8 1/4	0.688
2.50'	4 3/16	0.350	4 1/2	0.375	4 13/16	0.400	5 1/8	0.425	5 3/8	0.450	5 11/16	0.475	6	0.500	6 5/16	0.525	6 5/8	0.550	6 7/8	0.575	7 3/16	0.600	7 1/2	0.625
2.25'	3 3/4	0.315	4 1/16	0.338	4 5/16	0.360	4 9/16	0.383	4 7/8	0.405	5 1/8	0.428	5 3/8	0.450	5 11/16	0.473	5 15/16	0.495	6 3/16	0.518	6 1/2	0.540	6 3/4	0.563
2.00'	3 3/8	0.280	3 5/8	0.300	3 13/16	0.320	4 1/16	0.340	4 5/16	0.360	4 9/16	0.380	4 13/16	0.400	5 1/16	0.420	5 1/4	0.440	5 1/2	0.460	5 3/4	0.480	6	0.500
1.75'	2 15/16	0.245	3 1/8	0.263	3 3/8	0.280	3 9/16	0.298	3 3/4	0.315	4	0.333	4 3/16	0.350										
1.50'	2 1/2	0.210	2 11/16	0.225																				

DIFFERENCE IN ELEVATION BETWEEN LINES OF ENVIRO-SEPTIC® PIPE IN INCHES AND FEET

Notes

Appendix A - System Installation Form

By Vermont law, for each new or replacement installation, Vermont State installers of Enviro-Septic® systems must complete and fax or mail a copy of this form to

Presby Environmental, Inc.
 143 Airport Road
 Whitefield, NH 03598
 Fax: (603) 837-9864

Installer's Name:		
Company Name:		
Street Address:		
City:	State:	Zip:
Property Owner:		
Site Street Address:		
City:	State:	Zip:
Date Installation completed:		
Wastewater System & Potable Water Supply Permit Number:		
Comments:		

Complete and email this form online at presbyenvironmental.com:
 "State Approvals/Vermont/System Installation Form."

Appendix A - System Installation Form

By Vermont law, for each new or replacement installation, Vermont State installers of Enviro-Septic[®] systems must complete and fax or mail a copy of this form to

Presby Environmental, Inc.
143 Airport Road
Whitefield, NH 03598
Fax: (603) 837-9864

Installer's Name:		
Company Name:		
Street Address:		
City:	State:	Zip:
Property Owner:		
Site Street Address:		
City:	State:	Zip:
Date Installation completed:		
Wastewater System & Potable Water Supply Permit Number:		
Comments:		

Complete and email this form online at presbyenvironmental.com:
"State Approvals/Vermont/System Installation Form."

