APPENDIX J

TABLES FOR SELECTING AN ON-SITE DISPOSAL SYSTEM

April 2013 J-1

The enclosed **system selection tables** are to be used in conjunction with section 4 of these guidelines.

The contents of these tables refers to the minimum required lengths of systems, soil types and depths for a particular slope. It is recommended that the system should be made as long as the width of the lot will permit (not in excess of 60m). If the length recommended indicated on the table is <u>not</u> available, consider the selection of another system type.

If the total soil depth "D" is less than indicated in this table, then proceed to the next table.

When selecting a soil type, the permeability <u>shall not be less</u> than that indicated for that particular soil type. If more than one type of permeable soil is present in the test pit, use the permeable with the lowest permeability for the selection and total depth of all permeable soils.

The width of the trench "W" is to be determined by referring to **Appendix K**, **Table 4.12**.

	FABLE 4	1.4A (C1 F	ULL	Y TR	RENC	CHEI	O SYS	STEN	M SE	LEC	CTIO	N-SI	NGL	E FA	MIL	X 3	BED	ROO	МН	OUS	E- <u>FI</u>	LOW	1000	LITE	RES/	DAY_	
				$\mathbf{L} = p$	oipe len	gth in	meters;	; C = 60	00 mm;	$\mathbf{D} = n$	ıinimu	m requ	ired to	tal soil	depth d	above v	water o	or bedr	ock in i	metres	; N/S =	no sel	ection					
			1			1	•	1		1	1		SLO	PE %		1		1				1			-			
Soil Type	Depth of Permeable Soil (mm)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28 29	30
Medium to	750 to 899	N/S	L=49 D=1.7	L=39 D=1.7	L=32 D=1.7	L=28 D=1.7																See Ra	aised C	1 Selec	tion Ta	ables		
coarse sand and	900 to 999	L=43 D=1.7	L=32 D=1.7	L=26 D=1.7																								
fine sandy gravel Permeability:	1000 to 1099	L=35 D=1.7	L=27 D=1.7																									
20E-6 m/s (1.73 m/d)	1100 to 1199	L=30 D-1.7			L=2							L=2: D=1:								L=25						L=2	5	
	1200 to 1299	L=26 D=1.7			D=1	.7						D=1	.0]	D=1.9	9					D=2	.0	
	1300 +								T	ı	ı	1	ı	1														
Silty Sand	750 to 899							L=54 D=1.7	L=49 D=1.7	L=44 D=1.7	L=40 D=1.7	L=37 D=1.7	L=35 D=1.8	L=32 D=1.8						See C	1 Rais	ed Sele	ection 7	Tables				
	900 to 999		N/S		L=54 D=1.7	L=46 D=1.7	L=40 D=1.7	L=36 D=1.7	L=32 D=1.7	L=30 D=1.8	L=27 D=1.8																	
Permeability: 8E-6 m/s (0.69 m/d)	1000 to 1099			L=53 D=1.7	L=44 D=1.7	L=38 D=1.7	L=33 D=1.7	L=30 D=1.7	L=27 D=1.7																			
	1100 to 1199		L=56 D=1.7	L=45 D=1.7	L=37 D=1.7	L=32 D=1.7	L=28 D=1.7													L=25	₹					1	L=25	
	1200 to 1299		L=49 D=1.7	L=39 D=1.7	L=32 D=1.7	L=28 D=1.7						L= D=	25 1.8							D=1.9)=2.0	
	1300 +	L=57 D=1.7	L=43 D=1.7	L=34 D=1.7	L=29 D=1.7		L=25 D=1.7						-1.0															
	750 to 899																				L=59 D=1.8	L=56 D=1.8	L=54 D=1.8	L=52 D=1.8	See R	Raised (C1 selection	Tables
Sandy Silt	900 to 999													L=57 D=1.7			L=48 D=1.8	L=45 D=1.8	L=43 D=1.8	L=41 D=1.8	L=39 D=1.8	L=38 D=1.8	L=36 D=1.9	L=35 D=1.9		L=32 D=1.9	L=31 L=3 D=1.9 D=1	
Permeability: 3E-6 m/s	1000 to 1099	NO	SE	LEC	CTIC	N					L=59 D=1.7	L=54 D=1.7	L=50 D=1.7	L=47 D=1.7		L=42 D=1.8	L=39 D=1.8	L=37 D=1.8	L=35 D=1.8	L=34 D=1.8	L=32 D=1.8	L=31 D=1.9	L=30 D=1.9			L=26 D=2.0		
(0.26 m/d)	1100 to 1199								L=60 D=1.7	L=54 D=1.7	L=50 D=1.7	L=46 D=1.7	L=43 D=1.7	L=40 D=1.8		L=35 D=1.8	L=33 D=1.8	L=32 D=1.8	L=30 D=1.8	L=29 D=1.9	L=27 D=1.9	L=26 D=1.9						
	1200 to 1299							L=57 D=1.7	L=52 D=1.7		L=43 D=1.7	L=40 D=1.7	L=37 D=1.8			L=31 D=1.8	L=29 D=1.8	L=27 D=1.9	L=26 D=1.9			=25 =1.9					L=25	
	1300 +						L=57 D=1.7	L=51 D=1.7	L=46 D=1.7	L=42 d=1.7	L=38 D=1.7	L=35 D=1.8	L=33 D=1.8	L=31 D=1.8		L=27 D=1.8	L=26 D=1.9				D:	=1.9					D=2.0	

TAF	BLE 4.4B	C1 F	ULI	LY T	REN	(CH)	ED S	YST	EM	SEL	ECT	ION	- SI	NGL	E FA	MIL	Y 4	BED	ROC)М Н	OUS	SE -	FLO	W 1	1500 1	LITE	RES/I)AY	
	$\mathbf{L} = pipe$	e leng	gth in	met	ers; (C= 6	600 m	m; l	D = <i>i</i>	minin	пит г	requi	red to	otal s	oil d	epth a	bove	e wat	er or	bedro	ock ir	n mei	tres;	N/S	= no s	seleci	tion		
													SLO	PE %	6														
Soil Type	Depth of Permeable soil (mm)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Medium to	750 to 899	No Select	ion		L=49 D=1.7						•					•									N	O SEL	ECTIO	N	
coarse sand and fine sandy gravel	900 to 999				L=32 D=1.7												Se	ee Raise	ed C1 Se	election	Tables	i							
Permeability: 20E-6 m/s	1000 to 1099	D=1.7	D=1.7		L=27 D=1.7		L=25						L=25						,							_			
(1.73 m/d)	1100 to 1199	L=45 D=1.7		L=27 D=1.7			D=1.8						D=1.9					L=25 D=2.0					L=25						
	1200 to 1299	D=1.7	L=29 D=1.7																				D=2.1					L=	
	1300 +	L=34 D=1.7	L=26 D=1.7	D=1.7																								D=	·
Silty Sand	750 to 899											D=1.7	L=52 D=1.8					See F	Raised C	1 Select	tion Ta	ibles					No Sel	ection	
Permeability: 8E-6 m/s (0.69 m/d)	900 to 999	No Sele	o ction							D=1.8		D=1.8	D=1.8	D=1.9		L=29 D=1.9						See F	Raised (C1 Se	lection T	Гables			
	1000 to 1099					D=1.7		D=1.7	D=1.8	L=36 D=1.8	D=1.8	D=1.8		L=27 D=1.9															
	1100 to 1199				D=1.7	D=1.7		D=1.8	D=1.8	D=1.8	L=28 D=1.8		L=	25					=25 =2.0				Τ-	=25					
	1200 to 1299			D=1.7		D=1.7	D=1.7	D=1.8	D=1.8	L=27 D=1.8			D=											=2.1					=25 =2.2
	1300 + 750 to				L=43 D=1.7																							D -	.2,2
Sandy Silt	899																						1	1	No Selec	1			
Permeability: 3E-6 m/s (0.26 m/d)	900 to 999					1	No Sele	ection								Г		L	L	L	1	D=1.8	D=1.9	D=1.	2 L=50 9 D=1.9	D=1.9	D=1.9	D=1.9	N/S
(0.20 11/4)	1000 to 1099													L 1			D=1.8	L=56 D=1.8	D=1.8	-	+	D=1.9	D=1.9	D=1.	2 L=41 9 D=1.9	D=2.0	D=2.0)=2.0	
	1100 to 1199	1											L		D=1.8	D=1.8 I)=1.8	D=1.8		L=43 D=1.9	D=1.9	D=1.9	D=1.9	D=2.	6 L=35 0 D=2.0	D=2.0	D=2.0)=2.1	
	1200 to 1299										1	D=1.7			D=1.8	D=1.8 I	D=1.8	D=1.9		L=37 D=1.9		D=2.0		D=2.	0 D=2.0	D=2.1)=2.1	D=2.2
	1300 +										_	L=53 D=1.8				L=40 I D=1.8 I		L=36 D=1.9	L=34 D=1.9	L=33 D=1.9			L=29 D=2.0			=26 =2.1	L=25 D=2.1		=25 =2.2

	TABLE	4.5A]	RAISI	ED C1	SYST	EM S	ELEC	TION	- SIN	GLE	FAN	AILY	Y 3 B	EDI	ROO	и но	OUSE	- FL	OW	1000	LIT	RES	S/DA`	Y	
				L= pipe	length in	metres; C	= 300 mm	; D = min	imum req	uired tot	tal soil	depth d	above v	vater o	r bedroc	k in met	res; N/S	= no sel	ection						
				T						SLO	PE %				T										
Soil Type	Depth of Permeable Soil (mm)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	29	21	22	23	24	25	26 to 30
Medium to coarse sand and fine	750 to 899	L=32 D=1.4																							
sandy gravel	900 to 999	L=26 D=1.4									Τ	=25								L=	25				
Permeability: 20E-6 m/s (1.73 m/d)	1000 to 1300 +				=25 =1.4							= 1. 5								D =1					
	750 to 899	N	I/S	L=49 D=1.4	L=40 D=1.4	L=35 D=1.4	L=30 D=1.4	L=27 D=1.4																	L=25
Silty Sand	900 to 999		L=49 D=1.4	L=39 D=1.4	L=32 D=1.4	L=28 D=1.4																			D=1.7
Permeability: 8E-6 m/s	1000 to 1099	L=57 D=1.4	L=43 D=1.4	L=34 D=1.4	L=29 D=1.4							L=								L=					
(0.69 m/d)	1100 to 1199	L=51 D=1.4	L=38 D=1.4	L=31 D=1.4	L=26 D=1.4	L=						D=	1.5							D =2	1.6				
	1200 to 1299	L=46 D=1.4	L=35 D=1.4	L=28 D=1.4		D=	1.4																		
	1300 +	L=42 D=1.4	L=32 D=1.4																						
	750 to 899									L=59 D=1.4			L=46 D=1.4	L=43 D=1.5	L=40 D=1,5	L=38 D=1.5	L=36 D=1.5	L=34 D=1.5	L=32 D=1.5		L=30 D=1.6	L=28 D=1.6	L=27 D=1.6	L=26 D=1.6	
Sandy Silt Permeability:	900 to 999						_	L=57 D=1.4	L=52 D=1.4				L= 37 D=1.5		L=32 D=1.5	L=31 D=1.5	L=29 D=1.5	L=27 D=1.6	L=26 D=1.6						
3E-6 m/s (0.26 m/d)	1000 to 1099		No	Select	tion		L=57 D=1.4	L=51 D=1.4	L=46 D=1.4		L=38 D=1.4		L=33 D=1.5		L=29 D=15	L=27 D=1.5	L=26 D=1.6			T	25				
	1100 to 1199					L=58 D=1.4	L=51 D=1.4	L=45 D=1.4	L=41 D=1.4				L=29 D=1.5		L=26 D=1.5					L= D =	25 1.6				
	1200 to 1299					L=53 D=1.4	L=46 D=1.4	L=41 D=1.4	L=37 D=1.4	L=34 D=1.4		L=29 D=1.5	L=27 D=1.5		L=25 D=1.5										
	1300 +				L=56 D=1.4	L=48 D=1.4	L=42 D=1.4	L=38 D=1.4	L=34 D=1.4	L=31 D=1.5	L=28 D=1.5														

TABLE 4.5B RAISED C1 SYSTEM SELECTION - SINGLE FAMILY 4 BEDROOM HOUSE - FLOW 1500 LITRES/DAY L= pipe length in metres; C = 300 mm; D= minimum required total soil depth above water or bedrock in metres; N/S= no selection SLOPE % Soil Type Depth of 3 5 8 10 11 12 13 15 16 17 18 19 20 21 22 23 24 25 26 27 29 30 Permeabl e Soil (mm) L=36 L=29 Medium to 750 to 899 No Selection D=1.4 coarse sand 900 to 999 L=29 and fine D=1.4 D=1.4 sandy L=34 L=26 1000 to L = 25gravel L = 25L=25L=25 D=1.4 D=1.4 L=25D = 1.7D=1.9 D=1.5D = 1.8Permeability: 1100 to L=31 D = 1.620E-6 m/s D=1.4L=25 1199 (1.73 m/d) D=1.41200 to L=28 D=1.4 1299 1300 + L=26 L=52 L=46 L=40 L=36 L=33 L=30 L=28 750 to No Selection D=1.4 D=1.4 D=1.5 D=1.5 D=1.5 D=1.6 D=1.6 Silty Sand 899 No Selection L=32 Permeability: 900 to 999 L=49 L=42 L=36 L=29 L=27 D=1.4 D=1.5 D=1.4 D=1.4 D=1.4 D=1.5 D=1.5 8E-6 m/s L=25(0.69 m/d) L=25L=25D=1.8 L=51 L=43 L=32 L=29 L=25 L=37 L=26 1000 to D=1.4 D=1.4 D=1.4 D=1.5 D=1.5 D=1.5 D = 1.7D = 1.6D = 1.9L=46 L=38 L=29 L=26 1100 to D=1.4 D=1.4 D=1.4 D=1.4 D=1.5 D=1.5 1199 L=52 L=42 L=35 L=30 L=26 1200 to L=25 D=1.5 D=1.4 D=1.4 D=1.5 D=1.5 1299 D=1.5 1300 + L=47 L=38 L=32 L=27 L=54 L=51 L=44 L=42 L=40 L=39 L=37 L=36 L=49 L=46 L=35 L=34 750 to 899 D=1.5 D=1.5 D=1.5 D=1.5 D=1.6 D=1.6 D=1.6 D=1.6 D=1.6 D=1.7 D=1.7 D=1.7 D=1.8 D=1.8 Sandy Silt L=60 L=55 L=52 L=49 L=39 L=37 L=35 L=34 L=30 L=29 L=26 L=46 L=43 L=41 L=32 L=31 L=28 L=27 900 to 999 D=1.4 D=1.5 D=1.5 D=1.5 D=1.5 D=1.6 D=1.6 D=1.6 D=1.7 D=1.7 D=1.7 D=1.8 D=1.8 Permeability No Selection L=30 1000 to 1099 L=53 L=49 L=46 L=43 L=40 L=38 L=34 L=33 L=31 L=29 L=28 L=26 L=36 3E-6 m/s D=1.5 D=1.5 D=1.5 D=1.5 D=1.6 D=1.6 D=1.6 D=1.7 D=1.6 (0.26 m/d)L=44 L=29 L=28 L=27 1100 to 1199 L=51 L=47 L=41 L=38 L=36 L=34 L=32 L=31 L=26 L=25 D=1.5 D=1.5 D=1.5 D=1.5 D=1.5 D=1.6 D=1.6 D=1.6 D=1.6 D=1.7 D=1.9 L=43 L=33 L=27 L=55 L=50 L=46 L=40 L=37 L=35 L=31 L=29 L=28 1200 to 1299 L=25 D=1.4 D=1.5 D=1.5 D=1.5 D=1.5 D=1.6 D=1.6 D=1.6 D=1.6 D=1.7 D=1.7 D=1.8 L=39 L=36 L=32 L=30 L=27 1300 + L=46 L=42 L=34 L=28 L=25 D=1.4 D=1.5 D=1.5 D=1.5 D=1.6 D=1.6 D=1.6 D=1.6 D=1.7

	TABLE 4	1.6A	STA	NDA	RD	C2 S	YST	EM	SELI	ECT	ION	- SI	NGL	E FA	MII	Y 3	BEI	DROC)M I	HOU	SE -]	FLC)W 1	.0001	LITE	RES/I	DAY		
	L =	pipe	lengt	h in n	neters	s; C =	175	mm;	$\mathbf{D} = n$	ninin	ium r	equir	ed to	tal soi	il dep	th abo	ove v	vater o	or bed	lrock	in me	etres;	N/S	= no	selec	tion			
													SLOI	PE %															
Soil Type	Depth of Permeable soil (mm)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Medium to coarse sand	300 to 449	N/S	L=49 D=1.2				•	L=	:33							•		•		N	lo Sele	ction		•			'		
and fine sandy gravel	450 to 599	L=43 D=1.2		L=33 D=1.3					1.3									L=33 D=1.4									L=33 D=1.5		
Permeability: 20E-6 m/s (1.73 m/d)	600+	L=32 D=1.2		25 1.3			L=25 D=1.3							L=25 D=1.4									L=25 D=1.5					L=25 D=1.6	
	300 to 449							L=54 D=1.3	L=49 D=1.3	L=44 D=1.3	L=40 D=1.3	L=37 D=1.3									N/S								
Silty Sand	450 to 599		N/S		L=54 D=1.3		L=40 D=1.3				L=33 D=1.3								L=33 D=1.4								L=33 D=1.5		
Permeability: 8E-6 m/s	600 to 749			D=1.2	D=1.3	D=1.3	L=30 D=1.3																						
(0.691 m/d	750 to 899	T -54		D=1.3	L=32 D=1.3		J	25																					
	900 to 999	D=1.2	D=1.3	D=1.3	D=1.3		L= D=							L=25								L= D=					L	=25	
	1000 to 1099	D=1.2	L=36 D=1.3	D=1.3										D=1.4	ļ												D)=1.6	
	1100 to 1199 1200 to	D=1.2 L=40																											
	1299 1300 +	D=1.2	D=1.3 L=28																										
	300 to 449	D-1.2	D-110	<u> </u>															<u> </u>		N/S	S							
	450 to 599																	L=45 D=1.4			L=39 D=1.4						L=33 D=1.5		
	600 to 749			N/	C					L=59 D=1.3						L=38 D=1.4		L=34 D=1.4			L=30 D=1.4								
Sandy Silt	750 to 899			11/	3			D=1.3		D=1.3	D=1.3	D=1.3	D=1.3	D=1.4	D=1.4			L=27 D=1.4	L=26 D=1.5						_				
Permeability: 3E: 6m/s	900 to 999						D=1.3	D=1.3	L=43 D=1.3	D=1.3	D=1.3	D=1.3	D=1.4	D=1.4															
(0.26 m/d)	1000 to 1099					D=1.3	D=1.3	D=1.3	L=39 D=1.3	D=1.3	D=1.3	D=1.3											L=25						
	1100 to 1199					D=1.3	1	D=1.3	D=1.3		D=1.3	L=27 D=1.4]				L	=25					D=1.5					L=25 D=1.6	
	1200 to 1299				L=54 D=1.3		L=40 D=1.3		L=32 D=1.3	L=30 D=1.3	L=27 D=1.4	L= D=	25 1.4				D	=1.4											
	1300 +				L=50 D=1.3		_		L=30 D=1.3																				

TABLE 4.6B STANDARD C2 SYSTEM SELECTION - SINGLE FAMILY 4 BEDROOM HOUSE - FLOW 1500LITRES/DAY $L = pipe \ length \ in \ meters; \ C = 175 \ mm; \ D = minimum \ required \ total \ soil \ depth \ above \ water \ or \ bedrock \ in \ metres; \ N/S = no \ selection$ SLOPE % Depth of 15 16 22 24 26 Soil Type 5 7 8 10 11 12 13 14 17 18 19 20 21 23 25 27 28 29 30 Permeable soil (mm) L=49 L=42 L=36 NO SELECTION 300 to 449 Medium to D=1.3 D=1.3 D=1.3 coarse sand L=33 L=49 L=39 L=33L=33 NO SELECTION and fine sandy 450 to 599 D=1.3 D=1.3 D=1.4 D=1.5 D=1.3 gravel 600 to 749 L=36 L=29 No Selection D=1.2 D=1.3 D=1.3 Permeability: L=25L=2520E-6 m/s L=25L=25(1.73 m/d) D=1.5 D=1.6 D=1.3D=1.4750 to 899 L=39 L=29 D=1.3D=1.3 L=25 L=25 D=1.8 900+ =32 D=1.7 300 to 449)=1.3 450 to 449 L=54 L=49 L=44 L=40 L=37 L=35 L=33 L=33 NO SELECTION NO SELECTION D=1.3 D=1.3 D=1.4 D=1.4 D=1.5 600 to 749 L=52 L=46 L=40 L=36 L=33 L=30 L=28 L=26 D=1.3 D=1.3 D=1.3 D1.3 D=1.4 D=1.4 D=1.4 D=1.5 L=58 L=49 L=42 L=36 L=32 L=29 L=27 Silty Sand 750 to 899 D=1.3 D=1.3 D=1.3 D=1.3 D=1.4 D=1.4 N/S L=49 L=40 L=35 L=30 L=27 Permeability: 900 to 999 8E-6 m/s D=1.3 D=1.3 (0.69 m/d) L=25 1000 to 1099 L=55 L=44 L=36 L=31 L=27 L=25L=25D=1.8 D=1.3 D=1.3 D=1.3 D=1.4 L=25D=1.7D=1.51100 to 1199 L=40 L=33 L=28L=25D = 1.6D=1.3 D=1.3 D=1.3 D=1.41200 to 1299 L=36 L=30 L=26 D=1.3 D=1.3 D=1.3 1300 + L=42 L=34 L=28 L=25 =56 D=1.2 D=1.3 D=1.3 D=1.3 450 to 599 L=56 =54 L=52 L=50 L=48 N/S D=1.4 D=1.4 D=1.4 600 to 749 L=54 L=51 L=49 L=44 L=42 L=40 L=46 L=39 L=37 L=36 L=35 L=34 L=32 D=1.4 D=1.4 D=1.4 D=1.5 D=1.5D=1.5 L=29 L=28 L=27 750 to 899 L=55 L=52 L=49 L=46 L=43 L=41 L=39 L=37 L=35 L=34 L=32 L=31 L=26 D=1.3 D=1.3 D=1.4 D=1.4 D=1.4 D=1.4 D=1.5 D=1.5 D=1.5 D=1.5 D=1.6 D=1.6 D=1.6 D=1.7 D=1.7 D=1.7 D=1.7 Sandy Silt 900 to 999 NO SELECTION L=59 L=54 L=50 L=46 L=43 L=40 L=38 L=36 L=34 L=32 L=31 L=30 L=28 L=27 D=1.3 D=1.3 D=1.3 D=1.4 D=1.4 D=1.5 D=1.5 D=1.5 D=1.5 D=1.6 D=1.6 D=1.6 D=1.4 Permeability: L=27 L=58 L=53 L=49 L=45 L=42 L=39 L=36 L=34 L=32 L=31 L=29 L=28 3E-6 m/s 1000 to 1099 (0.26 m/d) D=1.3 D=1.3 D=1.3 D=1.3 D=1.4 D=1.5 D=1.5 D=1.5 D=1.5 D=1.6 D=1.6 D=1.6 D=1.4 D=1.4 L=25 D=1.8 L=53 L=44 L=33 L=28 L=48 L=41 L=38L=35 L=31 L=30L=27 1100 to 1199 D=1.4 D=1.4 D=1.4 D=1.4 D=1.4 D=1.4 D=1.6 D=1.6 D=1.6 D=1.6 D=1.6 L=25L=30 L=44 L=40 L=37 L=35 L=32L=29 L=27 L=26 L=25D=1.71200 to 1299 D=1.3 D=1.3 D=1.4 D=1.4 D=1.4 D=1.4 D=1.5D=1.5 D=1.5 D=1.5 D=1.6L=41 L=37 L=35 L=32 L=30 L=28 1300 +D=1.3 D=1.3 D=1.3 D=1.4 D=1.4 D=1.4 D=1.4 D=1.5 D=1.5

T	ABLE 4.7A	(IMP(ORTE	ED SAI	ND FI	LL, 3:	x10 ⁻⁵ n	n/s to 5	x10 ⁻⁴ 1	n/s) R	AISE	D C2	SYST	EM SI	ELEC	ΓΙΟΝ	- SINO	GLE F	AMI	LY 3 I	BEDR	OOM I	IOU	SE - <u>I</u>	LOV	V 1000	LITR	ES/DA	<u>Y</u>
					L =	pipe le	ngth in	meters;	C = 10	0 mm;	D = mir	nimum		d total . S LOPE !		th above	e water	or bedi	ock in	metres;	N/S = r	io select	ion						
														LOPE															
Soil Type	Depth of Permeable Soil (mm)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Medium to coarse sand and fine	150 to 299		L=49 D=1.0	L=39 D=1.0				=33 =1.0								L=33 D=1.1										L=33 D=1.	3 2		
sandy gravel Permeability:	300 to 599	L=43 D-1.0						1																					
20E-6 m/s (1.73 m/d)	600 +	L=26 D=1.0			L=25 D=1.0				L	=25 D	=1.1							L=	=25 D=	=1.2						L=25	D=1.3		
	150 to 299	N/	/S	L=55 D=1.0	L=46 D=1.0	L=40 D=1.0	L=35 D=1.0	L=33																					
Silty Sand	300 to 449		L=54 D=1.0	L=43 D=1.0	L=36 D=1.0			D=1.0								L=33 D=1.1										L=3. D=1			
Permeability: 8E-6 m/s	450 to 599	L=59 D=1.0	L=44 D=1.0	L=35 D=1.0		•									•		•										· -		
(0.69 m/d)	600 to 749	L=50 D=1.0	L=37 D=1.0	L=30 D=1.0																									
	750 to 899	L=43 D=1.0	L=32 D=1.0	L=26 D=1.0																									
	900 to 999	L=38 D=1.0	L=29 D=1.0			25 1.0																					L:	=25 =1.3	
	1000 to 1099	L=35 D=1.0	L=27 D=1.0									L=2: D=1.								L= D=							D-	-1.3	
	1100 to 1199	L=33 D=1.0																											
	1200 +	L=31 D=1.0			•				1																				
	150 to 299 300 to 449			L=60	L=56 D=1.0 L=50	L=48 D=1.0	L=42 D=1.0 L=38	L=38 D=1.0	L=34 D=1.1	L=33 D=1.0						T 00													
Sandy Silt	450 to 599	N.	/C	D=1.0	D-1.0 L=45	D=1.0 L=38	D=1.0 L=34	L=33 D=1.0								L=33 D=1.1										L=3.			
Permeability: 3E-6 m/s		17/	/3	L=54 D=1.0	D=1.0	D=1.0	D=1.0									1									Г	D=1.	2		
(0.26 m/d)	600 to 749			L=49 D=1.0	L=40 D=1.0	L=35 D=1.0	L=31 D=1.0	L=27 D=1.0																					
	750 to 899		L=55 D=1.0	L=44 D=1.0	L=37 D=1.0	L=32 D=1.0	L=28 D=1.0																						
	900 to 999		L=51 D=1.0	L=41 D=1.0	L=34 D=1.0	L=29 D=1.0	L=26 D=1.0					L=2: D=1.								L=							L=25 D=1.3		
	1000 to 1099			L=39 D=1.0		L=28 D=1.0														D=	1.2						<i>D</i> −1.3		
	1100 to 1199		L=46 D=1.0	L=37 D=1.0	L=31 D=1.0	L=27 D=1.0	1																						
	1200 to 1299	L=59 D=1.0	L=44 D=1.0	L=35 D=1.0	L=30 D=1.0	L D:	=25 =1.0																						
	1300 +	L=56 D=1.0	L=42 D=1.0	L=34 D=1.0	L=28 D=1.0																								

TAB	BLE 4.7B (IMI	PORT	ED SA	ND F	ILL,	3x10 ⁻⁵	m/s to	5x10	⁴ m/s) I	RAIS	ED C2	SYS	TEM S	SELE	CTIO	N SIN	GLE	FAMI	LY 4	BEDI	ROON	и но	USE -	FLO	W 150	0 LIT	RES/I	DAY	
						$\mathbf{L} = pip$	e length	in meters	; C = 100	mm; D	= minim	um requ	ired total SLOPE		th above	water or	· bedroo	ck in metre	es; N/S =	no selec	tion								
Soil Type	Depth of Permeable Soil (mm)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Medium to coarse	150 to 299	N/S		L=58 D=1.0	L=49 D=1.0	L=42 D=1.0	L=36 D=1.0	L=33 D=1.1									L=33	,						т_2	2			١,	L=33
sand and fine sandy gravel	300 to 449		L=49 D=1.0	L=39 D=1.0	I	=33	L=	:33			L=33 D=1.1						D=1.							L=3. D=1.					D=1.4
Permeability: 20E-6 m/s (1.73 m/d)	450 to 599	L=49 D=1.0	L=36 D=1.0		D	=1.0	D=	1.1			D-1.1																		
,	600 to 749	L=39 D=1.0	L=29 D=1.0	L=25				=25 =1.1					L=25					L=25 =1.3							=25 =1.4				L=25 D=1.5
	750 +	L=32 D=1.0	D=	1.0			D -	1.1					D=1.2											D	7—1 .4				7–1.3
	150 to 299			_		L=59 D=1.0	L=52 D=1.0	L=46 D=1.0	L=42 D=1.1	L=38 D=1.1	L=35 D=1.1													т о	,			١	L=33
Silty Sand	300 to 449		N/S		L=54 D=1.0	L=46 D=1.0	L=40 D=1.0	L=36 D=1.1			L=33						L=33							L=3. D=1.)=1.4
Permeability:	450 to 599			L=53 D=1.0	L=44 D=1.0	L=38 D=1.0					D=1.1]	D=1.	2											
8E-6 m/s (0.69 m/d)	600 to 749		L=56 D=1.0	L=45 D=1.0	L=37 D=1.0	L=32 D=1.0	L=28 D=1.1																						
	750 to 899		L=49 D=1.0	L=39 D=1.0	L=32 D=1.0	L=28 D=1.1																							
	900 to 999	L=57 D=1.0	L=43 D=1.0	L=34 D=1.0	L=29 D=1.0																			_					
	1000 to 1099	L=53 D=1.0	L=40 D=1.0		L=27 D=1.0]	L=25				L=25					T.=	=25						<i>z</i> =25 =1.4				L=25 D=1.5
	1100 to 1199	L=49 D=1.0	L=37 D=1.0	L=30 D=1.0				,	D=1.1				D=1.2	2					1.3					ע	-1.7			L	J=1.5
	1200 to 1299	L=46 D=1.0	L=35 D=1.0	L=28 D=1.0				,	D-1.1																				
į.	1300 +	L=43 D=1.0	L=33 D=1.0	L=26 D=1.0				L=56	L=51	T. 46	T 42	T 20	1. 20	I ₇₋₂₄	1						ı								
Sandy Silt	150 to 299 300 to 449						L=56	D=1.0 L=50	L=45	L=41	L=37	L=35	L=36 D=1.1	D=1.2			L	=33						L=3.	3			•	_=33
·	450 to 599					L=57 D=1.0	D=1.0 L=50 D=1.0	L=45	L=40	L=37	D=1.1 L=34 D=1.1	D=1.1	L=33 D=1.1				D	=1.2						D=1.	3)=1.4
Permeability: 3E-6 m/s (0.26 m/d)	600 to 749	No	0			L=52	L=46 D=1.0	L=40	L=36	L=33 D=1.1	L=30	L=28 D=1.2	L=26 D=1.2	L=25 D=1.2															
(312 3 2 2 2)	750 to 899	1,,,			L=55 D=1.0	L=48	L=42	L=37		L=30	L=28	L=26	D-112	2-112				т	25										
	900 to 999	Selec	ction		L=51	L=44	L=38	L=34	L=31 D=1.1	L=28	L=26								=25 =1.3						<i>2</i> =25 =1.4				=25
	1000 to 1099			L=58 D=1.0	L=49 D=1.0	L=42 D=1.0	L=36 D=1.0	L=32 D=1.1	L=29 D=1.1	L=27 D=1.1					L=25 D=1.2									D	-1.7				=1.5
	1100 to 1199			L=55 D=1.0	L=46 D=1.0	L=40 D=1.0	L=35 D=1.0	L=31 D=1.1	L=28 D=1.1			L=25																	
	1200 to 1299	1		L=53 D=1.0	L=44 D=1.0	L=38 D=1.0	L=33 D=1.1	L=30 D=1.1	L=27 D=1.1]	D=1.1	L																
	1300 +			L=51 D=1.0																									

TABLE	E 4.7C (FIL)	TER S	SAI																					JSE -	FL	OW 1	1000L	ITRI	ES/DA	<u>Y</u>
					$\mathbf{L} = pip$	e length	i in met	ters; C =	: 100 m	m; D =	minimi	um requ		l total soil L OPE %	depth	above w	ater or	bedroci	k in met	tres; N	J/S = no	selectio	on							
Soil Type	Depth of Permeable Soil	3	4	5	6	7	8	9	10	11	12	13	14		16	17	18	19	20	21	22	23	2	24	25	26	27	28	29	30
Medium to coarse sand and fine sandy	150 to 299 300 to 599			•			I	=33 =1.0						•		L=33	3		•	•			•			I	L=33 D=1.2			
gravel Permeability: 20E-6 m/s (1.73 m/d)								_1.0 T	_							D=1.	l I								-					
(1.73 m/d)	600 +				L=25 D=1.0				1	=25 D=	:1.1								L=25 D=	=1.2		1				1	L=25 D=	=1.3		
	150 to 299	L=35 D=1.0																												
Silty Sand Permeability: 8E-6 m/s	300 to 449							L=33 D=1.								L=33 D=1.											=33 D=1.2			
(0.69 m/d)	450 to 599																													
	600 to 749	L=26 D=1.0																				<u></u>								
	750 to 899																													
	900 to 999					=25 =1.0						L=25								T	∠=25							L=25		
	1000 to 1099]	D=1.1	ĺ								=1.2						-	D=1.3	5	
	1100 to 1199																													
	1200 +																													
	150 to 299	L=37 D=1.0																							•					
Sandy Silt Permeability:	300 to449	L=36 D=1.0				L:	=33									L=33										Ι	L=33			
3E-6 m/s (0.26 m/d)	450 to 599	L=34 D=1.0				D=	=1.0									D=1.	1									Ι)=1.2			
	600 to 749	L=33 D=1.0																												
	750 to 899	L=32 D=1.0																												
	900 to 999	L=31 D=1.0			L=25 D=1.							L=25 D=1.1								I	=25									
	1000 to 1099	L=30 D=1.0				-					J	IJ=1.I	L							D	=1.2							L=25 D=1.3		
	1100 to 1199	L=29 D=1.0																												
	1200 to 1299	L=29 D=1.0																												
	1300 +	L=28 D=1.0																												

TABL	E 4.7D (FII	TER	SAN	D, 1	x10 ⁻⁴ n	n/s to	5x10) ⁻⁴ m/s) RA	ISED	C2 S	SYST	EM S	ELE	CTI	ON SI	NGL	E FA	MIL	Y 4	BED	ROO	МН	OUSI	E - <u>F</u> I	LOW	1500	LIT	RES/DAY
						L:	= pipe le	ngth in i	meters; (C= 100 n	nm; D =	minimu	n requir	ed total : SLOPE :		th above	water or	· bedroc	k in metr	res; N/S	= no sel	ection							
Soil Type	Depth of Permeable Soil (mm)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Medium to coarse	150 to 299	L=45 D=1.0	L=34 D=1.0		L=3 ²	3			T.	=33							L=33							L=33					L=33
sand and fine sandy gravel	300 to 449	L=37 D=1.0			L=33 D=1.	.0				=1 . 1							D=1.2							D=1.					D=1.4
Permeability: 20E-6 m/s	450 to 599																												
(1.73 m/d)	600 to 749	L=27 D=1.0		=25			L= D=						=25 =1.2					=25 =1.3						L= D=					L=25 D=1.5
	750 +		D=	=1.0			<i>D</i> –	1,1					7-1,2					7–1.5						<i>D</i> -	.1.4				D=1.5
	150 to 299 300 to 449	L=52 D=1.0	L=39 D=1.0		L=33					L=33						1	L=33							L=33	ł				L=33
Silty Sand		L=47 D=1.0	L=35 D=1.0		D=1.0				j	D=1.1	1						D=1.2							D=1.3	3				D=1.4
	450 to 599	L=43 D=1.0																											
Permeability: 8E-6 m/s	600 to 749	L=40 D=1.0	L=30 D=1.0																										
(0.69 m/d)	750 to 899	L=37 D=1.0	L=28 D=1.0																										
	900 to 999	L=34 D=1.0	L=26 D=1.0				L=						L=25					L= D=	25					L= D=	=25 =1.4				L=25 D=1.5
	1000 to 1099	L=33 D=1.0		,			D=	1.1				J	D=1.2	2				D=	1.3					D -	1				D-1.0
	1100 to 1199	L=31 D=1.0	T	=25																									
	1200 to 1299	L=30 D=1.0		1.0																									
	1300 +	L=29 D=1.0																											
	150 to 299	L=56	L=42	L=34 D=1.0																									
Sandy Silt	300 to 449	D=1.0 L=54	L=40	D=1.0	-																			L=33	,				L=33
Samu y Sint	450 to 599	D=1.0 L=51	D=1.0 L=39]	L= D=					L=33 D=1.1							L=33 D=1.2							L=33 D=1.3					D=1.4
Permeability: 3E-6 m/s	600 to 749	D=1.0 L=49	D=1.0 L=37	L=30						J-1.1								-											
(0.26 m/d)	750 to 899	D=1.0 L=48 D=1.0	D=1.0 L=36 D=1.0	D=1.0 L=29 D=1.0																									
	900 to 999	L=46	L=35	L=28	1																								1 25
	1000 to 1099	D=1.0 L=45	D=1.0 L=34	D=1.0	1		L=						L=	=25					=25						25				L=25 D=1.5
	1100 to 1199	D=1.0 L=44	D=1.0 L=33	L=27 D=1.0			D=	1.1					D	=1.2				D	=1.3					D=	1.4				D-1.3
	1200 to 1299	D=1.0 L=43	D=1.0 L=32	L=26																									
	1300 +	D=1.0 L=42 D=1.0	D=1.0	D=1.0 L=25 D=1.0	1																								
		D=1.0		D=1.0	<u> </u>																								

TABL	E 4.8	A (IM	POR	TED S	SAND	FILL	., 3x1() ⁻⁵ m/s	to5x1	.0 ⁻⁴ m/	s) RA	ISED	C2 S	ELEC	TION	0 TC	149	MM ()F PE	RME	ABLI	E SOI	L - <u>AI</u>	LL SO	IL TY	PES		
	$\mathbf{L} = pipe\ length\ in\ meters;\ \mathbf{C} = 100\ mm\ \mathbf{D} = minimum\ required\ total\ soil\ depth\ above\ water\ or\ bedrock\ in\ metres;\ \mathbf{N/S} = no\ selection$																											
	_	_	=	_	=	-	=	-	-	_	-	SLC	PE %	6		_	-	_	-	-	-	_		=	-	_		
Flow (l/d)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1000	NO	SEL	ECTI	ON	L=56 D=1.0		L=43 D=1.0		L= D =	:39 1.0							L= D =	:39 1.1								L=39 D=1.2		
1500			NO SI	ELEC	TION	I					L=45 D=1.1			L=39 D=1.1						:39 :1.2						L=39 D=1.3		

	TABLE	4.8 B	(FILT	TER S	AND,	, 1x10	⁻⁴ m/s	to5x1	0 ⁻⁴ m/s	s) RA	ISED	C2 SI	ELEC	TION	0 TC	149 I	MM C	F PE	RME	ABLE	E SOI	L - <u>Al</u>	LL SO	IL TY	<u>'PES</u>			
	$\mathbf{L} = pipe\ length\ in\ meters;\ \mathbf{C} = 100\ mm\ \mathbf{D} = minimum\ required\ total\ soil\ depth\ above\ water\ or\ bedrock\ in\ metres;\ \mathbf{N/S} = no\ selection$																											
	SLOPE %																											
Flow (l/d)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1000						L=39											L=	39								L=39		
						D=1.0)										D=	1.1								D=1.2		
1500	L=58			L=	39						L=39								L=	39						L=39	•	
	D=1.0	D=1.0		D=	1.0						D=1.1								D=	1.2						D=1.3	1	

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		TABLE	4.9 C3 A	AND MOUND SELECTION	ON
			Flo	ow: 1000 liters	
Slope %	System type	Length	Number of Holes	Hole Spacing	Imported Sand Fill Specification
0 to less than 3	Mound	25 m	20	centre of first hole .625 m from the ends of the pipe then spaced 1.25 m on centres	Imported Sand Fill (3 x 10 ⁻⁵ to 5 x 10 ⁻⁴ m/s)
3 to 10	С3	25 m	20	centre of first hole .625 m from the ends of the pipe then spaced 1.25 m on centres	Filter Sand (1 x 10 ⁻⁴ to 5 x 10 ⁻⁴ m/s)
11 to 30	C3	25 m	20	centre of first hole .625 m from the ends of the pipe then spaced 1.25 m on centres	Imported Sand Fill (3 x 10 ⁻⁵ to 5 x 10 ⁻⁴ m/s)
			Flo	ow: 1350 liters	
Slope %	System type	Length	Number of Holes	Hole Spacing	Imported Sand Fill Specification
0 to less than 3	Mound	34 m	28	centre of first hole 0.125 m from the ends of the pipe then spaced 1.25 m on centres	Imported Sand Fill (3 x 10 ⁻⁵ to 5 x 10 ⁻⁴ m/s)
3 to 10	C3	34 m	28	centre of first hole 0.125 m from the ends of the pipe then spaced 1.25 m on centres	Filter Sand (1 x 10 ⁻⁴ to 5 x 10 ⁻⁴ m/s)
11 to 30	C3	34 m	28	centre of first hole 0.125 m from the ends of the pipe then spaced 1.25 m on centres	Imported Sand Fill (3 x 10 ⁻⁵ to 5 x 10 ⁻⁴ m/s)
			Flo	ow: 1500 liters	
Slope %	System type	Length	Number of Holes	Hole Spacing	Imported Sand Fill Specification
0 to less than 3	Mound	38 m	30	centre of first hole .875 m from the ends of the pipe then spaced 1.25 m on centres	Imported Sand Fill (3 x 10 ⁻⁵ to 5 x 10 ⁻⁴ m/s)
3 to 10	С3	38 m	30	centre of first hole .875 m from the ends of the pipe then spaced 1.25 m on centres	Filter Sand (1 x 10 ⁻⁴ to 5 x 10 ⁻⁴ m/s)
11 to 30	С3	38 m	30	centre of first hole .875 m from the ends of the pipe then spaced 1.25 m on centres	Imported Sand Fill (3 x 10 ⁻⁵ to 5 x 10 ⁻⁴ m/s)

TABLE 4.10 (A) MULTIPLE TRENCH SELECTION

DEPTH OF TRENCH ALLOWED FOR DIFFERENT DEPTHS OF PERMEABLE SOIL AND TOTAL SOIL

(required to give under upslope	e at least 600 mm trench with 3 m een trenches)		m) ive at least 1m upslope trench with	ALLOWABLE DEPTH OF DOWNSLOPE TRENCH (the bottoms of all trenches are at the same elevation)
2 Trenches	4 Trenches	2 Trenches	4 Trenches	
less than 875	less than 1090	less than 1275	less than 1490	No selection possible
875 and over	1090 and over	1275 and over	1490 and over	Partially trenched- trench depth 150 mm.
1025 and over	1240 and over	1425 and over	1640 and over	Partially trenched- trench depth 150 to 300 mm.
greater than 1400	greater than 1615	greater than 1800	greater than 2015	Fully trenched- trench depth 150 to 675 mm.

All trenches must be level and at the same elevation.

TABLE 4.10 (B) MULTIPLE TRENCH MINIMUM LENGTH OF TRENCH REQUIRED FOR DIFFERENT SOIL TEXTURES (USE LONGER ROWS WHERE POSSIBLE)

(USE LUNGER RUWS WHERE PUSSIBLE)					
Soil Type	Flow 1000 L/day	Flow 1500 L/day			
Medium to Coarse Sand or Fine Sandy Gravel	Total length = 68 m. Use 2 rows 34 m long or 4 rows 17 m long Trench width = 0.6 m minimum	Total length = 100 m. Use 4 rows 25 m long. Trench width = 0.6 m minimum			
Silty Sand	Total length = 84 m. Use 4 rows 21 m long. Trench width = 0.6 m minimum	Total length = 124 m. Use 4 rows 31 m long. Trench width = 0.6 m minimum			
Sandy Silt	Total length = 112 m. Use 4 rows 28 m Trench width = 0.6 m minimum	Total length = 168 m. Use 4 rows 42 m long. Trench width = 0.6 m minimum			

TABLE 4.11 (A) AREA BED SELECTION

ALLOWABLE TYPE OF SYSTEM AND DEPTH OF CUT FOR DIFFERENT DEPTHS OF PERMEABLE SOIL AND TOTAL SOIL

PERMEABLE SOIL DEPTH (mm) (required to give at least 600 mm under the upslope edge of a bed up to 6 m wide)	TOTAL SOIL DEPTH (mm) (required to give at least 1 m separation below upslope side of a bed up to 6 m wide)	ALLOWABLE SYSTEM TYPE AND DEPTH OF CUT ON DOWNSLOPE SIDE OF BED
less than 780	less than 1180	No selection possible
780 and over	1180 and over	At ground surface- cut depth 0 mm.
1080 and over	1480 and over	Partially trenched - cut depth 0 to 300 mm.
greater than 1455	1855 and greater	Fully trenched - cut depth 0 to 675 mm.

TABLE 4.11 (B) AREA BED MINIMUM AREAS AND MINIMUM CROSS SLOPE DIMENSIONS FOR DIFFERENT SOIL TEXTURES						
SOIL TYPE	FLOW - 1000 L/DAY	FLOW - 1500 L/DAY				
Medium to Course Sand or Fine Sandy Gravel	75 m ² - 15 metres across slope x 5 metres wide	110 m ² - 22 metres across slope x 5 metres wide				
Silty Sand	100 m ² - 20 metres across slope x 5 metres wide	150 m ² - 30 metres across slope x 5 metres wide				
Sandy Silt	125 m ² - 25 metres across slope x 5 metres wide	180 m ² - 30 metres across slope x 6 metres wide				

Note: 1) A trench system is preferred, if that option is available.

- 2) For area beds to be constructed at ground surface, the qualified person must ensure the bed is notched into any organic layer present.
- 3) The perforated pipe in the area bed should be installed such that there is a maximum separation from the wall of the excavation of 1.5 m to the pipe and the maximum separation distance between rows of pipe is 3 m.
- 4) Use larger areas with longer cross slope dimension, where possible.

TABLE 4.13 HOLDING TANK SYSTEM SELECTION - STORAGE TIMES (DAYS)						
	NUMBER OF BEDROOMS					
TANK SIZE	1	2	3	4		
45001	√ (15)	not a selection	not a selection	not a selection		
90001	√ (30)	√ (15)	not a selection	not a selection		
135001	√ (45)	√ (22.5)	√ (15)	√ (11.3)		

Notes: a. These are storage estimates only. The actual usage will depend on personal conservation measures and the type/make of the fixtures installed in the home or cottage

b. Multiple tanks can be assembled.