HO112-03

Seepage Bed Sizing Worksheet

Area of infiltrative Surface (AIS) & Minimum Contour Length (MCL) Sizing

The complete system is to comply with BC SPM Version 3

This worksheet does NOT consider all of the requirements of SPM Version 3

Use only Metric units of measurement throughout (Liters (L), Centimeters (cm), L/day/m^2)

Step 1) Determine the expected volume of sewage per day

Be sure that sewage strength does not exceed requirements of BC SPM V3 - Table III- 8

Daily Design Flow DDF _____ L/day F1

Step 2) Determine the (design) soil effluent loading rate:

_____ (Texture) & _____ (Structure) & _____ (Grade) & _____ (Consistence) = _____ (Consistence Category) = _____ L/day/m^2 (Table II-22) Soil HLR F2A

_____ mm/day Kfs Range OR _____ min/inch Perc Rate = _____ L/day/m^2 (Table II-23) Permeability HLR F2B

_____ L/day/m2 F2

Site Slope _____ %

Use lower of values from F2A or F2B to determine F2 HLR

Step 3) Calculate the required area of infiltrative surface for the soil (AIS)

DDF _____ L/day (From F1) ÷ HLR _____ L/day/m^2 (From F2) = Area of Infiltrative Surface AIS _____ m^2 F3

Step 4) Select the appropriate Linear Loading Rate (LLR)

_____ (Texture) & _____ (Structure) & _____ (Grade) & _____ (Consistence) = _____ (Consistence Category) = _____ L/day/m (Table II-27) Soil LLR F4A

Kfs Range _____ mm/day or Perc Rate _____ min/inch = _____ L/day/m (Table II-28) Permeability LLR F4B

Step 5) Determine minimum contour length of dispersal field required based on LLR

DDF _____ L/day (from F1) ÷ LLR _____ L/d/m (Use lower value of F4A or F4B) = Minimum contour Length _____ m F5

Minimum Length 7.5 m

Step 6) Determine width of seepage bed based on MCL

AIS _____ m^2 (From F3) ÷ MCL _____ m (From F5) = Bed width based on MCL _____ m F6

Step 7) Adjust bed length if F6 is greater than 3 m

AIS		Maximum bed width		Adjusted bed length	
m^2	÷	3 m	=		F7
From F3					

Step 7) Summarize

F1	L/day	Daily Design Flow - DDF
F2	$L/day/m^2$	Effluent Loading rate - HLR
F3	m^2	Minimum Soil Infiltration Surface Area - AIS
F4A or F4B	L/d/m	LLR
F5	m	MCL
F6	m	Bed width
F7	m	Adjusted bed length (if necessary)