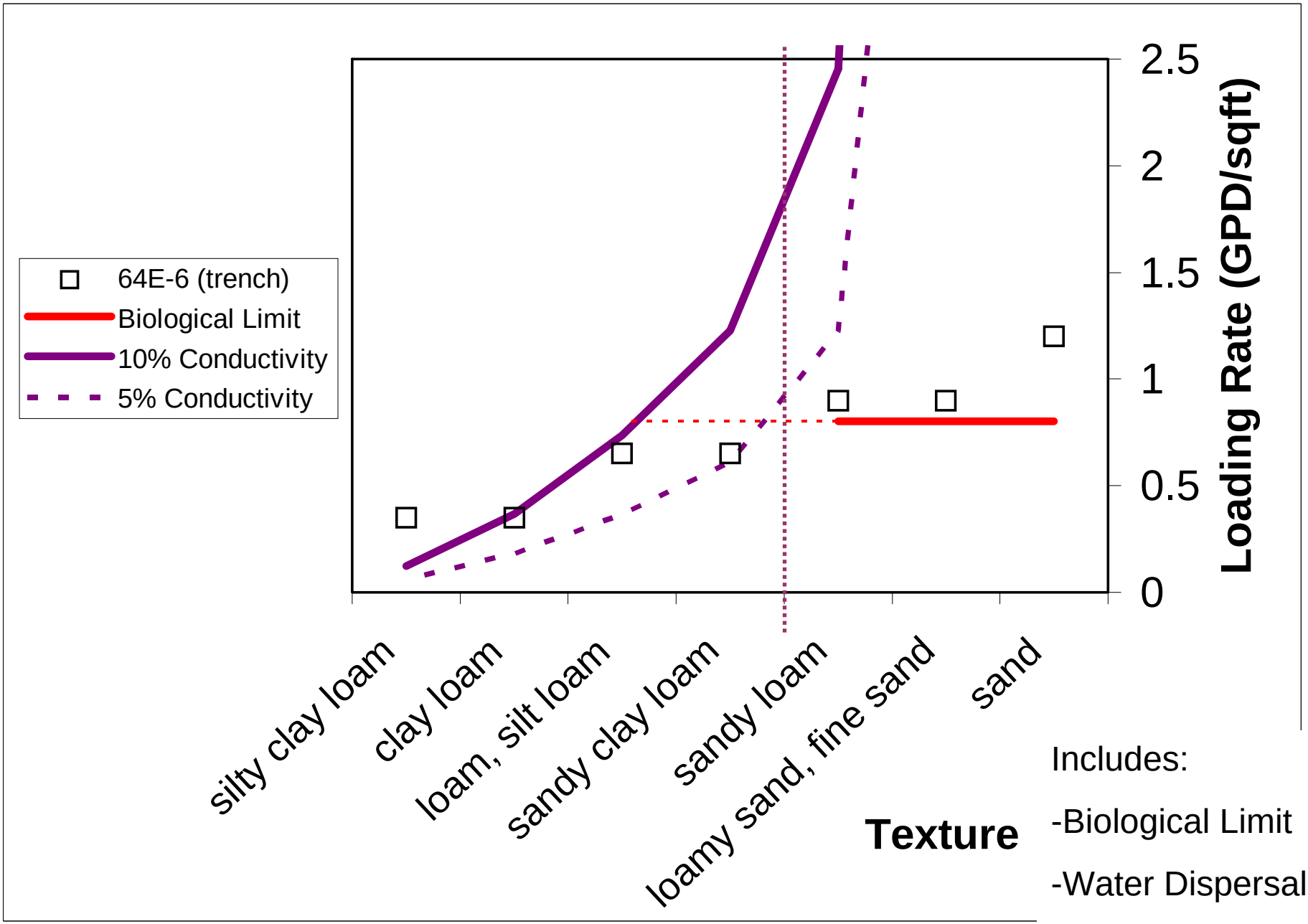
Hydraulic Loading Rates



Includes:

-Biological Limit

-Water Dispersal

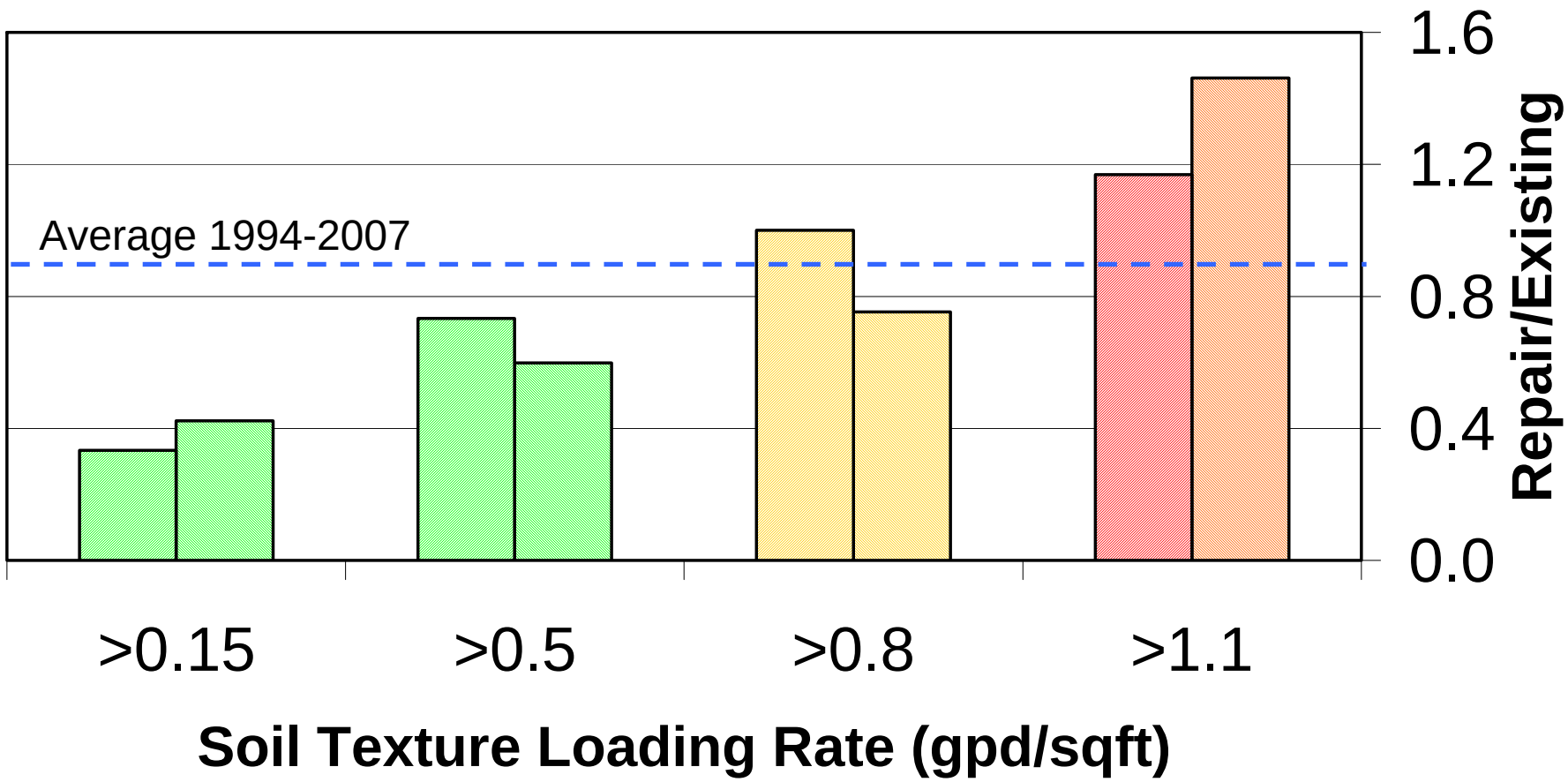
Drainfield Sizing (Subsurface)

USDA SOIL TEXTURAL CLASSIFICATION	SOIL TEXTURE LIMITATION	MAXIMUM SEWAGE LOADING RATE ABSORPTION SURFACE GALLONS PER SQUARE FOOT PER DAY	
		TRENCH	BED
Sand; Coarse Sand not associated with a SHWT of less than 48 inches; and Loamy Coarse Sand	Slightly limited	~~1.20~~ 0.80	~~0.80~~ 0.60
Loamy Sand; Sandy Loam; Coarse Sandy Loam; Fine Sand	Slightly limited	~~0.90~~ 0.80	~~0.70~~ 0.60
Loam; Fine Sandy Loam; Silt Loam; Very Fine Sand; Very Fine Sandy Loam; Loamy Fine Sand; Loamy Very Fine Sand; Sandy clay loam	Moderately limited	0.65	0.35
Clay Loam; Silty Clay	Moderately limited	0.35	0.20

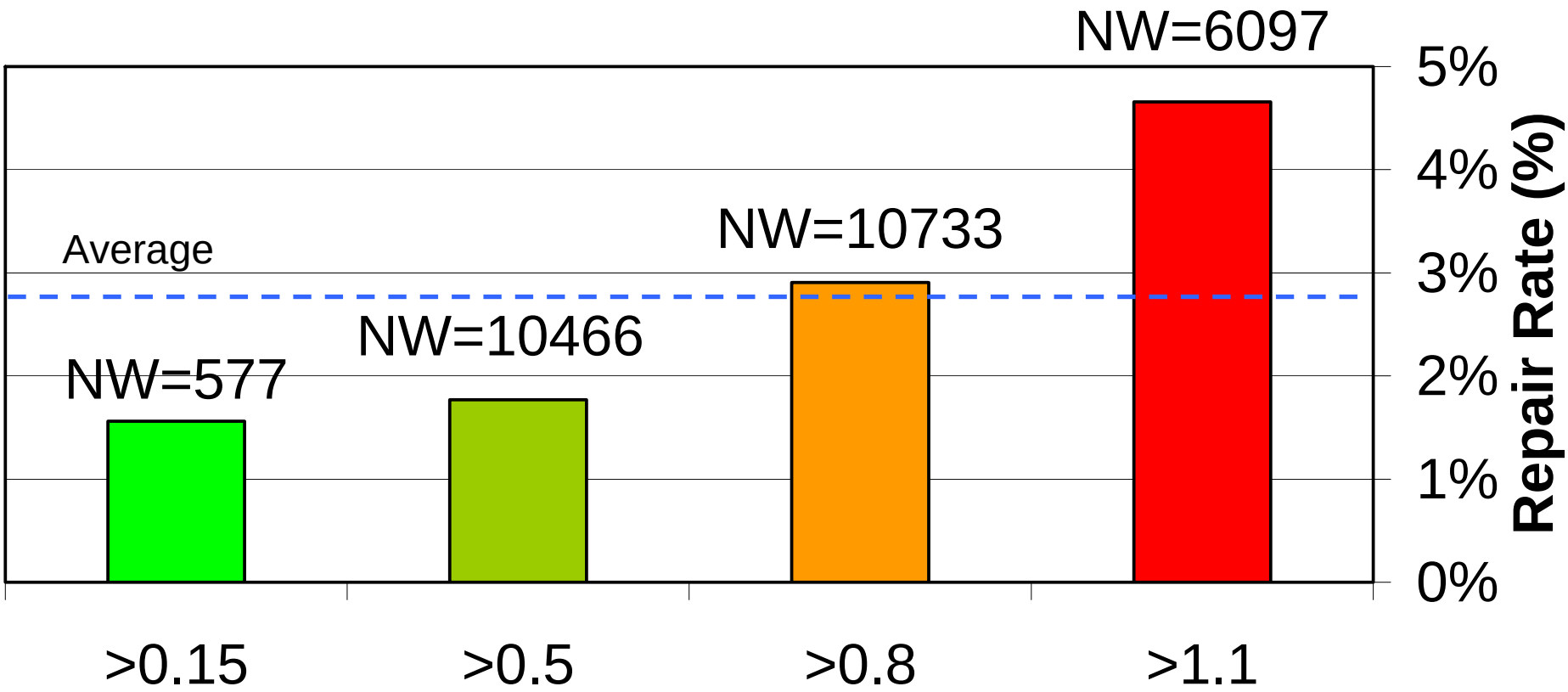
Drainfield Sizing (Mound and Fill)

FILL MATERIAL	MAXIMUM SEWAGE LOADING RATE ABSORPTION SURFACE GALLONS PER SQUARE FOOT PER DAY	
	TRENCH	BED
Sand; Coarse Sand; Loamy Coarse Sand	~~1.00~~0.80	~~0.75~~0.60
Fine Sand	0.80	~~0.65~~0.60
Sandy Loam; Coarse Sandy Loam; Loamy Sand	0.65	0.40

Ratio of Repair to Existing System Permits installed in given Period (Escambia, Okaloosa, Santa Rosa, Walton)



Repair Rate (Repair Permits originally installed / New System Permits 1998-6/2007) Escambia, Okaloosa, Santa Rosa, Walton

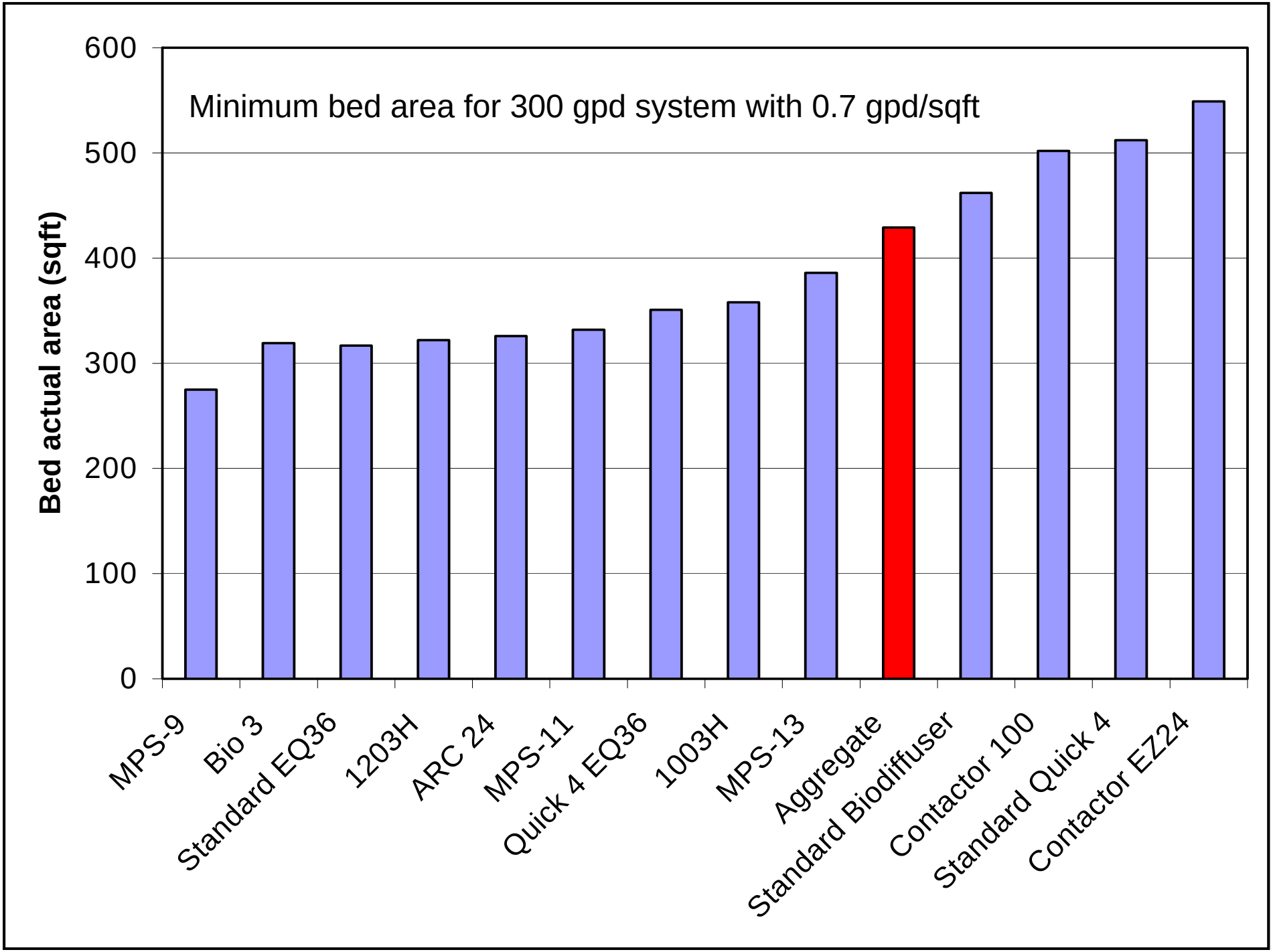


Alternative Drainfield Product Sizing

Product	Size (sqft)	Size relative to aggregate (%)
Aggregate	**429**	**100%**
Standard Biodiffuser	462	108%
Bio 3	319	74%
ARC 24	326	76%
MPS-13	386	90%
MPS-11	332	77%
MPS-9	275	64%
Standard Quick 4	512	119%
Quick 4 EQ36	351	82%
Standard EQ36	317	74%
1003H	358	83%
1203H	322	75%
Contactor EZ24	549	128%
Contactor 100	502	117%

Example:
- 300 gpd est. sewage flow
- bed, five lines
- 0.7 gpd/sqft LTAR
- Assumes that products can be cut to arbitrary sizes

Note: differences are in part due to separation requirements between adjacent products


Minimum bed area for 300 gpd system with 0.7 gpd/sqft
Bed actual area (sqft)
600
500
400
300
200
100
0
MPS-9
Bio 3
Standard EQ36
1203H
ARC 24
MPS-11
Quick 4 EQ36
1003H
MPS-13
Aggregate
Standard Biodiffuser
Contactor 100
Standard Quick 4
Contactor EZ24

Unobstructed Area

- Provide sufficient unobstructed area for one drainfield repair that meets setbacks
- Second repair would require drainfield replacement
- Keep unobstructed area requirement constant for smaller mounds

Unobstructed Area (Revised)

64E-6.005

(4) Suitable, unobstructed land shall be available for the installation and proper functioning of the system. ~~At least 75 percent of~~ the unobstructed area must meet minimum setback requirements of subsections (1), (2), and (3) above to allow for drainfield repair or system expansion. The minimum unobstructed area shall:

(a) Be at least 1.5~~2~~ times as large as the drainfield absorption area required by rule. For example, if a 200 square feet drainfield is required, the total unobstructed area required, inclusive of the 200 square feet drainfield area, would be ~~400~~320 square feet. Unobstructed soil area between drain trenches shall be included in the unobstructed area calculation.

(b) Be contiguous to the drainfield.

~~(c) Be in addition to the setbacks required in subsection (2) above.~~

Example Unobstructed Area (300 gpd)

Drainfield	Method	Texture	old LTAR (gpd/sqft)	new LTAR (gpd/sqft)	old unobstructed Area (sqft)	new unobstructed Area (sqft)
subsurface	trench	sand etc	1.2	0.8	500	600
	trench	fine sand etc	0.9	0.8	667	600
	trench	loam etc	0.65	0.65	923	738
	bed	sand etc	0.8	0.6	750	800
	bed	fine sand etc	0.7	0.6	857	800
	bed	loam etc	0.35	0.35	1714	1371
mound	trench	sand	1	0.8	600	600
	trench	fine sand	0.8	0.8	750	600
	trench	sandy loam etc	0.65	0.65	923	738
	bed	sand	0.75	0.6	800	800
	bed	fine sand	0.65	0.6	923	800
	bed	sandy loam etc	0.4	0.4	1500	1200