

ADVANCED ENVIRO-SEPTIC® DESIGN WORKSHEET FOR OKLAHOMA

Project: _____ Date: _____

Design Criteria: _____

1. Calculate the minimum System Sand Bed Area (SSBA):

a. _____ Bedrooms = _____ ft²

b. _____ Additional Bedrooms x _____ ft² / bedroom = _____ ft²

c. Total area required = _____ ft² from 1a above + _____ ft² from 1b above = _____ ft²

Soil Group	Minimum Required Bed Area (square feet) by Number of Bedrooms			
	Two or Fewer	Three	Four	Each Additional Bedroom
1	230	300	370	80
2	230	300	370	80
2a	350	460	580	120
3	480	630	770	150
3a	700	930	1,160	240
4	920	1,240	1,540	320
5	1,400	1,880	2,340	500

Note: Table B AES loading rates already reflect a 33% reduction in conventional bed sizing.

2. Advanced Enviro-Septic® pipe required:

_____ bedrooms x 70 ft / bedroom = _____ ft minimum

3. Calculate the number of serial sections required (skip if using Parallel distribution):

_____ bedrooms ÷ 5 = _____ serial sections minimum (round up to nearest whole number)

4. Number of AES rows required:

Pipe required (from Step #2) = _____ ft ÷ _____ row length ft

= _____ rows (round up to nearest whole number) ÷ _____ serial sections (from Step #3)

= _____ rows per section (round up to whole number) x _____ serial sections

= _____ rows minimum, _____ updated row length

5. Find Pipe Layout Width (PLW):

(_____ # of rows - 1) = _____ x _____ ft center-to-center spacing = _____ ft + 1 ft = _____ ft

Note: the PLW is the distance from the outermost edge of the first to the outermost edge of the last rows.

6. System Sand Bed Length & Width (SSBL & SSBW):

a. SSBL = _____ row length + 1 = _____ ft

b. SSBW = _____ SSBA from step #1c ÷ (_____ SSBL from step 6a above) = _____ ft min.

c. (_____ PLW + 1) = _____ ft (sand needed to cover all AES rows)

7. Verify final sand bed width requirements:

Verify the minimum SSBW from Step #6 will cover all the rows in the bed.

a. Level beds & beds sloping 5% or less: If the minimum SSBW is less than the (PLW + 1 ft), use (PLW + 1 ft) as the new minimum SSBW.

Use the larger of 6b or 6c = _____ ft sand bed width minimum

b. Beds sloping > 5%: If the minimum SSBW is less than the (PLW + 3.5 ft), use (PLW + 3.5 ft) as the new minimum SSBW. Adding 3.5 ft to the pipe layout width accounts for a 2.5 ft system sand extension on the down slope side of the field.

1. _____ PLW from step #5 + 3.5 ft = _____ ft

2. _____ SSBW from step #6b

3. _____ ft minimum sand bed width (choose the larger of 1 or 2 above)

8. Calculate System Sand extensions (SSE):

For level beds, the sand extensions are placed on each side of AES pipes. If the value from step #6c is equal to or greater than the value from step #7a above, there will be no extensions.

a. Sand extensions = (_____ value from step #7a – _____ value from step #6c) ÷ 2 = _____ ft

b. Sloping Beds >5%: extension placed entirely on the down slope side of the bed.

Extension = _____ value from step #7b3 - _____ value from step #6c = _____ ft

Notes:

Designed by: _____